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### Abstract

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### Title

**The Effectiveness of Digital Firewalls in Combating Political Extremism and the Rise of VPN Usage in Pakistan: A Critical Analysis of Social Media Policies and User Responses**

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### Abstract

*Owing to growing political extremism on social media, the Government of Pakistan implemented a digital firewall framework aimed at curbing extremist content. However, due to poor execution of the policy, the public resorted to the use of VPNs to bypass online restrictions. The research aims to examine how the government's attempt to combat online political extremism triggered an unforeseen outcome in the form of increased VPN usage. Employing a quantitative methodology by conducting an online survey of social media users in Pakistan, the study reveals the public's dissatisfaction with the government's digital regulation measures, perceiving them as a possible threat to their inalienable right to information and doubting whether it could prove to be a viable measure to achieve the government's desired outcome. Finally, the paper recommends a review of the existing digital firewall policy for an improved public response and outcome.*

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**Keywords:** Digital Firewalls, Political Extremism, VPN Usage, Social Media Responses

### Introduction

Although political extremism is not a new phenomenon in Pakistan with the rise of populism it has become deeply rooted, escalating polarization and endangering democracy. Political extremism has corrupted the entire political landscape where blame and shame activities are carried out by opponents on TV shows or during rallies, without realizing that

their behavior has a spillover effect in society. Spreading hate and misinformation instead of focusing on real issues makes an already polarized society more inclined toward violence and intolerance (Asghar, 2023). One such example is the May 9, 2023 incident when a violent mob of Pakistan Tehreek-e-Insaf's (PTI) supporters started setting ambulances on fire, attacking law enforcement agencies, and



targeting critical institutions like the military headquarters, following former Prime Minister Imran Khan's arrest. As a consequence, thousands of PTI members were arrested by the police on charges of assault on government officials (Human Rights Watch, [2024](#)).

To arrest the deteriorating situation, the government of Pakistan introduced strict laws against extremism both online and physical. The National Counter-Terrorism Authority (NACTA, [2023](#)) established in 2008, has been determined to back all the strategies aimed at controlling and blocking online extremism, under which the individuals involved in spreading hate speech and extremism shall be dealt with strictly, in accordance with the law. All possible means shall be utilized to halt propaganda against the state and its institutions, emerging victorious in the "battle of narratives". Especially with the introduction of the Prevention of Electronic Crimes Act (PECA) in 2016 more stringent digital laws have been enacted. Section 37 of PECA authorizes the Pakistan Telecommunication Authority (PTA) to block any content that may be deemed as a national security threat, focusing primarily on hate speech and violent content (Ahmed, Zafar & Gul, [2024](#)). Hence, in July 2024, the federal government declared its decision to ban PTI under Article 17 (2) of the constitution (Dawn, [2024](#)). Similarly, on 25<sup>th</sup> November 2024 a resolution was submitted in the Punjab Assembly Secretariat to ban PTI declaring it as an extremist party involved in sedition, while condemning the May 9 incident (The Nation, [2024](#)). Moreover, on 13<sup>th</sup> December 2024, various PTI workers had been summoned by the Joint Investigation Team (JIT), accused of allegedly spreading hate speech and disinformation on social media. The aim was to identify the culprits and uncover their motives behind the campaign (The Express Tribune, [2024](#)).

Citing national security concerns followed by growing political tensions, the Government of Pakistan implemented a digital firewall to monitor the citizen's online activity and the flow of information. A digital firewall allows the state to block specific websites, track online activity, and monitor communications, working as a barrier between a

country's citizens and the internet (Saeed, [2024](#)). Although Pakistan's firewall is inspired by the Chinese Great Firewall, it lacks the technological and human resources required to fully implement a digital governance model, resulting in an inconsistent strategy (Ahmed et al., [2024](#)). Firewalls have diverse categories, such as those dealing with operating system security issues or those used as national firewalls, like in China which block access to online information. However, this type of firewall is not meant to defend against attacks but rather to restrict the users' online activity. The term "firewall" emerged as early as 1764, referring to a wall that separated the parts of a building from the rest of the structure to prevent fire from spreading throughout the building. Over the years this term evolved and now firewalls are network devices that implement an organization's or a state's security policy. Their demand grew when malicious users and unethical online behavior threatened the diverse and quickly expanding internet (Ingham & Forrest, [2002](#)).

In Pakistan, a firewall was installed for the first time in 2021 during the PTI government's tenure, fulfilling the party's promise to restrict blasphemous content from streaming into Pakistan, but it was seen as an infringement on digital freedoms by the opposition. Eventually, the PTA succeeded in implementing the firewall (Malik, [2024](#)). This Firewall came to public notice only during the PTI protests in 2024, when the government blocked internet and mobile services citing security threats (The Nation, [2024](#)). While initially denying the installation of any firewall, the IT minister later accepted that the government was upgrading its 'web management system' to combat cyber security threats (Shahid & Malik, [2024](#)). Subsequently, the PTA Chairman Maj Gen (R) Hafeezur Rehman accepted that 97,000 sites had been blocked (Haider, [2024](#)). As part of this policy, the government has banned access to social media platforms like X (formerly Twitter) and enforced restrictions on communication apps (Al Jazeera, [2024](#)), with the aim to restrict online content perilous to national security and provoking political unrest and religious agitation in the country (Malik, [2024](#)). While justifying the ban on X, Information Minister Atta Tarar stated that the platform was being

used by "separatists and terrorists" against Pakistan, which is unacceptable and had nothing to do with infringing on freedom of expression (Ali, 2024).

Pakistan is faced with the biggest challenge of balancing its legitimate national security concerns with the protection of civil liberties. The challenge emerged due to a lack of transparency and communication with the public over renewed digital policies (Malik, 2024). Responding to this poorly managed and ill-communicated policy, the public resorted to the use of Virtual Private Networks (VPNs) to access restricted websites like X, since VPNs aid in accessing content that may be inaccessible or blocked for internet users in their country (Ali, 2014). A VPN is a way to simulate a private network over a public network, such as the Internet. It is called virtual because it depends on the use of virtual connections, i.e. temporary connections that have no real physical presence but consist of packets routed over various machines on the internet on an ad hoc basis (Scott, Wolfe & Erwin, 1999). Forbes reported that as a result of banning X, international VPN services have recorded more than a 100 percent rise in demand for their services in Pakistan, with a 400 percent increase in the number of new users in Pakistan (Rajput, 2024). This sudden rise was overwhelming and threatening for the government, hence on 14<sup>th</sup> November 2024, the Interior Ministry directed PTA to block unauthorized VPNs citing security threats from terrorist and extremist groups. This decision only targeted illegal VPNs, allowing for VPN registrations till 30<sup>th</sup> November of the same year (The Express Tribune, 2024).

The research aims to investigate how the government's initiative to protect its citizens from political extremism has backfired, due to poor execution and lack of transparency. Further, the paper intends to measure the impact of the government's digital firewall on public perception and their responses to the imposed restrictions. The following research question is explored in the study, "To what extent has Pakistan's digital firewall policy been effective in curbing online political extremism, and

how has it influenced the rise in VPN usage among citizens as a form of digital resistance?"

The study offers a detailed perspective on digital policies to counter national security threats and public sentiment while aiding policymakers in understanding the societal challenges that arise from digital firewalls by triangulating survey data with in-depth interviews. The findings of the study are significant not only for Pakistan but also for other developing countries dealing with the challenges of balancing national security and freedom of expression. Finally, based on prior trends, the study hypothesizes that the poor execution of the government's firewall policies to combat political extremism has triggered public dissent in the form of increased VPN usage.

## Literature Review

Pakistan's recent digital firewall policy though criticized by many, is aimed at combating political extremism but the government's inefficient management of the policy, led to an increased VPN usage by the public to circumvent blocked content. In order to highlight the significance of this study, it is essential to examine how previous studies have explored this debate. For further clarity, the literature review has been categorized into three themes given below.

This category includes studies that examine how media censorship undermines democratic values and freedom of speech. For example, Iram, Shahid, and Shams (2022) examined how successive authoritarian and democratic governments in Pakistan have undermined democratic values by imposing politically motivated media censorship. The study concluded that the PECA given in 2016, has led to self-censorship and suppression of independent journalism; ranking Pakistan among the 10 worst countries for digital freedom. Similarly, Jamil (2021) applied competitive authoritarianism to reveal that Pakistan is a country following the footsteps of an authoritarian regime. She identified three key threats to media freedom in Pakistan i.e. cyberattacks, digital surveillance of journalists, and state-circulated disinformation. On the contrary, Meserve and

Pemstein (2020) linked theories of state survival and digital authoritarianism to explain that even liberal democracies compromise digital freedom when facing security threats, by examining the case of France. But, instead of imposing direct state censorship, democratic states use legal mechanisms to combat terrorism.

Digital censorship is often a response to national security concerns faced by governments but several states may also exploit these concerns to suit their interests. This section enlists the studies that link national security concerns to digital governance. Ryng et al. (2022) employed securitization theory and the human rights framework to reveal that the governments in Belarus and Myanmar followed a trend of internet securitization during political unrest to crush freedom of speech and justified their authoritarian actions under the guise of national security and existential threats. Highlighting Pakistan as an extreme case experiencing 41 internet shutdowns in just 5 years Wagner (2018) adopted the concept of communicative ruptures to explain the phenomenon of internet shutdowns in Pakistan and revealed that short-term shutdowns are used for security reasons around political events and perceived security threats while long-term internet shutdowns are used in marginalized areas particularly Balochistan, aiming to suppress dissent and isolate communities from national discourse. Similarly, Malik (2024) adopted the Firewall Regime theory to explain the connection between national security and technology in shaping Pakistan's internet governance. He employed a mixed-method approach to examine how governments provide justifications for online censorship by claiming to counter misinformation, extremism, and cyber threats.

This last category discusses the use of circumvention tools to bypass digital censorship and facilitate political activism. Romanosky et al. (2015) highlighted the main purpose of internet bypassing tools to ensure human rights and promote democracy by providing access to the Internet globally. The study indicated that the demand for these tools increased especially during political unrest as seen in Tunisia, Libya, and Egypt in 2011. Al-Saqaf (2016) employed

the liberation technology theory to explain the role of censorship circumvention tools in challenging authoritarian digital control by facilitating political activism and information dissemination in Syria, during the Arab Spring. Similarly, Anyanwu, Ukpong, and Nkechi (2022) emphasized the role of VPNs in safeguarding individual's right to freedom of speech and expression, by examining Nigeria's Twitter ban. The study employed a quantitative approach revealing that 93.9% of respondents considered banning Twitter as an infringement on their rights, hence they resorted to the use of VPNs in an attempt to bypass censorship. However, Mou, Wu, and Atkin (2016) adopted Lin's Interactive Communication Technology (ICT) Adoption Model to conclude that low political trust increases the likelihood of using circumvention tools, while attitudes toward censorship had no significant impact on their usage by the Chinese population.

It is evident that a majority of the existing studies focus extensively on broader areas like media censorship and digital governance, only one study highlights the role of firewalls in Pakistan's digital governance. However, even that study fails to examine the relationship between the implementation of digital firewalls and the rising VPN usage in Pakistan.

### **Theoretical Framework**

The study has employed the "Social Contract" theory which has three versions. Hobbes (1651) believed that before assimilating into a society human beings used to live in a 'state of nature' which was guided by the natural laws with no supreme authority because human nature is selfish and people tend to compete with each other, which resulted in a war. In this state of war, people tend to find peace by forming a contract, under which they mutually give up their rights but the absolute power lies with the ruler. As the ruler is not a part of the contract, hence rebelling against him is illegal. The major criticism of Hobbes' social contract theory was that the government or the ruler had absolute authority, with full control over all the rights except for the right to life. Hobbes believed that in order to protect the people, the ruler had to act

like a “Leviathan”, a giant monster mentioned in the Bible. In contrast to Hobbes, Locke (1689) viewed that if the state acted like a 'Leviathan' then the people would fear it, contrary to the purpose of a government which is to safeguard the liberty and safety of its people. His version of the "Social Contract" theory posits that the state of nature is peaceful where everyone enjoys their natural rights, so in order to protect these rights and to resolve their property disputes, the people mutually decided to give up certain rights to a government, under a "social contract." Since the government is also a party to this contract, hence if it fails to protect and deliver the rights of people then they have the right to rebel against it. In other words, if the government violated the social contract then the public can revolt. Locke viewed natural rights as inalienable rights that can't even be taken away by the state. He believed that the ultimate power lies with the people and not the government. On the contrary, Rousseau (1762) stated that in early societies contracts were made under conditions of inequality but true freedom comes only when fair and legitimate social contracts are formed through the general will. This is a slightly complex idea where Rousseau believes true freedom can only be achieved by surrendering individual interests to the collective will, where no individual is at the arbitrary will of another.

Hobbes's social contract theory is not suitable for this study since it gives supreme authority to the state justifying an autocratic regime, where the power does not lie in the hands of the people. Similarly, Rousseau's concept of 'general will' is idealistic and difficult to apply in the real world, since in the real world individuals have conflicting interests and never give up their interests for society's well-being (Zhang, 2024). Therefore, John Locke's Social Contract Theory is best suited to this study which argues in favor of a limited government where the people possess inalienable rights. In the case of the imposition of the digital firewall which was declared by the Government to safeguard national security and prevent political extremism in Pakistan, the citizens perceived these measures as a violation of their right to information and expression. This was attributed to

the lack of public consultation, lack of transparency, and ineffective communication strategies by the government resulting in increased usage of VPNs in Pakistan.

## Research Methodology

The study is exploratory and analytical in nature. This is a cross-sectional study analyzing real-time impacts, as it aims to explore the effectiveness of digital firewalls in combating extremist content and the rise in VPN usage, focusing on data collected within the last 5–6 months, given that Pakistan's digital firewall has been operational since then. In order to provide an in-depth understanding of the research problem, this study has employed a quantitative method approach under which a survey-based technique was adopted to gather the opinions of social media users in Pakistan regarding the government-imposed firewalls and the rise in VPN usage as a response.

For the survey, in order to ensure representation across gender and occupation categories, the study employed quota sampling. The sample for the study included 220 social media users, with an equal male-female representation between the ages of 18–40 years, who belonged to diverse sectors i.e. students, professionals, and entrepreneurs, to record a broad spectrum of perspectives (Lavrakas, 2008). As part of the quantitative approach, the data was collected through a survey-based technique, where an online questionnaire was designed via Google Forms, which was distributed through WhatsApp to guarantee ease of participation. The data collected was then processed using the Statistical Package for the Social Sciences (SPSS) software (version 23). Through SPSS, frequency tables were constructed to help visualize percentages of the responses.

In the light of the recent imposition of digital firewalls by the Pakistani government and the rise in VPN usage as a countermeasure, Pakistan appears as an excellent case study to measure the broader implications of digital governance in developing states. Hence, Pakistan is focused as a primary case in the research.

## Results

This section is the quantitative representation of the results obtained by conducting an online survey. The

results are represented in the form of frequency tables constructed through SPSS. It outlines the findings of the study, representing the public perception of government's firewall policy and their response.

**Table 1**

*How Often Do You Use Social Media?*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Daily	162	73.6	73.6	73.6
	Rarely	10	4.5	4.5	78.2
	Weekly	48	21.8	21.8	100.0
	Total	220	100.0	100.0	

*Note.* Following question revealed that most of the respondents i.e. 73.6% use social media daily, while about 21.8 % respondents use social media weekly and

only 4.5 use it rarely. The response shows that these respondents are well-suited for this survey.

**Table 2**

*Which Social Media Platforms Do You Use The Most?*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Facebook	27	12.3	12.3	12.3
	Instagram	55	25.0	25.0	37.3
	Snapchat	12	5.5	5.5	42.7
	Tiktok	17	7.7	7.7	50.5
	Twitter	84	38.2	38.2	88.6
	Whatsapp	25	11.4	11.4	100.0
	Total	220	100.0	100.0	

*Note.* According to this table, most of the respondents use Twitter (now called X) (38.2%) and Instagram (25%). These statistics are important, since Twitter or X has been banned by the government and Instagram

users face challenges due to firewall installation. While others prefer Facebook (12.3%), Whatsapp (11.4), Tiktok (7.7%), and Snapchat (5.5%) which is the least preferred app.

**Table 3**

*Are You Aware Of Pakistan's Digital Firewall Policies Aimed At Blocking Political Extremism Online?*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	17	7.7	7.7	7.7
	Yes	203	92.3	92.3	100.0
	Total	220	100.0	100.0	

*Note.* According to this response, about 92.3 % of the respondents are well aware about Pakistan's digital firewall policies aimed at countering political extremist, while only 7.7% of the respondents remain

uninformed. It means that most of the respondents are well aware about government's firewall policies, which can prove helpful while evaluating the responses.

**Table 4**

*Do You Think The Pakistani Government Is Transparent About Its Policies On Digital Firewalls And Social Media Censorship?*

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	114	51.8	51.8
	Not sure	25	11.4	63.2
	Yes	81	36.8	100.0
	Total	220	100.0	100.0

*Note.* A striking 51.8% of the respondents don't think that the government is transparent about its digital policies, which means that the government struggled to take the public into confidence. Moreover, a lack of transparency can translate into a lack of awareness among the people about the content being blocked and why, which has pushed the public to use countermeasures like VPNs. This is because the

citizens believe that the government has provided insufficient justification for the implementation of digital firewalls to safeguard national security. Only 36.8% of respondents believe that the policies are clearly communicated by the government, but about 11.4% of the respondents remain confused about the government's transparency.

**Table 5**

*Do You Think That Blocking Extremist Content On Social Media Is Effective In Reducing Violence And Radicalization?*

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	109	49.5	49.5
	Not sure	19	8.6	58.2
	Yes	92	41.8	100.0
	Total	220	100.0	100.0

*Note.* Majority of the respondents argue that the government's policy of blocking extremist content on social media is not as effective as the government claims. The table shows that 49.5% of the participants don't agree that blocking extremist content online can reduce violent and radical activities in the country which represents a policy gap. Ironically, it represents that the public never consented to or favored the

implementation of digital firewalls in the first place, resulting in a strong reaction in the form of increased VPN usage.

Here, 8.6% of the participants appear uncertain about the effectiveness of blocking extremist content online and about 41.8% respondents view digital firewalls as an effective government policy towards countering extremism and violence.

**Table 6**

*Do Digital Firewalls Affect The Availability Of Information On Social Media And News Sites?*

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	4	1.8	1.8
	Only a little	36	16.4	18.2
	Yes, a lot	180	81.8	100.0
	Total	220	100.0	100.0

*Note.* According to the response, 81.8% of the participants believe that the availability of information on social media and news sites has been affected since the implementation of the digital firewalls. This indicates that the public is facing challenges in accessing daily news and information. In a smaller

group, about 16.4% of the respondents believe that firewalls have a slight impact on their access to information which is still concerning, while only 1.8% perceive that firewalls don't impact their access to online information.

**Table 7**

*Do You Feel That the Digital Firewall Policy In Pakistan Is Focused More On Compromising Your Inalienable Right To Expression Than Preventing Extremist Content?*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	38	17.3	17.3	17.3
	Disagree	3	1.4	1.4	18.6
	Neutral	16	7.3	7.3	25.9
	Strongly Agree	160	72.7	72.7	98.6
	Strongly Disagree	3	1.4	1.4	100.0
	Total	220	100.0	100.0	

*Note.* A majority of the respondents (17.3% agree and 72.7% strongly agree) expressed their fear that the government's digital firewall policy limits their inalienable rights. Only a few perceive that digital firewalls are meant only to combat extremist content, i.e. 1.4% strongly disagree and 1.4% disagree. Around 7.3% of the participants remain neutral on this

question. As interpreted from the response, the majority of the respondents expressed their disapproval of the government's claimed objectives achieved from implementing the digital firewall, which manifested in the form of increased VPN usage by the public as a protest.

**Table 8**

*Have You Ever Tried To Access Blocked Content Or Bypass Censorship Using A VPN?*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	32	14.5	14.5	14.5
	Yes	188	85.5	85.5	100.0
	Total	220	100.0	100.0	

*Note.* According to this response, 85.5% of the respondents have admitted to using VPN to access the content blocked by the government, highlighting that VPNs are used as a countermeasure to digital firewalls.

Moreover, this indicates the public's dissatisfaction with the government's digital regulation policies. However, only 14.5% of the respondents have never used a VPN to bypass censorship.

**Table 9**

*Do You Use A VPN To Access Social Media More Frequently Now Than You Did A Year Ago?*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	38	17.3	17.3	17.3
	Not sure	21	9.5	9.5	26.8

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	161	73.2	73.2	100.0
Total	220	100.0	100.0	

*Note.* Most of the respondents (73.2%) have reported a rise in their VPN usage since the last year, prioritizing freedom over compliance with government policies. This response raises a critical point that where the government is trying to restrict extremist content by implementing a digital firewall,

it is encouraging the public to circumvent censorship, providing access to all kinds of content available online. A small portion of participants (17.3%) have not experienced a rise in their VPN usage over the past year, while only 9.5% are not sure whether their VPN usage has increased or not, over the past year.

**Table 10**

*Do You Believe Using VPNs To Bypass Digital Firewalls Is A Violation Of National Security?*

	Frequency	Percent	Valid Percent	Cumulative Percent
No	107	48.6	48.6	48.6
Valid Not sure	33	15.0	15.0	63.6
Yes	80	36.4	36.4	100.0
Total	220	100.0	100.0	

*Note.* The response reveals that the majority of the participants i.e. 48.6% disagree that using VPNs to bypass digital firewalls is a violation of national security. The majority of the respondents do not associate the usage of VPNs with any violation of national security but rather consider it their right to

access information. However, a minority of respondents (36.4%) view VPN usage as a threat to national security, associating it with threats like online extremist content. However, only 15% of participants remain confused about whether VPN usage is a threat to national security or not.

**Table 11**

*Would You Still Use A VPN If It Were Made Illegal Or Heavily Regulated In Pakistan?*

	Frequency	Percent	Valid Percent	Cumulative Percent
No	70	31.8	31.8	31.8
Valid Yes	150	68.2	68.2	100.0
Total	220	100.0	100.0	

*Note.* Responding to this question, a majority of respondents (68.2%) argued that they would still use VPN even if it were made illegal or heavily regulated in Pakistan. This response reflects a prioritization of right to information and expression over compliance with the government’s digital policies. But, a

significant number of respondents i.e. 31.8% expressed that they would abstain from using VPN if the government imposed more stringent laws. This group seems fearful of the penalties associated with illegal use of VPNs. .

**Table 12***How Does VPN Usage Affect Digital Firewalls?*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Helps firewall	25	11.4	11.4	11.4
	No effect	20	9.1	9.1	20.5
	Weakens firewall	175	79.5	79.5	100.0
	Total	220	100.0	100.0	

*Note.* Most of the respondents (79.5%) expressed that VPN usage weakens the firewall's effectiveness. While 9.1% argued that VPN usage has no effect on the firewall's effectiveness; only 11.4% of participants think that VPN usage helps firewall implementation, but that's not technically possible. This is a critical

point indicating that despite knowing that using VPNs to access blocked content the public resorted to this measure, clearly displaying the public's dissatisfaction with the government-implemented firewall.

**Table 13***Should Pakistan's Digital Firewall Policies Be Reviewed And Updated To Ensure Better Protection Against Extremist Content?*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	10	4.5	4.5	4.5
	Not sure	16	7.3	7.3	11.8
	Yes	194	88.2	88.2	100.0
	Total	220	100.0	100.0	

*Note.* According to the response, 88.2% of respondents believe that the government needs to review and update its digital firewall policies to ensure better protection against online political extremism, indicating dissatisfaction with the existing framework of digital firewalls. About 4.5% of the respondents are

satisfied with the government's firewall policies while 7.3% remain confused. The response indicates that the public views digital firewalls as outdated and ill-executed which means the government needs to reassess its digital policies, as the ultimate power lies with the people.

**Table 14***Do You Think The Government's Actions Regarding Digital Firewalls Have Increased Public Mistrust Of Its Policies?*

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	11	5.0	5.0	5.0
	Not sure	21	9.5	9.5	14.5
	Yes	188	85.5	85.5	100.0
	Total	220	100.0	100.0	

*Note.* A significant majority, about 85.5% of the respondents believe that government actions regarding digital firewalls have increased public mistrust, raising questions regarding the credibility

and transparency of digital policies. Only 5% of the respondents disagreed with this while 9.5% remained confused.

**Table 15**

*Do You Think Digital Firewalls Negatively Impact Pakistan's Reputation Globally In Terms Of Freedom Of Speech?*

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	16	7.3	7.3
	Not sure	24	10.9	18.2
	Yes	180	81.8	100.0
	Total	220	100.0	100.0

*Note.* An overwhelming majority of the respondents, i.e. 81.8% argued that Pakistan's global reputation in terms of freedom of speech is being negatively impacted by implementing digital firewalls while only a small number of respondents (7.3%) didn't agree with this. The response highlights public rejection of digital policies formulated by the government, fearing that they may put Pakistan's global reputation at stake, particularly in terms of freedom of speech. Only 10.9% of the respondents were not sure about this, which may be due to a lack of knowledge about Pakistan's international standing.

### Discussion

Surprisingly, an overwhelming majority (92.3%) of the respondents were well aware of the recent digital firewall framework implemented by the government but a striking 51.8% of the respondents don't think that the government is transparent about its digital policies. This indicated that the government has struggled to take the public into confidence and ensure a transparent framework, which translated into a lack of awareness among the people about the content being blocked and why. Hence, provoking the public to use countermeasures like VPNs to bypass online restrictions.

Moreover, the results reveal that 49.5% of the respondents doubt that blocking extremist content online can reduce violent and radical activities in the country which represents a policy gap at the hands of the government. The response reveals public dissatisfaction with the government's digital approach to combat extremism by blocking online content. This is supported by the findings of Malik (2024) who represent that a majority of the participants were doubtful whether Pakistan's firewall framework could combat extremism. This has infused a fear in the hearts

of the public that the government's digital firewall policy may be aimed at limiting their inalienable right to stay informed, as a majority of the respondents (17.3% agree and 72.7% strongly agree) expressed that the firewall implementation is not an effort to promote national security but rather a compromise on their rights. This fear is justified as around 81.8% of the respondents faced a great challenge in accessing everyday information and news online, which is their basic right. These statistics are consistent with the findings of Anyanwu et al. (2022) which found that 93.9% of respondents considered banning Twitter a compromise on their rights to freedom of speech and expression.

The public responded by increased VPN usage as 85.5% of the respondents have admitted to using VPN to access the content blocked by the government. Interestingly, 73.2% of the respondents have reported a rise in their VPN usage since last year, prioritizing their rights over compliance with government policies. The rising VPN usage is a direct response to digital firewalls, which means that the government's firewall policy has actually prompted the public to use VPNs. This highlights a critical point that though the government implemented a digital firewall citing national security concerns it backfired and the public resorted to the use of VPNs citing a threat to their fundamental rights. This pattern surely indicates a gap in the execution of the government's policy.

Although the government blocked unauthorized VPNs once again citing a national security concern, a majority of the respondents (around 48.6%) don't link VPN usage to any national security threat as an overwhelming majority around 68.2% expressed that they would still use VPN even if it were made illegal or heavily regulated in Pakistan. Similarly, Anyanwu et al. (2022) found that 63.6% of the respondents in

their study viewed that using VPNs to access Twitter is not illegal despite the federal government's decision to ban the use of the platform. This indicates the public's determination to safeguard their undeniable fundamental rights to information and expression. Moreover, this situation calls for the government to identify the gaps in its digital policies, particularly in the firewall framework. Similarly, though 79.5% of the respondents were aware that using VPNs could adversely impact the effectiveness of digital firewalls, they still insisted on using them to access blocked content.

About 85.5% of the respondents believe that digital firewalls have increased public mistrust, raising questions about the credibility and transparency of digital policies. This indirectly indicates an imbalance in the government's national security preferences and civil liberties. To ensure a successful digital policy to combat extremist content, the government needs to take the public into confidence and promote transparency. Hence, disappointed at the government's inefficient digital policies, around 88.2% of the survey respondents finally expressed to update and review the existing digital regulation strategy, clearly indicating the public's agitation. Lastly, 81.8% of the respondents have associated the implementation of the government's firewall framework with a misguided global image of Pakistan. The respondents fear that such a poorly implemented digital policy may display Pakistan as a state restricting civil liberties.

## Conclusion

This research has critically analyzed the effectiveness of digital firewalls in Pakistan, focusing on their role in countering extremist content and the unanticipated rise in VPN usage. Although the government implemented a digital firewall in view of the rising political extremism the public fears the infringement of their right to freedom of speech since the citizens were not taken into confidence. Moreover, the implementation of such ill-communicated and ill-executed digital policies has adversely impacted the public's confidence in the government, compelling them to resort to VPN usage as a countermeasure.

This implies that the government has struggled to balance its priorities between national security and the protection of civil liberties, to which the people have expressed their fears about the government's digital policies.

## Recommendations

1. Since the research lacks the inclusion of the economic and psychological aspects of digital firewall implementation, future researchers should examine these areas.
2. Policymakers should take the public into confidence while formulating any future digital policies, this could strengthen the public's trust in the government.
3. Rather than imposing bans, the government should integrate AI and advanced machine learning algorithms to effectively monitor and filter content.
4. In order to analyze the efficiency of digital firewalls in limiting political extremist content, the government should publish an annual report on the government's achievements.
5. The government should opt for regulating VPN usage instead of completely banning it, since they also serve other purposes i.e. remote work and privacy protection.
6. The government should focus on introducing such digital policies that balance national security and civil liberties.

## Limitations

Although the study provides an adequate understanding and insight it is important to acknowledge some limitations of the study. The sample size of 220 social media users though suitable for this research, is insufficient to generalize the findings of this research. The research only includes the responses from the urban population, completely ignoring the rural population's perspective on the issue. Moreover, some of the respondents felt hesitant to honestly answer the questions asked in the survey due to fear of repercussions. Finally, the study lacks insights from policymakers which could be critical to this issue.

## References

- Ahmed, Z. S., Yilmaz, I., Akbarzadeh, S., & Bashirov, G. (2024). Contestations of internet governance and digital authoritarianism in Pakistan. *International Journal of Politics Culture and Society*. <https://doi.org/10.1007/s10767-024-09493-2>  
[Google Scholar](#) [WorldCat](#) [Fulltext](#)
- Al Jazeera. (2024, April 17). Pakistan says it blocked social media platform X over 'national security'. *Al Jazeera*. <https://www.aljazeera.com/news/2024/4/17/pakistan-says-it-blocked-social-media-platform-x-over-national-security>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Ali, K. (2024, December 1). PTA decides not to ban VPNs over 'lack of legal grounds.' *Dawn*. <https://www.dawn.com/news/1875860>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Al-Saqaf, W. (2016). Internet Censorship Circumvention Tools: Escaping the control of the Syrian regime. *Media and Communication*, 4(1), 39–50. <https://doi.org/10.17645/mac.v4i1.357>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Analyzing PECA Amendments: Press Freedom, Democratic Values, and Digital Regulation in Pakistan. (2025). *Traditional Journal of Law and Social Sciences*, 4(01), 41–51. <https://ojs.traditionaljournaloflaw.com/index.php/TJLSS/article/view/191>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Anyanwu, B. J., Ukpogon, E. N., & Nkechi, O. L. (2022). Implications of Nigeria's Twitter ban and use of virtual private networks (VPNs) on freedom of speech and expression. *American Journal of Humanities and Social Sciences Research*, 6(4), 1–13.  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Asghar, U. (2023, January 8). Political extremism and Pakistan. *Pakistan Today*. <https://www.pakistantoday.com.pk/2023/01/08/political-extremism-and-pakistan/>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Dawn. (2024, July 15). Govt to ban PTI, seek Article 6 proceedings against Imran, others. *Dawn*. <https://www.dawn.com/news/1845974/govt-to-ban-pti-seek-article-6-proceedings-against-imran-others>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Haider, M. (2024, August 22). PTA chief concedes 'firewall' being upgraded. *The News International*. <https://www.thenews.com.pk/print/1222305-firewall-system-being-upgraded-on-govt-court-orders-pta>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Human Rights Watch. (2024). *World report 2024: Pakistan*. <https://www.hrw.org/world-report/2024/country-chapters/pakistan>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Ingham, K., & Forrest, S. (2002). *A history and survey of network firewalls* (Tech. Rep.). University of New Mexico.  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Iram, A., Shahid, R., & Shams, M. (2022). Freedom of expression under censorship in democratic Pakistan. *Pakistan Journal of Social Research*, 4(04), 809–819. <http://dx.doi.org/10.52567/pjsr.v4i04.895>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Jamil, S. (2021). The rise of digital authoritarianism: Evolving threats to media and internet freedoms in Pakistan. *World of Media–Russian Journal of Journalism and Media Studies*, 3, 5–33. <http://dx.doi.org/10.30547/worldofmedia.3.2021.1>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Lavrakas, P. (2008). Encyclopedia of Survey Research Methods. In *SAGE Publications, Inc. eBooks*. <https://doi.org/10.4135/9781412963947>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Malik, B. (2024). Pakistan's firewall regime: examining political influence, technological structure, and security impacts. *IPRI Journal*, XXIV(02), 109–138. <https://doi.org/10.31945/iprij.240205>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Meserve, S. A., & Pemstein, D. (2020). Terrorism and internet censorship. *Journal of Peace Research*, 57(6), 752–763. <https://www.jstor.org/stable/48631918>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Mou, Y., Wu, K., & Atkin, D. (2014). Understanding the use of circumvention tools to bypass online censorship. *New Media & Society*, 18(5), 837–856. <https://doi.org/10.1177/1461444814548994>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)

- National Counter Terrorism Authority. (2023, May 15). *Pakistan's national narrative against terrorism and extremism* (p. 4). <https://nacta.gov.pk/wp-content/uploads/2023/05/broucher-final-05-15-23.pdf>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Rajput, S. (2024, July 21). Rights: The great firewall of Pakistan. *Dawn*. <https://www.dawn.com/news/1847040>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Romanosky, S., Libicki, M. C., Winkelman, Z., & Tkacheva, O. (2015). Why internet freedom tools? In *Internet freedom software and illicit activity: Supporting human rights without enabling criminals* (pp. 3–8). RAND Corporation. [https://www.rand.org/pubs/research\\_reports/RR1151.html](https://www.rand.org/pubs/research_reports/RR1151.html)  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Ryng, J., Guicherd, G., Al Saman, J., Choudhury, P., & Kellett, A. (2022). Internet shutdowns: A human rights issue. *The RUSI Journal*, 167(4–5), 50–63. <http://dx.doi.org/10.1080/03071847.2022.2156234>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Saeed, A. (2024, June 30). Pakistan's new national firewall to target 'propaganda and unwanted content,' confirms official. *Arab News*. <https://www.arabnews.com/node/2540666/pakistan>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Scott, C., Wolfe, P., & Erwin, M. (1999). *Virtual private networks* (2nd ed.). O'Reilly Media, Inc.  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Shahid, J., & Malik, A. M. (2024, August 16). Govt finally admits it is tinkering with the internet. *Dawn*. <https://www.dawn.com/news/1852555>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- The Express Tribune. (2024, December 12). JIT summons PTI workers over malicious social media campaign. *The Express Tribune*. <https://tribune.com.pk/story/2515521/jit-summons-pti-workers-over-malicious-social-media-campaign>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- The Express Tribune. (2024, November 15). Interior ministry orders ban on unregistered VPNs. *The Express Tribune*. <https://tribune.com.pk/story/2509822/interior-ministry-orders-ban-on-unregistered-vpns-citing-terrorism-concerns>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- The Nation. (2024, November 25). PA resolution calls for ban on PTI over alleged extremism, violence. *The Nation*. <https://www.nation.com.pk/25-Nov-2024/pa-resolution-calls-for-ban-on-pti-over-alleged-extremism-violence>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- The Nation. (2024, October 4). Internet services suspended across major cities in Pakistan ahead of PTI protest. <https://www.nation.com.pk/04-Oct-2024/internet-mobile-services-suspended-ahead-of-pti-protest>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Wagner, B. (2018). Understanding internet shutdowns: A case study from Pakistan. *International Journal of Communication*, 12(1), 22.  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)
- Zhang, Y. (2024). An analysis of Social Contract Theory: based on a comparative analysis of Hobbes, Locke and Rousseau. *Journal of Sociology and Ethnology*, 6(2). <https://doi.org/10.23977/jsoc.2024.060218>  
[Google Scholar](#) [Worldcat](#) [Fulltext](#)