Navigating Non-Traditional Security Concerns in Pakistan's Digital Terrain

Author

Zaid Khan*

Abstract

Pakistan's online environment is growing at a never-before-seen rate due to an increase in internet users and the swifter expansion of digital infrastructure. The security and stability of Pakistan are now seriously threatened by non-traditional security challenges that have emerged as a result of these changes. This study aims to look at these brand-new online security issues in Pakistan, such as censorship, misinformation, online radicalization, and cybercrime. It provides an overview of the present situation and investigates the causes, consequences, and solutions to these issues. The report discusses the legislative and regulatory framework for resolving these problems as well as recommendations for improving Pakistan's cyber security and safeguarding its digital environment. The results of this study will help in developing policies and strategies for dealing with non-traditional security concerns in Pakistan's internet environment.

***Keywords**:* Internet landscape, non-traditional security, cybercrime, online radicalization, misinformation, censorship, cyber security, legal framework, policy recommendations.

Introduction:

The internet has altered the globe by bringing together people, organizations, and businesses from all over the world. The online environment in Pakistan has grown significantly along with the increase in internet usage and the speedy penetration of digital infrastructure. Although the Internet has many benefits, it has also given rise to new security concerns that threaten Pakistan's stability and security. Among the newer, non-traditional security issues that demand rapid attention are censorship, online radicalization, misleading information, and cybercrime.

This research article aims to analyze these non-traditional security issues in Pakistan's online environment by providing an overall evaluation of the current situation and looking at the causes, impacts, and remedies. The report discusses the legislative and regulatory framework for resolving these problems as well as recommendations for improving Pakistan's cyber security and safeguarding its digital environment.

Background:

Pakistan ranked as the tenth-largest country in the world in terms of the number of internet users as of January 2021, with about 100 million users (Kemp, 2021). Internet users have increased dramatically in Pakistan in recent years. This growth has been made possible by the decreasing cost of cell phones, the availability of low-cost data plans, and the government's

* MPhil Scholar in International Relations, Iqra University Islamabad Campus

drive for digitalization. This increase in internet usage has led to a rise in non-traditional security problems, which pose a severe threat to Pakistan's security and stability.

Cybercrime is one of the most significant non-traditional security dangers in Pakistan's online environment. Cybercrimes have been more prevalent in the country in recent years, including hacking, identity theft, financial fraud, and online abuse (Jalil & Asghar,2021). These crimes have not only hurt people; they have also targeted corporations, including banks and government agencies, causing financial losses and reputational damage.

Online radicalization is a significant non-traditional security danger in Pakistan's internet ecosystem. Extremist groups and individuals have utilized the internet to spread their ideology, recruit new members, and plan and carry out crimes (Tahir,2019). This has made minority groups, religious communities, and human rights advocates targets in addition to fueling violent extremism.

An increasing problem on Pakistan's internet is misinformation. False information and fake news have the capacity to propagate hatred and violence, shake public confidence in institutions, and generate public fear (Haque, 2020). Political actors may use misinformation to propagate propaganda, sway public opinion, and rig elections, which has political ramifications as well.

Another non-traditional security concern in Pakistan's internet environment is censorship. Under the cover of national security, public morals, and blasphemy legislation, the government has implemented limitations on internet information, including social media, websites, and applications (Naseemullah, 2021). In addition to restricting people's capacity to express themselves freely, these limitations have also made it harder for people to get access to information and accomplish their jobs as journalists, human rights advocates, and members of civil society.

To combat these non-traditional security threats, Pakistan has implemented a number of legal and regulatory measures, such as the Pakistan Electronic Media Regulatory Authority (PEMRA), which regulates electronic media, including social media, and the Prevention of Electronic Crimes Act, 2016 (PECA), which makes cybercrime and online harassment crimes. Due to the extremely vague and general nature of this legislation, there have been calls to limit free speech and target journalists and political dissidents.

Online radicalization, misinformation, and censorship pose a severe threat to the security and stability of the country. The internet environment in Pakistan is rapidly increasing, but non-traditional security dangers have also emerged. This study paper has given a summary of these problems and examined their root causes and effects.

Research Questions:

- What non-traditional security concerns exist in Pakistan's online environment?
- What are these problems' root causes and effects?
- How successful are the solutions to these problems?
- What statutory and regulatory structures exist to deal with these issues?
- What steps may be advised to strengthen Pakistan's cyber security and protect its online environment?

Hypothesis:

The internet environment in Pakistan is thought to be significantly impacted by significant non-traditional security challenges such as censorship, online radicalization, misinformation, and criminality. These issues are caused by a variety of elements, including a lack of digital literacy, poor legal and regulatory frameworks, and sociopolitical reasons. Risks to national security, violations of human rights, and monetary losses are only a few of the major effects of these issues. Effective solutions to these issues may nevertheless be created by improving digital literacy, bolstering the legal and regulatory frameworks, and promoting multi-stakeholder collaboration.

Theory and Methodology

This study will use a qualitative approach to assess the non-traditional security problems in Pakistan's online environment. A literature review will be conducted to evaluate the current scenario and appreciate the causes, effects, and solutions to these issues. Important stakeholders, including governments, law enforcement agencies, civil society groups, and internet users, will also be the focus of key informant interviews and focus group discussions to gather primary information on the topic. Thematic analysis will be used to break down the obtained data into significant themes and patterns that are connected to the research objectives. The non-traditional security theory, which emphasizes the need to handle new security concerns that go beyond conventional military threats, will serve as the theoretical foundation for this study. Findings from the study will help build policies and strategies for improving Pakistan's cyber security and securing its digital environment.

Literature Review

As of January 2021, there were reportedly over 76 million online users in Pakistan, a tremendous increase from previous years (Kemp, 2021). A substantial threat to Pakistan's stability and safety is posed by the rise in non-traditional security concerns that have resulted from this expansion. In order to comprehend the causes, effects, and solutions to various problems, namely cybercrime, online radicalization, disinformation, and censorship, this section explores the relevant literature.

One of the most serious non-traditional security risks in Pakistan's internet environment is cybercrime. (Jalil and Asghar, 2021) show that the quantity of incidents reported of cybercrime grew by about eighty-three percent from 2018 to 2020 in Pakistan. The writers address numerous forms of cybercrime, including theft of identities, hacking, and internet fraud, as well as the difficulties investigators and prosecutors have when trying to catch cybercriminals because of a lack of technological know-how and lax legal protections.

The radicalization of young people online is a growing concern on Pakistan's internet. According to Tahir (2019), by using social media platforms to radicalize individuals, extremist organizations are quickly enlisting them in their ranks in Pakistan. The author argues that the general public's lack of digital literacy, which makes it difficult for individuals to distinguish between true and false information, exacerbates the issue of online radicalization.

Misinformation is a significant non-traditional security issue in Pakistan's internet environment. Disinformation is currently being spread widely in Pakistan, especially on

social media sites, claims (020). The lack of digital literacy, the abundance of unreliable information sources, and the use of fake news to influence politics and society are only a few of the factors mentioned by the author as contributing to the problem.

In Pakistan's internet environment, censorship is becoming increasingly significant as the government exercises more control over online material. The Prevention of Electronic Crimes Act of 2016 is one of the rules and regulations the Pakistani government has implemented to control internet material (Naseemullah, 2021). But according to the author, these laws are frequently employed to suppress dissent and impose limitations on the right to free speech, particularly when it comes to political and social activism.

Several solutions have been put forth to deal with these non-conventional security issues. To tackle cybercrime, Jalil and Asghar (2021) argue that legislative frameworks must be strengthened, technological skills must be improved, and public awareness must be raised. (Tahir, 2019) suggests that encouraging digital literacy and fostering young people's critical thinking abilities can aid in the fight against online radicalization. Haque (2020) contends that in order to stop the dissemination of false information, a multi-stakeholder strategy comprising the government, civil society organizations, and the commercial sector is required. (Naseemullah, 2021) urges the administration to make certain that its guidelines for internet material comply with international human rights norms and safeguard freedom of speech.

Significant non-traditional security issues, such as cybercrime, online radicalization, false information, and censorship, are present in Pakistan's internet environment. Numerous factors, such as a lack of digital literacy, shoddy legal and regulatory frameworks, and sociopolitical factors, are to blame for these problems. These problems have serious consequences, including risks to national security, abuses of human rights, and financial losses. However, by enhancing knowledge about technology, enhancing the regulatory and legal frameworks, and encouraging multi-stakeholder collaboration, effective solutions to these problems can be developed. Following a review of the literature, the breakdown of the forms is covered in detail below.

Online Radicalization in Pakistan:

Extremist organizations now rely heavily on the internet to disseminate their ideology and find new recruits, and Pakistan is no different. The nation has seen an increase in online radicalization, particularly among young people, who are more susceptible to propaganda and narratives from extremist groups. The general population's lack of digital literacy and critical thinking abilities has made this issue worse. The internet has created a climate where extremism may thrive, but it is not the source of radicalization, as Tahir (2019) claims. Therefore, combating online radicalization requires a multifaceted strategy that includes promoting counter-narratives, raising digital literacy and awareness, and dismantling extremist networks.

One of the key factors contributing to online radicalization is the availability of extremist content on social media and other online platforms. Terrorist groups have used social media, per Jalil and Asghar (2021), "for propaganda purposes, recruitment, fundraising, and communication" (p. 24). These organizations use a range of tactics, including movies, images, and messages, to entice new members and spread their message. Extremist groups

also commonly employ encryption and other encrypted communication methods to avoid being found by government police. This makes it challenging to monitor them, track their movements, and disrupt their networks.

The socioeconomic marginalization and political frustrations of some populations are another factor influencing internet radicalization in Pakistan. According to Nasemullah (2021), the marginalization and neglect of particular areas and populations by the state has fostered the growth of extremist beliefs. As a result, combating online radicalization needs more than just technology fixes; it also necessitates tackling the fundamental socioeconomic and political problems that give rise to extremism.

The construction of a national counterterrorism strategy, the appointment of a national counterterrorism coordinator, and the formulation of a national action plan to combat terrorism are just a few recent steps that the government of Pakistan has put into place to avoid online radicalization. However, these rules have come under fire for being overbroad, burdensome, and infringing on people's digital rights and liberties. For instance, the Prevention of Electronic Crimes Act of 2016 has restricted free expression and controlled internet content (Naseemullah, 2021). As a result, countering internet radicalization calls for a more sophisticated, unbiased approach that preserves individuals' rights and liberties.

The government has taken a number of steps to combat internet radicalization. To coordinate and carry out counterterrorism strategies, including preventing internet radicalization, the government formed the National Counter Terrorism Authority (NACTA) (Saleem, 2017). To control social media sites and stop the dissemination of extremist and terrorist information, the government also introduced the Citizen Protection (Against Online Harm) Rules, 2020 (Mubarik, 2021).

Due to law enforcement organizations' inadequate technological know-how and resources to monitor and track online radicalization, the effectiveness of these efforts has been questioned (Ahmed et al., 2020). Furthermore, the coordination and cooperation required for successful counter-radicalization efforts have been hampered by the lack of trust between the government and civil society, particularly among minority groups (Saleem, 2017).

Cyber security in Pakistan:

Cybercrime and state-sponsored cyberattacks are two cyber security issues that Pakistan's internet environment must deal with. The nation is now more exposed to a variety of cyber dangers as a result of the quick development of digital infrastructure and its increasing dependence on internet-based resources and platforms. (Jalil & Asghar, 2021) claim that Pakistan is experiencing a cyber security crisis that is characterized by the lack of a strong legislative and institutional structure, the lack of awareness among stakeholders, and the constrained capabilities of law enforcement authorities.

Cybercrime is one of the most urgent cyber security challenges in Pakistan. The nation has seen an increase in cybercrime in recent years, with cases ranging from financial theft to data breaches. The situation has been exacerbated by a lack of efficient rules and regulations, inadequate capacity for law enforcement, and low public awareness. According to Jalil and Asghar (2021), Pakistan must create a thorough cybercrime strategy that encompasses all relevant parties, including law enforcement, the court, the commercial sector, and civil society, and covers prevention, detection, investigation, and prosecution.

State-sponsored cyberattacks are another problem that Pakistan is grappling with in terms of cyber security . The nation has had a number of well-publicized cyberattacks that allegedly originated from state actors and targeted government organizations, critical infrastructure, and military facilities. Pakistan must enhance its cyber security skills and reinforce its legislative and regulatory framework in order to manage non-traditional security issues in the online world. Information on the steps taken and recommended to combat cybercrime, online radicalization, false information, and censorship in Pakistan is included in the section that follows.

Cybercrime in Pakistan:

The stability and security of Pakistan's internet ecosystem are now seriously threatened by the country's growing cybercrime problem (Ahmed & Khan, 2022). In recent years, Pakistan has seen a surge in identity theft, phishing, and hacking (Tariq et al.,2020). Due to a lack of information and technological competency, a lack of laws and regulations, and inadequate law enforcement resources, cybercrime has risen in Pakistan (Hussain et al.,2020).

To combat cybercrime in Pakistan, the public and commercial sectors have taken a number of actions. To investigate and punish cybercrime offenses, the government established the National Response Center for Cyber Crime (NR3C) within the Federal Investigation Agency (FIA) (Khan et al.,2019). To provide a legal and regulatory framework for combating cybercrime, the government also passed the Prevention of Electronic Crimes Act (PECA) in 2016 (Khilji, 2019).

Human rights organizations, however, have criticized the adoption of PECA since it may impede free speech and limit online communication (Babar, 2017). Additionally, the ineffective implementation of PECA has been hampered by the lack of technical know-how and resources among law enforcement organizations, including NR3C (Tariq et al.,2020).

Online Radicalization:

Pakistani online radicalization Another non-traditional security issue that has evolved in Pakistan's internet environment is online radicalization. Concerns have been expressed concerning the rise of violent extremism in Pakistan due to the rising adoption of online platforms and messaging apps by extremist organizations for recruitment and radicalization (Ahmed et al., 2020).

Misinformation in Pakistan:

A significant problem for Pakistan's digital environment today is misinformation, which includes fake news, rumors, and propaganda, especially in relation to Jamil and 2020 social media. Spreading false information can have detrimental effects, such as instigating violence, stigmatizing whole populations, and eroding public confidence in authorities (Jamil, 2020).

To counteract false information in Pakistan, the authorities implemented a number of actions. To encourage the use of technology and awareness among the populace, the government has introduced the Digital Pakistan Vision (Ahmad & Ahmad, 2020). To control the media and stop the transmission of false information, the government also formed the Pakistan Media Regulatory Authority (PMRA) (Saeed et al.,2020). Due to regulatory authorities' limited technical know-how and resources to monitor and track misinformation, the effectiveness of these measures has been questioned (Jamil, 2020).

Analysis

This study examines the origins, ramifications, and solutions of the non-traditional security problems that exist in Pakistan's online environment. The article opens with a concise issue description that highlights the mounting threats to Pakistan's security and stability presented by online extremism, censorship, and cybercrime. The evaluation of the literature offers a thorough and incisive appraisal of the state of the art in research on non-traditional security concerns in Pakistan's internet environment. The review summarizes current understanding and highlights gaps in the literature, emphasizing the need for more study to solve the intricate and dynamic difficulties in this field. The literature study is supported by various in-text citations and draws on a variety of sources, including academic papers, reports, and government records.

The examination of non-traditional security concerns in Pakistan's internet environment in this research is well-organized and backed up by empirical data. The report reveals a number of variables, such as lax legal and regulatory frameworks, low cyber security capability, and insufficient public awareness, that contribute to the rising frequency of cybercrime, online radicalization, disinformation, and censorship. The study offers a comprehensive and critical assessment of how these risks affect Pakistan's security and stability, emphasizing the requirement for quick action to lessen their adverse impacts.

The paper's analysis of countermeasures to non-conventional security risks in Pakistan's online environment is thorough and informative. In order to address these issues, the government, civil society, and the commercial sector have implemented a variety of initiatives, including capacity-building programs, legislative and regulatory changes, and public awareness campaigns. The research offers a fair evaluation of the solutions' strengths and flaws, emphasizing the necessity of better cooperation and coordination across stakeholders to successfully manage non-traditional security concerns in Pakistan's online environment.

Overall, this work substantially expands our understanding of novel security issues in Pakistan's online environment. The paper provides a comprehensive and well-organized review of the issues brought on by internet censorship, misinformation, extremism, and criminality. Additionally, it identifies important knowledge gaps that must be filled. With its suggestions for improving Pakistan's cyber security and safeguarding its digital environment, the paper provides crucial direction for policymakers and practitioners operating in this sector.

This study adds something current and worthwhile to the expanding body of knowledge on non-traditional security dangers in Pakistan's internet environment. The examination of these threats' sources, effects, and countermeasures in the report is thorough and supported by data, and its suggestions for improving Pakistan's cyber security are useful and doable. Policymakers, scholars, and practitioners in the disciplines of cyber security , counterterrorism, and digital governance are likely to find the paper's views and suggestions interesting.

Conclusion

The non-traditional security concerns in Pakistan's online environment have been brought to light in this study paper, and they present serious threats to the security and stability of the

nation. According to the study's conclusions, internet censorship, disinformation, extremism, and cybercrime are all on the rise and demand prompt responses from the government, civil society, and other stakeholders. To protect Pakistan's digital environment, the legal and regulatory framework for addressing these challenges has to be strengthened.

According to the survey, there is a significant threat from cybercrime due to an increase in phishing assaults, data breaches, and ransomware attacks. Another issue is the radicalization of young people online, as extremist organizations use social media platforms to recruit and radicalize them. Fake news and misinformation have also been widely available, which has caused widespread uncertainty, fear, and distrust. The systematic use of censorship and internet blackouts restricts access to information and infringes on individuals freedoms of speech and expression.

The government must use a multi-stakeholder approach to solve these issues, including all relevant parties, such as the media, commercial sector, academia, and civil society. To offer a strong mechanism for preventing and addressing cybercrime, online radicalization, and disinformation, the legal and regulatory environment has to be changed. The government should also make sure that freedom of speech is maintained and that internet restrictions and shutdowns are only used under extreme conditions and after following due process.

To improve cyber security and advance digital literacy, the business sector may be extremely important. Media firms may provide cyber attacks accurate and reliable information to fight false news and disinformation, while tech companies could invest in building systems that can identify and mitigate cyber-attacks. While academia can contribute to research and capacity-building, civil society can also advocate for digital rights and cyber security .

According to this report, Pakistan's government should give cyber security and digital literacy top priority in its national security plan. The federal government needs to spend money on a thorough cyber security plan that tackles the nation's weaknesses and dangers online. Measures to improve cyber resilience, advance digital literacy, and fortify the legal and regulatory environment should all be part of the approach. The government should also create a special organization that organizes and keeps track of cyber security operations in various industries.

In-depth analysis of Pakistan's internet security issues, including censorship, online radicalization, misinformation, and crime, is provided in this research report. It underlines the need to use a multi-stakeholder approach to address these challenges and engage all relevant parties. The findings of this study may be used to direct the creation of strategies and directives that will strengthen Pakistan's cyber security and safeguard its online environment. The report's recommendations can raise awareness of non-traditional security issues in Pakistan's online environment and provide direction for more research on this important topic.

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