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ARTICLES

GENDER INEQUALITY IN INTERNET ACCESS DURING COVID-19 IN SOUTH ASIA: EVIDENCE FROM PAKISTAN

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Abstract

Advances in technology have introduced relentless competition and increasing demands to everyday life. These pressures particularly intensified during the COVID-19 pandemic, especially in countries where Internet access remains spotty. The right to Internet access ensures connectivity through broadband, and those without such access fall into the digital divide. South Asia, and Pakistan in particular, offers a striking case study of digital inequities, whose impact has been magnified by the global pandemic. Recent studies confirm a persistent gender digital divide in Pakistan and South Asia, where women are significantly less likely to own a mobile phone, access the Internet, or use digital services than men. Against this backdrop of a pronounced gender digital divide, this paper argues that the digital divide, particularly in the South Asian context, constitutes a violation of the fundamental right to Internet access. It seeks to substantiate this claim through an analysis of legal instruments and empirical data on exclusion. It explores the gendered dimensions of this divide in Pakistan, considers the relevant constitutional provisions, and analyzes its broader implications for national development within Pakistan, as well as for regional progress in South Asia. Building on this analysis, the paper concludes by formulating actionable legal and policy remedies, advocating for a multi-level approach that combines constitutional recognition, gender-inclusive governance, strategic partnerships, and targeted empowerment initiatives to bridge the digital gender divide in Pakistan and South Asia.

Keywords

right to Internet access, global pandemic, gender digital divide, South Asia, Pakistan

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СТАТЬИ

ГЕНДЕРНОЕ НЕРАВЕНСТВО В ДОСТУПЕ К ИНТЕРНЕТУ В ПЕРИОД ПАНДЕМИИ COVID-19 В ЮЖНОЙ АЗИИ: ОПЫТ ПАКИСТАНА

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Аннотация

Современные технологические успехи человечества вместе с господством идеи прогресса приводят к усилению социальной конкуренции и требований к квалификации членов общества не только в профессиональной, но и в повседневной жизни. Пандемия COVID-19 особенно ярко проявила это напряжение в странах, где доступ к интернету остается технически нестабильным и недоступным отдельным категориям граждан. Право на доступ к сети интернет предполагает подключение посредством определенной инфраструктуры (широкополосных каналов связи), ограничение доступа к которой приводит к цифровому неравенству. Южная Азия, и особенно Пакистан, представляет собой показательный пример цифрового неравенства, последствия которого были существенно усугублены глобальной пандемией. Современные исследования подтверждают устойчивое существование гендерного цифрового разрыва в Пакистане и странах Южной Азии, где женщины значительно реже, чем мужчины, владеют мобильными телефонами, имеют доступ к интернету и пользуются цифровыми услугами. На фоне выраженного гендерного цифрового неравенства в статье обосновывается тезис о том, что цифровой разрыв, особенно в южноазиатском контексте, представляет собой нарушение фундаментального права на доступ к интернету. Для подтверждения данного утверждения проводится анализ международных и национальных правовых актов, а также эмпирических данных, свидетельствующих об исключенности из цифровой среды. В работе исследуются гендерные аспекты цифрового разрыва в Пакистане, рассматриваются соответствующие конституционные положения и анализируются более широкие последствия этого явления для национального развития Пакистана и регионального прогресса в Южной Азии. На основе проведённого анализа в заключении формулируются практико-ориентированные правовые и политические рекомендации, предполагающие многоуровневый подход, сочетающий конституционное признание права на доступ к интернету, гендерно инклюзивное управление, стратегические партнерства и целевые программы расширения прав и возможностей, направленные на преодоление гендерного цифрового разрыва в Пакистане и странах Южной Азии.

Ключевые слова

право на доступ к интернету, пандемия, гендерное цифровое неравенство, Южная Азия, Пакистан

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Introduction

Information and Communication Technology (ICT) permeates every aspect of socio-economic and political life. By 2020, more than 4.54 billion people worldwide were using the Internet.[1] The steady increase in Internet users enhances digital literacy, which in turn promotes human development. Owing to its significance, digital literacy has been formally recognized by the United Nations (UN) as an indicator of human development. The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines digital literacy as "the ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital devices and networked technologies for participation in economic and social life. It includes competencies that are variously referred to as computer literacy, ICT literacy, information literacy, and media literacy".[2]

In sum, those who fail to meet these criteria are considered to fall within the digital divide. This paper examines the digital divide as an infringement of the right to Internet access, with a particular focus on South Asia in general and Pakistan in particular.

Discussion

Digital Divide and its Determinants

Scholars have long attempted to define the term *digital divide*, and three main schools of thought can be identified: technological determinism, economic and sociological perspectives (Srinuan & Bohlin, 2011, pp. 5–6).

From the technological determinist view, the digital divide arises from the absence of physical means of access or supporting infrastructure. Within this framework, liberalization and market expansion are seen as responses necessitated by technological change in order to close the divide. The implication is that all individuals possess equal potential to use technology and benefit from ICTs, provided they are granted access. This theory can be subdivided into hard and soft determinism: according to hard determinism, technology inevitably drives social change, while soft determinism

[1] Kemp, S. (2020, January 30). *Digital 2020: Global digital overview.* Datareportal. https://datareportal.com/reports/digital-2020-global-digital-overview

[2] UNESCO. (n.d.). *What you need to know about literacy.* Retrieved April 12, 2025 from https://www.unesco.org/en/literacy/need-know#:~:text=UNESCO%20defines%20digital%20literacy%20as,employment%2C%20decent%20jobs%20and%20entrepreneurship

maintains that technology may facilitate, but does not guarantee, such change (Srinuan & Bohlin, 2011, pp. 2–6).

The economic perspective interprets the digital divide primarily in terms of affordability. Individuals may not be able to pay for Internet access at all, or may only be able to afford cheaper, more limited options, such as mobile data. This divide must be understood in the context of both developed and developing nations (David & Phillips, 2022, pp. 2072–2076).

Finally, the sociological perspective emphasizes the socio-cultural causes of the digital divide, such as migration, illiteracy, unemployment, disability, and gender inequality (OECD, 2021, p. 5). This approach resonates with structuration theory, which posits that individuals are constrained by social structures. For example, public access to computers in libraries or community centers is shaped both by librarians, who regulate access, and by users, who in turn reshape the system through their own choice of how to use the technology (Dixon et al., 2014, pp. 991–1009).

Taken together, these perspectives suggest that the digital divide manifests both as a *divide of access* and a *divide of use*. Divide of access refers to limited availability of hardware, software, broadband connectivity, and related infrastructure. By contrast, divide of use concerns disparities in skills, literacy, abilities, and actual practices of use. Ultimately, the digital divide cannot be reduced to a purely technological, social, or economic phenomenon; rather, it encompasses elements of each. Moreover, it operates across multiple levels: between individuals and households, among communities, and even between countries in terms of ICT access and utilization (Srinuan & Bohlin, 2011, pp. 7–9).

Digital Divide and Gender Inequality in the New Normal

It is often emphasized that the world has become a global village, where people and information are accessible with a single click. Yet the pandemic revealed that this notion is not absolute: many still lack the digital connectivity necessary to participate in this global village. These inequities existed prior to the pandemic, but as public life shifted into virtual spaces, they became even more pronounced. The consequences were particularly severe in sectors such as education and healthcare, compared to other sectors that could more readily transition to remote work. Similarly, the impact varied across regions, with South Asia among the most affected due to its extremely high population density and its status as the region with the second-highest rate of extreme poverty.[3]

Understanding the risks and factors underlying the digital divide is crucial, for although the pandemic has ended, dependence on digital technologies continues to grow. Four distinct types of divides must be considered collectively. The first is the *digital usage gap*, which refers to insufficient digital skills at both the personal and professional levels. The second is the *digital access gap*, where certain groups are excluded from Internet access primarily due to socio-economic inequalities. The third is the *digital generation gap*: Eurostat data shows that nearly half of individuals between the ages of 65 and 74 possess low digital skills, a disparity highlighted during the COVID-19 pandemic. Finally, the *gender-based digital gap*—the focus of this paper—remains a persistent challenge.[4]

According to a report by the Alliance for Affordable Internet (2022), four indicators are essential for achieving meaningful connectivity. The absence of one or more of these factors often underlies the gendered digital divide.

[3] Economic and Social Commission for Asia and the Pacific. (2020). COVID-19 and South Asia: National strategies and subregional cooperation for accelerating inclusive, sustainable and resilient recovery (pp. 1–14). United Nations. https://repository.unescap.org/server/api/core/bitstreams/4f86fbd5-7444-455e-9c8a-24704053e3cd/content

[4] Repsol. (n.d.). *What is the digital divide and how can we address it? A gap that must be bridged.* Retrieved April 12, 2025 from https://www.repsol.com/en/energy-and-the-future/people/digital-divide/index.cshtml

These indicators are:

1) regular use of the Internet, with the minimum threshold being daily use;
2) access to an appropriate device, most commonly a smartphone;
3) sufficient data access;
4) a fast and reliable connection, typically defined as 4G.[5]

Significance of Internet Access: A Legal Framework

The Internet is a transformative tool that has greatly expanded global communication. As a medium, it serves as a driver of economic prosperity and sustainable social development. It plays a vital role in poverty reduction by enhancing access to education and healthcare, while also creating new avenues for employment and income generation for low- and middle-income households. Over the past decade, the Internet has also become a cornerstone of democracy and human rights by facilitating the free flow of ideas and opinions. It has revolutionized opportunities for citizen participation in policymaking, enhancing transparency and accountability. Given its contribution to securing political rights and enabling civic engagement, it is in the broader public interest to recognize Internet access as a human right.

Legal recognition of the right to Internet access must also be understood in terms of its role in promoting national development. In 2016, UN member states adopted 17 Sustainable Development Goals (SDGs) aimed at creating a more just, sustainable, and peaceful world by 2030.[6] Internet access directly contributes to achieving SDGs linked to economic and social development (Goals 8–11) as well as those promoting partnerships and inclusive institutions (Goals 16–17). In 2016, the UN General Assembly passed a resolution declaring that Internet access is a human right. While the resolution is non-binding, its adoption marks an important milestone in the early stages of global recognition.[7]

Other international legal instruments reinforce this recognition. Article 19 of the *Universal Declaration of Human Rights* guarantees freedom of opinion and expression "through any media and regardless of frontiers."[8] Similarly, Articles 2, 19, 22, and 25 of the *International Covenant on Civil and Political Rights*[9] are relevant to Internet access (Pollicino, 2020). Furthermore, the Human Rights Committee's General Comment No. 34 emphasizes the obligation of countries to ensure this right.[10]

There is a growing belief that the right to Internet access may eventually acquire the status of customary international law. This would require not only widespread *opinio juris* but also consistent state practice. Several countries have already recognized Internet access as a legal right, including Estonia (2001)[11] and Finland (2009)[12]. While global consensus is still developing, the increasing

5 Alliances for Affordable Internet. (n.d.). *Meaningful connectivity — unlocking the full power of Internet access.* Retrieved April 12, 2025 from https://a4ai.org/meaningful-connectivity

6 Howell, C., & West, D. M. (2016, November 7). *The Internet as a human right.* Brookings. https://www.brookings.edu/blog/techtank/2016/11/07/the-Internet-as-a-human-right/

7 Barry, J. J. (2020, May 26). *COVID-19 exposes why access to the Internet is a human right*. Open Global Rights. https://www.openglobalrights.org/COVID-19-exposes-why-access-to-Internet-is-human-right/

8 Universal Declaration of Human Rights, art. 19, G.A. Res. 217 (III) A, U.N. Doc. A/810, at 71 (Dec. 10, 1948).

9 International Covenant on Civil and Political Rights, Dec. 16, 1966, 999 U.N.T.S. 171.

10 U.N. Human Rights Committee, General comment No. 34, Article 19, Freedoms of opinion and expression, U.N. Doc. CCPR/C/GC/34 (12 Sept. 12, 2011), https://www.refworld.org/legal/general/hrc/2011/en/83764

11 Est. Sup. Ct. (Const. Rev. Ch.), Constitutional Judgment, May 23, 2016, para. 23.

12 Electronic Communications Services Act (Tietoyhteiskuntakaari) ch. 7, pt. 3, Act No. 1207/2020 (Fin.).

acknowledgment of Internet access as a human right signals a move toward its eventual codification under customary international law, provided sufficient international cooperation emerges (Reglitz, 2020, pp. 13-14).

Right to Internet Access: South Asia

Globally, men are 21% more likely than women to be online, and in the world's Least Developed Countries (LDCs), this gap widens to 52%.[13] Internet usage is lowest in South Asia, followed by Sub-Saharan Africa, where only 28% of women, compared to 38% of men have Internet connectivity.[14] The digitalization trends during COVID-19 further highlighted gender inequality in South Asia. According to the United Nations Economic and Social Commission for Asia and the Pacific, the average fixed broadband and mobile broadband speeds in the region are 17 Mbps and 15 Mbps, respectively.[15] These speeds declined during the pandemic as daily Internet use increased by 10% among urban users. The causes are multifaceted, including financial crises, low literacy levels, rural-urban disparities, poor security provisions, and entrenched gender-based digital divides.[16]

It is noteworthy that while the *coverage gap* in South Asia has narrowed over time, the *usage gap* remains significant.[17] Around 18% of women in the region have Internet access, compared to 37% of men. Women are particularly disadvantaged in terms of access to global markets, hindered by lower rates of phone ownership, limited access to mobile Internet, and fewer opportunities to develop digital skills. The pandemic and subsequent lockdowns further reduced women's participation in the labor force, with a sharper shift from formal to informal employment compared to men (91% versus 87%).[18]

The GSMA *Mobile Gender Gap Report* (2021) found that, despite the digital inclusion initiatives introduced during the pandemic, a 36% gender gap in broadband access persists in South Asia. While 38% of women in the region use mobile Internet, approximately 372 million women remain unconnected. The report identified the main reasons women cited for not using mobile Internet as lack of literacy and digital skills, followed by affordability constraints. Additional challenges to digital equality include inadequate digital infrastructure, persistent financial barriers, concerns over data privacy and online harassment, limited interest, and perceptions of irrelevance, as well as broader socio-cultural and institutional obstacles.[19]

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13 Ibarz, G. D. (2022, January 24). *Towards gender equality: The digital rights of girls and women.* International Institute for Environment and Development. https://www.iied.org/towards-gender-equality-digital-rights-girls-women

14 Sarpong, E. (2020, April 15). *COVID-19 shows why Internet access is a basic right. We must get everyone connected.* Web Foundation. https://webfoundation.org/2020/04/COVID-19-shows-why-Internet-access-is-a-basic-right-we-must-get-everyone-connected/

15 Internet Society. (2020). *Impact of COVID-19 on the Internet Ecosystem in Bangladesh, Bhutan, and Pakistan.* https://www.Internetsociety.org/resources/doc/2022/impact-of-COVID-19-on-the-Internet-ecosystem-in-bangladesh-bhutan-and-pakistan/

16 United Nations. (2020, August 18). *Bridging Asia-Pacific 'digital divide' vital to realize tech benefits*. UN News. https://news.un.org/en/story/2020/08/1070502

17 Jefferie, N. (2025, 10 April). *The state of mobile Internet connectivity in South Asia: The coverage gap is narrowing but the usage gap remains the largest in the world*. GSMA. https://www.gsma.com/mobilefordevelopment/blog/the-state-of-mobile-Internet-connectivity-in-south-asia/

18 Okuda, A., & Bell, J. (2022, May 23). *Tackling the digital gender divide in Asia*. The UN agency for digital technologies. https://www.itu.int/hub/2022/05/digital-gender-divide-asia-unicef-rosa/

19 GSMA Connected Women. The Mobile Gender Gap Report. GSMA Intelligence. https://www.gsmaintelligence.com/research/the-mobile-gender-gap-report-2021

Right to Internet Access: A Case Study of Pakistan

According to the Pakistan Bureau of Statistics, the country's population stands at 241.50 million, nearly half of which is women (48.51%).[20] These 101.34 million women were among the most vulnerable populations during the COVID-19 pandemic. Even prior to the pandemic, a digital gender divide existed in Pakistan, and COVID-19 further exposed and exacerbated these disparities. Research on regions with the most frequent Internet shutdowns globally classifies that none of the countries in Southeast Asia are free with respect to Internet freedom.[21]

Within Pakistan, the Digital Rights Foundation has highlighted the inequalities women face in digital space. Its research indicates that women's underrepresentation online is shaped by multiple factors, including cultural and stereotypical expectations, threats of online harassment, and sexualized violence.[22] The gender divide is particularly pronounced on social media platforms. A 2018 report revealed that of 35 million social media users in Pakistan, only 23% were women, and many of these women did not maintain their own accounts but instead shared accounts with male family members.[23]

This pattern is further supported by a telephonic survey of 900 mobile users in Punjab conducted by Emrys Schoemaker. His analysis identified patriarchal attitudes as a key factor shaping men's and women's differential use of social media. The survey found that 85% of Facebook users were male, compared to just 47% of women respondents. Conversely, women showed higher levels of activity on WhatsApp than men.* One interviewee explained this by describing WhatsApp as *ghar ki baat* (a domestic matter), suggesting that it was perceived as a more private platform. Unlike other social media applications, WhatsApp enables more limited interaction and restricts contact with strangers, making it appear more socially acceptable for women. Schoemaker criticizes such selective use of technology, arguing that it reinforces societal stereotypes rather than challenging them.[24]

The following section evaluates the gender-based digital divide across various sectors in Pakistan and assesses its broader impact.

Access to Necessary Information

In Pakistan, as in Bangladesh, women were found to be 15% less likely than men to have access to potentially lifesaving information during the pandemic. This disparity is linked to factors

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20 Government of Pakistan, Ministry of Planning Development, & Pakistan Bureau of Statistics. (2023). 7th Population and Housing Census: National census report (p. 7). https://www.pbs.gov.pk/wp-content/uploads/2020/07/National-Census-Report-2023.pdf

21 Gomez, J. (2021). Internet censorship deteriorates press freedoms in Southeast Asia. Human Rights in the 21st Century. http://humanrights21.eu/Internet-censorship-deteriorates-press-freedoms-in-southeast-asia/

22 Digital Rights Foundation & BoloBhi. (2020, March 31). The digital gap during the COVID-19 pandemic is exasperating inequalities. *Digital Rights Foundation*. https://digitalrightsfoundation.pk/joint-statement-by-digital-rights-foundation-and-bolobhi-the-digital-gap-during-the-COVID-19-pandemic-is-exasperating-inequalities/

23 Farooq, M. (2018, April 18). *Pakistan's social media landscape dominated by males, females lag behind: Report*. Profit. https://profit.pakistantoday.com.pk/2018/04/18/pakistans-social-media-landscape-dominated-by-males-females-lag-behind-report/

* Ed. note: By decision of the authorities of the Russian Federation, *Meta Platforms, Inc.* has been declared an extremist organization, and its activities are prohibited on the territory of Russia.

24 Schoemaker, E. (2015, August 3). Pakistan's 'digital purdah': How gender segregation persists in social media. *LSE*. https://blogs.lse.ac.uk/southasia/2015/08/03/pakistans-digital-purdah-how-gender-segregation-persists-in-social-media/

such as low rates of mobile phone ownership and limited literacy.[25] Pakistan already faces a high maternal mortality rate, with estimates indicating that at least 140 women die during childbirth for every 100,000 live births (Shaeen et al., 2022). Limited access to essential information has only worsened women's health outcomes. A survey by UN Women revealed that 32% of women in Pakistan reported receiving no information to help them prepare for COVID-19, compared with 21% of men. In Bangladesh, 29% of women reported being out of reach of such information, versus only 15% of men.[26]

Although the Pakistani government did take steps to address these challenges, a survey conducted by the Internet Society found that 80% of respondents were unaware of these initiatives. Significantly, 78% of these respondents were male, suggesting that the proportion of women excluded from access to necessary information was even higher.[27]

The gender gap is also evident in women's use of digital platforms that function as major sources of information and space for socio-political engagement. A survey conducted by Punjab University found Facebook usage to be 80.8% among men but only 19.2% among women.* Similarly, women lagged 16.3% behind on LinkedIn, where men represented 83.7% of users.[28] Women's participation was also notably lower on X (formerly Twitter).[29] These disparities are particularly significant given that social media platforms play a central role in shaping socio-political opinion and enabling the global exchange of ideas and expression.

Provisions for Mental and Emotional Health

The impact of COVID-19 on women experiencing the digital gender gap has been profound. Many have faced unemployment or been confined to lower-paying jobs, while simultaneously shouldering increased domestic responsibilities and encountering rising levels of domestic and gender-based violence. As a result, women have borne a disproportionate burden, which is reflected in heightened stress, anxiety, and other mental health conditions.

A United Nations survey found that 63% of men in Pakistan reported suffering from mental and emotional health conditions, compared to 66% of women. In Bangladesh, the figures were similar, with 62% of women and an equal percentage of men reporting mental health challenges.

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25 Aggarwal, A. (2020, November 11). *How COVID-19 fuels the digital gender divide.* Friedrich Ebert Stiftung. https://asia.fes.de/news/digital-gender-divide/

26 UN Women Regional Office for Asia and the Pacific. (2020). *Unlocking the lockdown: The gendered effects of COVID-19 on achieving the SDGS in Asia and the Pacific*. UN Women. https://data.unwomen.org/sites/default/files/documents/COVID19/Unlocking_the_lockdown_UNWomen_2020.pdf

27 Agha, R. J., Qaisrani, A. A., Mughal, M. L., & Asif, S. (2020). *COVID-19 and disaster vulnerability in Pakistan: A Human Rights Based Analysis*. Ministry of Human Rights, Government of Pakistan; United Nations Development Programme. https://files.acquia.undp.org/public/migration/pk/COVID-19-and-Disaster-Vulnerability-in-Pakistan---Revised-28_01_2021.pdf

* Ed. note: By decision of the authorities of the Russian Federation, *Meta Platforms, Inc.* has been declared an extremist organization, and its activities are prohibited on the territory of Russia.

28 Velasco, B. (2022, 21 April). *Gender justice through digital rights and data*. Friedrich Ebert Stiftung. https://www.fes.de/en/iez/international-week-of-justice/article-in-gerechtigkeitswoche/geschlechtergerechtigkeit-durch-digitale-rechte-und-daten-governance

29 Farooq, M. (2018, April 18). *Pakistan's social media landscape dominated by males, females lag behind: Report.* Profit. https://profit.pakistantoday.com.pk/2018/04/18/pakistans-social-media-landscape-dominated-by-males-females-lag-behind-report/

Compounding the problem is a lack of health insurance coverage: only 3% of women and 13% of men in Pakistan were found to have such coverage.[30]

Shift in Informal and Formal Employment

When considering the impact of the digital divide on employment during COVID-19, men were reported to have suffered greater losses than women in both formal and informal sectors. In the informal sector, 33% of women lost their jobs, compared to 56% of men. In the formal sector, the disparity was narrower, with 31% of women excluded from employment compared to 33% of men.

A regional comparison further illustrates the imbalance: in Bangladesh, women were six times less likely than men to be employed in the formal sector during the pandemic.[31]

Digital Gender Gap and the Education Sector in the Pandemic

The history of Pakistan's education sector has long been marked by challenges, ranging from health crises and financial constraints to natural disasters, such as the 2005 earthquake, the 2010 and 2022 floods, and military operations in Swat and other northern areas. COVID-19 emerged as yet another crisis, further undermining an already fragile education system. Gender disparity in education predated the pandemic: 22.8 million children were already out of school, of which 32% were primary-school-age girls compared to 21% boys. This disparity is even more pronounced in higher education, where only 13% of girls are enrolled in secondary education. At the national level, 55% of women over the age of 15 remain illiterate.[32]

Against this backdrop, when classrooms abruptly shifted to digital platforms during the pandemic, existing gender disparities deepened. With inadequate digital connectivity, Pakistan's students faced significant obstacles, sparking widespread protests across the country. Students demanded recognition of the structural inequalities that made online learning inaccessible, exposing the stark realities of the state's inability to provide equal education opportunities.

Access to online education depends on reliable electricity, yet in Pakistan, load-shedding in some areas lasts 16 to 18 hours a day, often during working hours. In remote regions, students lack access to highspeed Internet altogether, forcing many to travel long distances to find stable connections, at considerable financial and personal cost. Female students, in particular, face greater restrictions on mobility, adding health and safety burdens to the existing educational divide. The Human Rights Commission of Pakistan has reported that Internet services are routinely suspended in some areas of Pakistan, and such practices persist to this day.[33] Rather than addressing these systemic issues, the government responded to student protests by arresting peaceful demonstrators, thereby infringing their constitutional rights to peaceful assembly under Article 16[34] and freedom of speech and

30 UN Women Regional Office for Asia and the Pacific. (2020). *Unlocking the lockdown: The gendered effects of COVID-19 on achieving the SDGS in Asia and the Pacific.* UN Women. https://data.unwomen.org/sites/default/files/documents/COVID19/Unlocking_the_lockdown_UNWomen_2020.pdf

31 UN Women Regional Office for Asia and the Pacific. (2020). *Unlocking the lockdown: The gendered effects of COVID-19 on achieving the SDGS in Asia and the Pacific.* UN Women. https://data.unwomen.org/sites/default/files/documents/COVID19/Unlocking_the_lockdown_UNWomen_2020.pdf

32 Agha, R. J., Qaisrani, A. A., Mughal, M. L., & Asif, S. (2020). *COVID-19 and disaster vulnerability in Pakistan: A Human Rights Based Analysis.* Ministry of Human Rights, Government of Pakistan; United Nations Development Programme. https://files.acquia.undp.org/public/migration/pk/COVID-19-and-Disaster-Vulnerability-in-Pakistan---Revised-28_01_2021.pdf

33 Human Rights Commission of Pakistan. (2024). *State of human rights in Pakistan*. https://hrcp-web.org/hrcpweb/wp-content/uploads/2020/09/2024-State-of-human-rights-in-2023-EN.pdf

34 Pakistan Const. art.16.

expression under Article 19 of the Constitution of Pakistan (1973).[35] Furthermore, the state neglected its obligation under Article 37 to provide free and compulsory education and to eliminate illiteracy.[36]

A survey conducted by the Internet Society found that the majority of respondents (78%) were male, including 28% male students who reported difficulties in performing routine academic tasks. Specifically, 67% expressed challenges in attending online classes, citing low download speeds (54%), slow browsing (50%), and frequent disconnections (40%) as the main causes. The financial burden further exacerbated the divide, as respondents reported paying more than $10 on average for Internet services during the pandemic—an amount disproportionately high in Pakistan's economic context.[37]

Steady Shift in Digital Gender Gap in Post-Pandemic Era

According to a recent report by the Global System for Mobile Communications Association (GSMA), the gender gap among mobile Internet users in Pakistan has narrowed for the first time since 2021. While men continue to dominate overall usage, the gap declined from 38% in 2023 to 25% in 2024. However, this data must be critically assessed, as it reflects only mobile Internet users. Information on gender disparity across other digital platforms remains scarce, and patterns of usage across demographic segments require independent evaluation.

The same GSMA report highlights a significant divide in mobile ownership versus access. Approximately 35% of Pakistani women who use mobile Internet rely on borrowed devices, compared to only 6% of men.[38] Ownership itself reflects an even starker disparity: only 26% of women in Pakistan own smartphones, compared to 52% of men.[39] Beyond ownership, the digital gender gap extends to the quality of use. Even when women possess smartphones, they often face additional barriers, such as unreliable networks and limited digital literacy, both of which substantially diminish their user experience.[40] Thus, despite some progress, significant gaps persist.

Legal Backing for Right to Internet Access

In Pakistan, the right to Internet access has not yet been granted explicit constitutional protection, nor does any provincial legislation specifically guarantee this right or prescribe penalties for its infringement. Nonetheless, the right can be inferred from several constitutional provisions, including the right to access information, freedom of opinion and expression, peaceful assembly, and education.

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35 Ibid., art.19.

36 Ibid., art. 37. See also: Tahir, R. (2020, June 30). *Access to Internet is a human right*. Daily Times. https://dailytimes.com.pk/633791/access-to-Internet-is-a-human-right/

37 Internet Society. (2020). *Impact of COVID-19 on the Internet Ecosystem in Bangladesh, Bhutan, and Pakistan*. https://www.Internetsociety.org/resources/doc/2022/impact-of-COVID-19-on-the-Internet-ecosystem-in-bangladesh-bhutan-and-pakistan/

38 Jeffrie, N. (Lead Author), Bahia, K. (Contributor), Gleek, A. (Contributor), Jena, S. (Contributor), Kapllani, B. (Contributor), Leary, R. (Contributor), Lindsey, D. (Contributor), Sibthorpe, C. (Contributor), & Zagdanski, J. (Contributor). (2025). *The Mobile Gender Gap Report 2025* (p. 9). GSMA. https://www.gsma.com/r/wp-content/uploads/2025/06/The-Mobile-Gender-Gap-Report-2025.pdf

39 Shaikh, H., & Chichaibelu, B. B. (2024). *Addressing the gender digital divide in Pakistan: Promoting equal access to mobile phones for economic empowerment*. Consortium for Development Policy Research. https://www.cdpr.org.pk/addressing-the-gender-digital-divide-in-pakistan-promoting-equal-access-to-mobile-phones-for-economic-empowerment/

40 Jefferie, N. (2025, April 9). *Mobile has the potential to empower rural women, but persistent gender gaps must be addressed*. GSMA. https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/blog/mobile-has-the-potential-to-empower-rural-women-but-persistent-gender-gaps-must-be-addressed/

Beyond constitutional interpretation, certain legislative instruments indirectly support the right to Internet access. The *Prevention of Electronic Crimes Act (PECA) 2016* is the primary statute regulating unauthorized acts involving information systems.[41] However, the Act has been widely criticized for granting the government broad and vague powers that enable interference with citizens' Internet access and, more specifically, their ability to hold and express political opinions.[42] Under Section 37(2), read in conjunction with Section 51 of PECA 2016, the government introduced the *Removal and Blocking of Unlawful Online Content (Procedure, Oversight and Safeguard) Rules 2021*, which further expand executive control over online content.[43]

More recently, the *Personal Data Protection Bill 2023* has been introduced, which, once enacted, is expected to strengthen protections for users' digital rights, including the right to Internet access.[44]

Initiatives to Ensure the Right to Internet Access

The Government of Pakistan has recognized the challenges posed by the COVID-19 pandemic in the digital sphere and has undertaken certain measures in response. The following are some of the key initiatives introduced by the state:

Resource Management System (RMS)

The Federal Government launched the Resource Management System (RMS) through its pandemic control body, the National Command and Operation Center (NCOC). This initiative was designed to enhance citizens' ability to exercise their right to Internet access by improving digital connectivity within the healthcare system. The RMS facilitated reliable health resource mapping, covering more than 4,000 COVID and non-COVID hospitals nationwide. Leveraging military's health facilities and infrastructure, the system accelerated the testing and screening of COVID-19 patients, thereby strengthening the overall pace and efficiency of the public health response.[45]

Telehealth Platforms

Another significant government initiative was undertaken by the Ministry of National Health Services, Regulation and Coordination (MNHSRC), in collaboration with the World Health Organization (WHO) and the Commission on Science and Technology for Sustainable Development in the South (COMSATS). Together, they organized a short course to train doctors in providing online health services during the pandemic.[46]

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41 Prevention of Electronic Crimes Act, No. XL of 2016 (Pak.).

42 IDRC-CRDI. (2017, February 13). *Protecting digital rights in Pakistan*. https://idrc-crdi.ca/en/stories/protecting-digital-rights-pakistan

43 Removal and Blocking of Unlawful Online Content (Procedure, Oversight and Safeguards) Rules (2021), 1343 (1) S.R.O 1753 (Pak.).

44 Draft of The Personal Data Protection Bill (2023). (Pak.). https://moitt.gov.pk/SiteImage/Misc/files/Final%20Draft%20Personal%20Data%20Protection%20Bill%20May%202023.pdf

45 Ministry of National Health Services, Regulation and Coordination. (2020). *National Action Plan for Coronavirus Disease (COVID-19) Pakistan* (p. 27). Government of Pakistan. https://www.nih.org.pk/wp-content/uploads/2020/03/COVID-19-NAP-V2-13-March-2020.pdf

46 Agha, R. J., Qaisrani, A. A., Mughal, M. L., & Asif, S. (2020). *COVID-19 and disaster vulnerability in Pakistan: A human rights based analysis*. Ministry of Human Rights, Government of Pakistan; United Nations Development Programme. https://files.acquia.undp.org/public/migration/pk/COVID-19-and-Disaster-Vulnerability-in-Pakistan---Revised-28_01_2021.pdf

This initiative proved particularly beneficial for women in rural areas, who already faced limited access to hospitals and whose mobility was further restricted by COVID-19. Participants in the telehealth courses received training in prenatal care, delivery, and postnatal care, with special emphasis on emergency situations requiring referrals, including cases of postpartum depression and other gender-specific health concerns.[47]

National Socio-Economic Registry (NSER)

The National Socio-Economic Registry (NSER) created comprehensive databases aimed at regulating and safeguarding the rights of laborers employed in the informal sector. The project was distinctive for its explicit emphasis on gender equality and played a critical role during COVID-19 by enrolling beneficiaries in various poverty-reduction schemes. Importantly, it ensured women's representation within these programs, thereby addressing structural inequalities.

However, significant challenges persisted. Only 25% of women living in poverty had access to mobile phones and computerized national identification cards (CNICs), compared with 68% of men. This disparity limited women's ability to fully benefit from the Registry's initiatives, which highlights the structural barriers that continue to reinforce the digital gender divide.[48]

The National Education Response and Resilience Plan

The National Education Response and Resilience Plan was developed to address educational challenges during the pandemic in all four of Pakistan's provinces. It categorized regions into three distinct groups. The first included areas where educational institutions operated without any access to technology. The second comprised areas with only basic technological access—in these regions, the government introduced broadcast-based learning initiatives, such as educational TV programs. The third category encompassed areas where educational institutions had access to advanced technological resources, allowing for higher levels of digital learning.[49]

Higher Education Commission (HEC) Policy Guidance

The Higher Education Commission (HEC) of Pakistan responded to the pandemic by formulating policies that distinguished between *advanced universities*—those prepared to conduct online classes with operational Learning Management Systems (LMS)—and *lagging universities*, which lacked such systems. To address these disparities, HEC established three specialized committees. The Technology Support Committee was tasked with developing LMS platforms for universities that lacked them, as well as ensuring student access to digital library resources.[50] The Content Identification Committee was responsible for cataloguing lectures, reading materials, and evaluation

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47 Qaiser, N. (2023, April 6). COMSATS telehealth: Revolutionizing healthcare in rural Pakistan through ICT. *Daily Parliament Times*. https://www.dailyparliamenttimes.com/2023/04/06/comsats-telehealth-revolutionizing-healthcare-in-rural-pakistan-through-ict/

48 Ministry of Poverty Alleviation and Social Safety. (n.d.). *National Socio-Economic Registry (NSER)* (pp. 11–24). Government of Pakistan. Retrieved April, 12, 2025 from https://www.pass.gov.pk/Detail/NzAwYTI3NjAtOTNjYS00ZmU0LTk5OGEtYzBkYjA1NTdlZGQ1

49 Ministry of Federal Education and Professional Training. (2020). *Pakistan national education response and resilience plan (K-12) for COVID-19* (pp. 11–24). Government of Pakistan. https://planipolis.iiep.unesco.org/sites/default/files/ressources/pakistan_national_education_response_resilience_plan_COVID-19.pdf

50 Higher Education Commission of Pakistan. (2020). *COVID 19 — Technology Support Committee* (pp. 7–10) [Working paper]. https://www.hec.gov.pk/english/HECAnnouncements/Documents/nCoVirus/Approved-Working-Paper.pdf

tools, while the Preventive Measures Committee was established to implement standard operating procedures to prevent the spread of COVID-19 on campuses.[51]

In addition to these measures, HEC launched several broader initiatives, including the creation of the National Knowledge Bank (NKB), the establishment of the National Academy for Higher Education (NAHE), and the Radio School Program, which broadcast educational content daily from 10am to noon, with repeat sessions in the evening. HEC also launched televised lectures on HEC Web TV.[52]

At the regional level, HEC coordinated with other SAARC member states to design capacity-building programs during COVID-19. Furthermore, it established a transition body to regulate medical and dental education under the *Pakistan Medical Commission (PMC) Act 2020*.[53]

Digital Gender Inclusion Strategy 2024

The Pakistan Telecommunication Authority (PTA), in collaboration with UNESCO, the National Commission on the Status of Women (NCSW) and the Global System for Mobile Communications Association (GSMA), has launched a major initiative to address the digital gender divide in Pakistan. This program is part of Prime Minister Shehbaz Sharif's *Digital Nation Pakistan Vision*.[54] While the initiative represents an important step toward digital inclusivity, its effectiveness has yet to be systematically evaluated.

Results

Based on the comprehensive analysis presented above concerning the digital gender divide during and after the COVID-19 pandemic, both in South Asia broadly and in Pakistan specifically, the following recommendations are proposed:

1. **Regional Cooperation through SAARC**

   At the regional level, the South Asian Association for Regional Cooperation (SAARC) should play a more active role.[55]

   Therefore, ensuring equitable digital connectivity must be part of this agenda, enabling individuals to realize their potential through access to technology. Practical initiatives could include regional coding camps for women, modeled on successful programs like the *African Girls Can*

[51] Higher Education Commission of Pakistan. (2020). *HEC COVID-19 Policy Guidance No.5: Online Readiness* (pp. 4–6). https://www.hec.gov.pk/english/HECAnnouncements/Documents/nCoVirus/COVID-19-Policy-Guidance-No.5-Online%20Readiness.pdf

[52] Jamal, S. (2020, November 21). *COVID-19: Pakistan launches Radio Schools project to engage students during pandemic*. Gulf News. https://gulfnews.com/world/asia/pakistan/COVID-19-pakistan-launches-radio-schools-project-to-engage-students-during-pandemic-1.75414211

[53] Higher Education Commission of Pakistan. (2020). *COVID 19 — Technology Support Committee* (pp. 5–11) [Working paper]. https://www.hec.gov.pk/english/HECAnnouncements/Documents/nCoVirus/Approved-Working-Paper.pdf

[54] Pakistan Telecommunication Authority. (2024, February 28). *Digital Gender Inclusion Strategy*, https://www.pta.gov.pk/assets/media/digital_gender_inclusion_strategy_28-02-2024.pdf

[55] The eight founding members of SAARC, comprising Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka, signed its charter at Dhaka on Dec 08, 1985, with the main objective of promoting the welfare of people of South Asia through mutual assistance in the economic, social, cultural, technical, and scientific fields. *See*, Charter of the South Asian Association for Regional Cooperation, Dec. 8, 1985, Dhaka, Bangladesh, https://www.saarc-sec.org/index.php/resources/agreements-conventions/46-saarc-charter-provisional-rules-of-procedure/file

Code Initiative (AGCCI)[56] and the *Americas Girls Can Code (AGCC)*,[57] which provide training in programming and other digital skills.

2. **Constitutional Recognition of Internet Access**
   Pakistan should explicitly recognize the right to Internet access as a fundamental human right. Such recognition would establish a stronger legal framework against frequent Internet shutdowns, requiring that any restrictions meet strict proportionality standards in line with international human rights law. In parallel, strengthening existing government measures, such as right-of-way (ROW) charges for IT and fiber installations, would reinforce accessibility.
3. **Gender-Inclusive State Initiatives**
   All state-led initiatives must incorporate a gender-inclusive approach from the outset, ensuring that women's needs are addressed at the most basic level of policy and implementation.
4. **Public-Private Partnerships**
   Partnerships between the public and private sectors should be encouraged and incentivized. Investment in infrastructure, particularly in projects focused on women, should be guided by measurable Key Performance Indicators (KPIs). Telecom operators, including Jazz, Telenor, and Ufone, are already contributing to expanding Internet access and should be further supported. For instance, Jazz took the initiative of Mera *Goan Live* ("*My Village is Digitally Enabled*") in which Jazz outreached women at their door-steps leveraging GSMA mobile Internet skills training toolkits while respecting cultural norms.[58] Telenor worked on bridging gender digital divide by onboarding PTA on Disability Job Portal in 2022 as lead partner and job placement of 1 female person with disability at PTA. Further, it launched the program "Taleemabad" under which it established 6 virtual schools for girls at federal territory and digital birth registration system. Moreover, it also took the initiative of "Khushal Aangan" to empower women from rural and agri-focused regions of Pakistan.[59] Likewise, Ufone has also taken remarkable steps including the introduction of an industry-first Smart code (*765#) allowing women to receive mobile top-ups without having to share their phone numbers with retailers, addressing a key privacy need.[60]
5. **Affordable Devices and Data Plans**
   Programs to improve the affordability and accessibility of devices are essential. Mobile phones should be made available at subsidized rates, and telecom operators should be encouraged to offer discounted data packages or bundles tailored to rural areas and SIM cards registered to women.

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[56] UN Women Africa. (n.d.). *African Girls Can Code Initiative (AGCCI).* UN Women. Retrieved April 11, 2025, from https://africa.unwomen.org/en/where-we-are/eastern-and-southern-africa/liaison-office-to-au-and-uneca/african-girls-can-code-initiative-agcci

[57] ITU Regional Office for the Americas. (2020, December 14). *Americas Girls Can Code: Leveling the tech playing field for girls and women*. The UN Agency for Digital Technologies. https://www.itu.int/hub/2020/12/americas-girls-can-code-leveling-the-tech-playing-field-for-girls-and-women/

[58] Viljoen, K., & Manchanda, G. S. (2025). *Jazz Pakistan educates rural women and men about the transformational benefits and uses of mobile*. GSMA. https://www.gsma.com/solutions-and-impact/connectivity-for-good/mobile-for-development/blog/jazz-pakistan-educates-rural-women-and-men-about-the-transformational-benefits-and-uses-of-mobile/#:~:text=To%20ensure%20comfort%20and%20social,to%20reflect%20this%20inclusive%20approach

[59] Telenor Group, & Pakistan Telecommunication Authority. (2022, February). *#HerDigitalPakistan accelerating gender inclusion in ICTs*. https://www.pta.gov.pk/assets/media/telenor_10-05-2024.pdf

[60] Business Recorder. (2022, May 28). *Ufone 4G expands female customer base*. https://www.brecorder.com/news/40176230#:~:text=Also%20delivering%20on%20women's%20safety,GSMA%20Ufone%204G

6. **Promoting the Gig Economy for Women**
   The term gig economy is characterized by freelance, part-time, and project-based jobs facilitated through digital platforms, this model allows workers to offer services directly to customers or to businesses on a temporary basis (Dawid, 2024). Awareness campaigns should inform unemployed women, women in small-scale industries, and women with limited education and skills about the opportunities provided by the gig economy. Short-term online work offers flexible solutions that can help overcome cultural barriers and economic constraints, while reducing the gendered digital divide.
7. **Gender-Responsive Digital Safe Spaces**
   Women-centric platforms should be developed to provide safe spaces where women can voice concerns about Internet access and usage. A dedicated women's task force should also be created to address digital rights violations. Such measures can form part of a broader rights-based digital protection approach to social protection through technology.
8. **Education and Digital Literacy**
   The government should allocate sufficient budgetary resources to establish free public Wi-Fi hotspots, particularly in densely populated areas and government institutions. At the same time, strict measures must be adopted to ensure privacy protections and gender-sensitive policies. Digital literacy curricula should incorporate gender perspectives, and mentorship programs such as *Women in Cybersecurity*[61] should be expanded.
9. **STEM Quotas for Women**
   Quotas should be reserved for women in Science, Technology, Engineering, and Mathematics (STEM)—related jobs. Such affirmative action can encourage women's participation, help dismantle stereotypes, and contribute to narrowing the gender gap in technology.
10. **Awareness and Advocacy**
    Greater public awareness of the digital gender divide is essential. Journalists, think tanks, and advocacy groups should be engaged to highlight the urgency of the issue, fostering wider social and political support for reforms.

Conclusion

This research has systematically examined the digital gender divide as a fundamental infringement of the right to Internet access, with a concentrated focus on South Asia and an in-depth case study of Pakistan. The COVID-19 pandemic acted as a stark magnifier of pre-existing inequities. It highlighted the specific vulnerability of South Asia due to its socio-economic profile and introduced the four indicators of meaningful connectivity—regular use, appropriate device, sufficient data, and fast connection—the absence of which defines the gendered gap. The pandemic's acceleration of digital dependence across sectors like health, education, and employment rendered this divide not just a matter of inequality, but of acute disenfranchisement. The authors believe that addressing the digital gender divide requires a holistic, multi-stakeholder strategy that targets its technological, economic, and sociological roots simultaneously. In essence, securing digital equity for women in Pakistan and South Asia is not a standalone technical goal but a prerequisite for inclusive development, democratic participation, and the fulfillment of fundamental human rights. The path forward demands unwavering commitment to translating these interconnected recommendations from paper into practice.

[61] National Cyber Emergency Response Team of Pakistan (PKCERT). (n.d.). *Security Awareness for Female Empowerment and Resilience (SAFER)*. Retrieved April 11, 2025, from https://pkcert.gov.pk/safer.asp

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