

# Use of Digital Media in Parliaments: A Web-based Comparative Analysis of South Asia

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**Abstract** This research seeks to find out how parliaments in South Asia use digital media tools like parliament websites and social media and online communication networks. It also measures the degree of utilisation of such tools by the parliaments, to identify challenges and opportunities in the adoption of these technologies and correlate the findings with the democratic and participatory indices. The research, through a web-based comparative investigation of eight South Asian countries from December 7 to December 18, 2024, evaluates the existence and effectiveness of 15 digital tools, utilising a modified binary coding methodology based on Schwanholz and Busch (2016). The results show that there are big differences in how people use digital media. For example, Sri Lanka (24) and India (20) are at the top, while Afghanistan (0) and Bangladesh (11) are at the bottom because of problems with infrastructure and political challenges. The study also examines the relationship between digital media scores and V-Dem's Liberal Democracy Index (LDI) and Participatory Component Index (PCI), revealing significant negative correlations (LDI:  $r = -0.73$ ,  $p = 0.038$ ; PCI:  $r = -0.75$ ,  $p = 0.033$ ), suggesting that more robust democracies demonstrate higher levels of digital engagement and countries with robust digital media adaptation in parliamentary engagement are tend to have better democratic environment. The findings emphasise the importance of developing innovative ways to bridge the digital divide and promote inclusive government in South Asia.

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## INTRODUCTION

Parliaments in contemporary democracy not only legislate but also address concerns and opinion of the public, thereby ensuring transparency and accountability.<sup>1</sup> Using digital technologies, citizens can now directly and continuously engage with their representatives, which was not possible a decade ago. As noted by the World Bank Group, digital tools (Internet, social media, etc.) help in bridging the divide between governance institutions and citizens.<sup>2</sup> Furthermore, the use of these digital tools can strengthen citizen engagement and ensure legislative transparency. Therefore, digital platforms, such as, parliamentary monitoring websites, have emerged that enable real-time interaction between legislators and citizens.<sup>3</sup> Internet has the potential to democratize the world; it will improve relations between citizens and their representatives.<sup>4</sup> Social media, blogs and live stream services are examples of digital platforms which, according to Kunert, have revolutionized political engagement with people by allowing them to access up-to-date information and be part of the conversations from anywhere in the world.<sup>5</sup> Despite the widespread use in various contexts, many parliaments (notably in Western Europe) are slow to adopt these technologies.<sup>6</sup> However, subsequent studies show that digital media is now becoming a means to ensure visibility and transparency of legislative affairs, which indicates that politics is progressively integrating these

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<sup>1</sup> R. S. Katz and B. Wessels (eds), *The European Parliament, the National Parliaments, and European Integration*. Oxford: Oxford University Press, 1999. Accessed at: <https://doi.org/10.1093/0198296606.001.0001>

<sup>2</sup> World Bank Group, *World Development Report 2016: Digital Dividends*. Washington, D.C.: World Bank Publications, 2016. Accessed at: <https://www.worldbank.org/en/publication/wdr2016>

<sup>3</sup> R. Borge Bravo and M. Esteve Del Valle, 'Opinion leadership in parliamentary Twitter networks: A matter of layers of interaction?'. *Journal of Information Technology & Politics* 14(3) 2017, pp. 263-276. Accessed at: <https://doi.org/10.1080/19331681.2017.1337602> ;

D. Joshi and E. Rosenfield, 'MP transparency, communication links and social media: A comparative assessment of 184 parliamentary websites'. *The Journal of Legislative Studies* 19(4) 2013, pp. 526-545. Accessed at: <https://doi.org/10.1080/13572334.2013.811940>

<sup>4</sup> S. Coleman and J. A. Taylor, 'Parliament in the age of the Internet'. *Parliamentary Affairs* 52(3) 1999. Accessed at: <https://doi.org/10.1093/pa/52.3.365>

<sup>5</sup> J. Kunert, 'Informations- und Transparenzinhalte auf den persönlichen Webseiten der Mitglieder des Europäischen Parlaments'. *Zeitschrift für Vergleichende Politikwissenschaft* 10(Suppl 2) 2016, pp. 41-65. Accessed at: <https://doi.org/10.1007/s12286-016-0287-8>

<sup>6</sup> P. Norton (ed), *Parliaments and Citizens in Western Europe*. Abingdon: Routledge, 2020. Accessed at: <https://doi.org/10.4324/9781003062547>

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technologies.<sup>7</sup> Although different countries and political systems continue to utilise these tools in diverse manners, they are now indispensable for enhancing transparency and accomplishing greater inclusiveness in the democratic process.<sup>8</sup>

In South Asia, the use of digital media has been highly uneven but its use is increasingly becoming more critical in shaping the parliament-citizen relationship. Countries like Sri Lanka and India are ahead of others in using digital platforms for enhancing parliamentary communication and countries like Afghanistan and Bangladesh are not able due to infrastructural challenges.<sup>9</sup> Therefore, this study seeks to find out how parliaments in South Asia use digital media tools like parliament websites and social media and online communication networks. It will also measure the degree of utilisation of such tools by the parliaments to identify challenges and opportunities in the adoption of these technologies and correlate the findings with the democratic and participatory indices not only in South Asia but also in other regions. This study addressed the limitations and potential of digital tools for parliament. This paper might open up new avenues for research on parliament, including Australia and the Pacific areas. Further, findings will help the parliaments in the Pacific Island countries to overcome the barriers of such inclusion. Additionally, it could take some policy suggestions from countries like Australia and mimic them in South Asian countries.

## **THE EVOLVING ROLE OF PARLIAMENTS IN THE DIGITAL AGE**

In democracies, the parliament represents the will of the people as it makes laws that are directly applicable to them.<sup>10</sup> A parliament communicates with the citizens through its legislations. The World Bank Group points out that with the increasing incorporation of digital media in the state institutions, the way parliaments communicate with citizens seems to

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<sup>7</sup> C. Leston-Bandeira, 'Studying the relationship between Parliament and citizens'. *The Journal of Legislative Studies* 18(3-4) 2012, pp. 265-274. Accessed at: <https://doi.org/10.1080/13572334.2012.706044>

<sup>8</sup> C. Leggewie and C. Bieber, 'Demokratie 2.0- Wie tragen neue Medien zur demokratischen Erneuerung bei?', in C. Offe (ed), *Demokratisierung der Demokratie- Diagnosen und Reform vorschläge*. Frankfurt/M.: Campus Verlag, 2003, pp. 124-151 Accessed at: <https://tinyurl.com/mt5scyuz>

<sup>9</sup> M. U. Hossain, M. A. Hossain and M. S. Islam, 'An assessment of the information needs and information-seeking behavior of Members of Parliament (MPs) in Bangladesh'. *Information and Learning Science* 118(1/2) 2017, pp. 48-66. Accessed at: <https://doi.org/10.1108/ILS-10-2016-0075> ; Katz and Wessels, *The European Parliament*.

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change as well.<sup>11</sup> There is a growing trend throughout parliaments to use digital technology in their legislative processes to strengthen their communication with the public.<sup>12</sup>

Coleman and Taylor carried out the first extensive effort to understand the function that parliaments play on the internet as it has the ability to advance democratic ideals due to its capacity to strengthen connections between average citizens and powerful political figures.<sup>13</sup> Nevertheless, empirical case studies that were done some ten years later reveal that digital media has been crucial in supporting efforts and initiatives aimed at improving transparency and accessibility in legislative proceedings.<sup>14</sup> The time period between these two studies has witnessed a substantial progress on the communication of politicians with citizens through the widespread adoption of digital media. No matter where they are or what time it is, people in this modern era of information society are expected to have up-to-date knowledge of relevant topics and events.

According to Kunert, politicians have made use of the websites they maintain in order to fulfill the demands set forth by their constituents.<sup>15</sup> Politicians are able to supply voters with information about their personal as well as the professional activities they pursue, thanks to the availability of these web platforms. In addition, the use of these websites grants politicians a degree of control over their own narratives and reduces the extent of their dependency on the national mass media for the distribution of information. It is a standard practice in today's world for almost all elected politicians to have their own personal websites. Nevertheless, a discrepancy can be observed in the extent to which these platforms may be used and the variety of approaches to engage citizens. This discrepancy is obvious both within individual countries and when comparing different countries to one another globally.

Kunert has also found a positive trend that the EU Parliamentarians use the digital platforms (including blogs and X posts) more as compared to the members of the national parliaments.<sup>16</sup> However, a survey conducted in 2010 revealed that a significant number of Bundestag members acknowledged the great value of online communication for their respective

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<sup>11</sup> World Bank Group, *World Development Report 2016*

<sup>12</sup> Borge Bravo and Esteve Del Valle, 'Opinion leadership'; Joshi and Rosenfield, 'MP transparency'

<sup>13</sup> Coleman and Taylor, 'Parliament in the age of the Internet'

<sup>14</sup> Leston-Bandeira, 'Studying the relationship between Parliament and citizens'

<sup>15</sup> Kunert, 'Informations-und Transparenzinhalte'

<sup>16</sup> Kunert, 'Informations-und Transparenzinhalte'

professional activities.<sup>17</sup> Interestingly, these very parliamentarians continued to rely on traditional channels of mass media rather than directly engaging with the general public in order to disseminate information during the 2000s.<sup>18</sup> According to Hoecker<sup>19</sup> and Neuberger,<sup>20</sup> members of parliament have demonstrated little propensity to interact in an authentic manner with their constituents and instead view internet communication largely as a way to better represent themselves. The emergence of interactive and social media has brought about some significant new components. The interactive media possesses an often-overlooked utility in facilitating contact between political leaders and citizens.<sup>21</sup> As a result, it increases the likelihood that decision-making processes will align with the ideals of direct democracy. The development of new pathways for participating in political dialogue online has been made possible by recent advances in technology.

Some parliaments in Europe have established various ways increasing the public engagement on legislative matters, especially through online platforms like parliamentary websites.<sup>22</sup> A parliament's official website can provide impartial information concerning politics that may enhance social integration and inclusion. Such platforms help the citizens in tackling the confusion arising from information overload. They carry structured information that is easy to access and understand. Moreover, they assist in improving the way a citizen approaches complex political topics. Real-time coverage like live streaming of debates makes the

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<sup>17</sup> J. Tenschler and L. Will, 'Abgeordnete online? Internetaktivitäten und-bewertungen der Mitglieder des Deutschen Bundestages'. *Zeitschrift für Parlamentsfragen* 41(3) 2010, pp. 504-518. Accessed at: <https://doi.org/10.5771/0340-1758-2010-3-504>

<sup>18</sup> T. Zittel, 'Political representation in the networked society: the Americanisation of European systems of responsible party government?'. *The Journal of Legislative Studies* 9(3) 2003, pp. 32-53. Accessed at: <https://doi.org/10.1080/1357233042000246855>

<sup>19</sup> B. Hoecker, 'Mehr Demokratie via Internet? Die Potenziale der digitalen Technik auf dem empirischen Prüfstand'. *Aus Politik und Zeitgeschichte* 52(39-40) 2002, pp. 37-45. Accessed at: <https://www.bpb.de/shop/zeitschriften/apuz/26705/mehr-demokratie-via-internet/>

<sup>20</sup> C. Neuberger, 'Wandel der aktuellen Öffentlichkeit im Internet'. *Gutachten im Auftrag des Büros für Technikfolgen-Abschätzung beim Deutschen Bundestag zum Projekt 'Analyse netzbasierter Kommunikation unter kulturellen Aspekten, 2004*

<sup>21</sup> Leggewie and Bieber, 'Demokratie 2.0'

<sup>22</sup> Hansard Society, 'Parliaments and public engagement: Innovation and good practice around the world', 2011 ; C. Leston-Bandeira and D. Bender, 'How deeply are parliaments engaging on social media?'. *Information Polity* 18(4) 2013, pp. 281-297. Accessed at: <https://doi.org/10.3233/IP-130316>

community more engaged and the websites allow accessibility for diverse community members.<sup>23</sup>

Parliament serves as a neutral and cost-effective source of political information, fostering online discussions through social media, where citizens can interact with expert moderators and share ideas, as exemplified by platforms like the German Bundestag's 'Das Parlament'.<sup>24</sup> Despite this, there is a dearth of academic study that expressly investigates the connection between citizens and their government in the setting of information technology.<sup>25</sup> Moreover, it is crucial to point out that the number of studies that has already been conducted on this topic is scant, which reveals that there are some areas that have not been sufficiently investigated. In particular, the vast majority of the studies<sup>26</sup> that have been carried out up until this point have mostly concentrated on the viewpoint of democratic governance or public administration, often emphasizing e-government, transparency, and service delivery, but they have neglected to take into account the point of view of parliamentary systems. Moreover, much of the existing research in this field seems to concentrate only on the Anglo-Saxon as well as European countries, leaving other important regions of the world unexplored.<sup>27</sup>

## DIGITAL MEDIA IN BRIDGING THE DIGITAL DIVIDE

The way citizens engage with institutions, authorities, and politicians has changed substantially with the advancement of internet and digital media, reaching a standard that would have appeared unthinkable just 30 years ago.<sup>28</sup> In the past, the only means for the general public to

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<sup>23</sup> Leston-Bandeira, 'Studying the relationship between Parliament and citizens'

<sup>24</sup> P. Theiner, J. Schwanholz and A. Busch, 'Parliaments 2.0? Digital media use by national parliaments in the EU', in J. Schwanholz, T. Graham and P. Stoll (eds), *Managing Democracy in the Digital Age: Internet Regulation, Social Media Use, and Online Civic Engagement*. Cham: Springer International Publishing, 2017, pp. 77-95. Accessed at: [https://doi.org/10.1007/978-3-319-61708-4\\_5](https://doi.org/10.1007/978-3-319-61708-4_5)

<sup>25</sup> Norton, *Parliaments and citizens in Western Europe*

<sup>26</sup> Darrell M. West, *Digital Government: Technology and Public Sector Performance* (Princeton: Princeton University Press, 2005); A. Chadwick, *Internet Politics: States, Citizens, and New Communication Technologies*. Oxford: Oxford University Press, 2006; Helen Margetts, "The Internet and Public Policy," *Policy & Politics* 37, no. 1 (2009): 1–17.

<sup>27</sup> C. Leston-Bandeira, S. Ward, M. Francoli, T. Zittel, P. Norton and D. Roy, 'Parliaments in the digital Age'. *Oxford Internet Institute Forum Discussion Report* 13, 2008, p. 50. Accessed at: <https://www.oii.ox.ac.uk/wp-content/uploads/old-docs/FD13.pdf>

<sup>28</sup> Chadwick, *Internet Politics*.

communicate directly with their representatives was through written communication, in-person meetings during constituency elections, or through other official channels. Today, however, there are a variety of digital avenues available to do so, making communication more accessible.<sup>29</sup> Digital communication also makes it possible for anybody, anywhere, to produce and disseminate political content in a way that was previously only available to broadcasters and journalists.<sup>30</sup> Individuals or groups can now write and distribute information as ‘news’ without having to meet formal credentials, go through quality control procedures, or take ethical considerations into account.<sup>31</sup>

The publication and circulation of parliamentary information through digital media in developed nations have demonstrated that it improves citizen participation in governance and decreases the gap between the representative and the represented.<sup>32</sup> Over the past 20 years, the use of digital tools to aid this process has grown, leading to the creation of incredibly popular parliamentary monitoring websites like ‘TheyWorkForYou’ in the UK and ‘GovTrack’ in the USA.<sup>33</sup> The official website of the British Parliament, established in 1996, was one of the earliest efforts to use the internet to increase public participation in governance.<sup>34</sup>

With the emergence of the concept of ‘Web 2.0’, the static web has transformed into dynamic ones that enable users to create their own content as well as interact, which also contributed to the emergence of ‘Government 2.0’.<sup>35</sup> As people became accustomed to the participatory features of the internet, they expected similar transparency and interaction from their

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<sup>29</sup> S. Coleman and J. G. Blumler, *The Internet and Democratic Citizenship: Theory, Practice and Policy*. Cambridge: Cambridge University Press, 2009

<sup>30</sup> N. Couldry, S. Livingstone and T. Markham, *Media Consumption and Public Engagement: Beyond the Presumption of Attention*. Basingstoke: Palgrave Macmillan, 2016. Accessed at: <https://doi.org/10.1057/9780230800823>

<sup>31</sup> Z. Papacharissi, ‘The virtual sphere: The internet as a public sphere’. *New Media & Society* 4(1) 2002, pp. 9-27. Accessed at: <https://doi.org/10.1177/14614440222226244>

<sup>32</sup> A. Macintosh, ‘Characterizing e-participation in policy-making’, in *Proceedings of the 37th Annual Hawaii International Conference on System Sciences*. IEEE, 2004. Accessed at: <https://doi.org/10.1109/HICSS.2004.1265300>

<sup>33</sup> A. Chadwick, *The Hybrid Media System: Politics and Power*. Oxford: Oxford University Press, 2017.

<sup>34</sup> P. Norris, ‘Democratic divide? The impact of the Internet on parliaments worldwide’. *American Political Science Association Panel 2*, 2000, pp. 195-240. Accessed at: <https://tinyurl.com/mry7vy48>

<sup>35</sup> T. O’Reilly, ‘What is Web 2.0: Design patterns and business models for the next generation of software’. *Communications & Strategies* (1) 2007, p. 17. Accessed at: SSRN: <https://ssrn.com/abstract=1008839>

governments, leading to the concept of 'Parliament 2.0'.<sup>36</sup> This concept includes digital records, platforms for citizen engagement, and technology for remote participation and virtual voting.<sup>37</sup>

Digital platforms allow a wider reach to larger audiences. Political information can be accessed by individuals even in the farthest 'corners' of the globe, and by people with disabilities.<sup>38</sup> They help parliaments to receive feedback quickly as well as live Q&A sessions. Also, it makes parliament transparent and accountable as it allows citizens to revisit what their parliament has done in the past.<sup>39</sup> In addition, digital media is cheaper than other means of communication, and thus, resources can be allocated to other necessary services.<sup>40</sup> The younger generation is also using digital media to ensure that their opinions influence decision-making.<sup>41</sup>

Several scholarly works<sup>42</sup> speculated that the digital realm engenders public discourse which is essential for the effective functioning of democracy. People can use online platforms to connect with people who they never met in person but share similar interests, even if they are located far away.<sup>43</sup> In that sense, these online connections are useful in supporting

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<sup>36</sup> A. Chadwick, 'Web 2.0: New challenges for the study of e-democracy in an era of informational exuberance'. *ISJLP* 5, 2008, p. 9.

<sup>37</sup> J. Griffith and C. Leston-Bandeira, 'How are parliaments using new media to engage with citizens?'. *The Journal of Legislative Studies* 18(3-4) 2012, pp. 496-513. Accessed at: <https://doi.org/10.1080/13572334.2012.706058>

<sup>38</sup> Norris, P. (2000). Democratic divide? The impact of the Internet on parliaments worldwide. *American Political Science Association Panel*, 2, 195-240. Accessed at: <https://tinyurl.com/mry7vy48>

<sup>39</sup> Macintosh, 'Characterizing e-participation'

<sup>40</sup> S. Coleman, 'The lonely citizen: Indirect representation in an age of networks'. *Political Communication* 22(2) 2005, pp. 197-214. Accessed at: <https://doi.org/10.1080/10584600590933197>

<sup>41</sup> D. G. Lilleker and K. Koc-Michalska, 'Online political communication strategies: MEPs, e-representation, and self-representation'. *Journal of Information Technology & Politics* 10(2) 2013, pp. 190-207. Accessed at: <https://doi.org/10.1080/19331681.2012.758071>

<sup>42</sup> J. Blumler and S. Coleman, *Realising Democracy Online: A Civic Commons in Cyberspace*. London: Institute for Public Policy Research, 2001. Accessed at: <https://tinyurl.com/4j6c7y93> ; P. Levine, R. Hayduk and K. Mattson, 'Can the Internet rescue democracy? Toward an on-line commons', in R. Hayduk and K. Mattson (eds), *Democracy's Moment: Reforming the American Political System for the 21st Century*. Lanham: Rowman & Littlefield, 2002, pp. 195-212. Accessed at: <http://staging.community-wealth.org/sites/clone.community-wealth.org/files/downloads/paper-levine.pdf>

<sup>43</sup> H. Rheingold, *The Virtual Community, Revised Edition: Homesteading on the Electronic Frontier*. Cambridge, MA: MIT Press, 2000. Accessed at: <https://doi.org/10.7551/mitpress/7105.001.0001>

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marginalised people. Moreover, constituents' communication via digital means with elected officials improves efficiency and trust in representative democracy.<sup>44</sup>

Although much has been achieved concerning how parliaments in developed countries have embraced digital media, a clear research gap exists on South Asian parliaments. Most of the studies that have been conducted<sup>45</sup> have been concerned with democracies of the West, which have a supportive infrastructure and political systems that facilitate the integration of digital media. There is little research about embracing digital tools and practices by the parliaments in a region such as South Asia, with its specific institutional setup, different degrees of digital infrastructure and diverse patterns of civic engagement. While some studies have found social media engagement and citizen feedback tools to improve transparency and democratic participation,<sup>46</sup> we are yet to know their uses and effectiveness in South Asia. Furthermore, there are not many comparative studies that have looked at the digital media adoption of South Asian parliaments and what impact factors like internet penetration, social media use rates, political openness and democratic governance have on countries' digital engagement.

A comparative analysis of digital media strategies across South Asian countries, along with a deeper understanding of how these tools impact public trust and citizen involvement, would significantly contribute to closing this research gap. This study focuses on filling this gap by investigating the employment of digital media tools in the context of the South Asian parliaments and identifying distinct challenges as well as correlating the findings with the democratic and participatory indices.

## **METHODOLOGICAL FRAMEWORK AND APPROACH**

This study is based on the examination of national parliament websites of 8 South Asian countries from December 7 to December 18, 2024. Only the presence and functionality of the digital media tools from Table 3 are the subject of the analysis. Aspects like user-friendliness—such as how simple it is to find the application, where it is positioned, or how well it blends in

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<sup>44</sup> B. Bimber, 'The Internet and citizen communication with government: Does the medium matter?'. *Political Communication* 16(4) 1999. <https://doi.org/10.1080/105846099198569> ; S. Coleman, 'A tale of two houses: The House of Commons, the Big Brother house and the people at home'. *Parliamentary Affairs* 56(4) 2003, pp. 733-758. Accessed at: <https://doi.org/10.1093/pa/gsg113>

<sup>45</sup> Chadwick, *Internet Politics*; Coleman and Blumler, *The Internet and Democratic Citizenship*.

<sup>46</sup> Macintosh, 'Characterizing e-participation'

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with the website's overall layout and style—are not evaluated. Hoffman<sup>47</sup> and other systematic studies in political communication serve as the main foundation for the techniques chosen.

Lindsay Hoffman's Three-Dimensional Model of Political Communication (TDMPC) offers a comprehensive guideline for studying how media, interpersonal communication, and individual behaviour intersect in the political context. The foundation of Hoffman's model is that the political communication is not linear but has many different and interrelated components such as media exposure, interpersonal discussion and political participation. In complex ways, each of these dimensions influences one another in a dynamic process in which individuals' media exposure and political conversation shape and are shaped by their political behaviours.<sup>48</sup> The model shows digital media plays a significant role in ensuring democratic participation. Using digital media tools citizens will feel more engaged in civic life, and lead them to think about social issues and political activities. The model also shows how communication and participation complete a feedback loop.<sup>49</sup> Hoffman's TDMPC model classified digital media into different types; one-dimensional, two-dimensional, and three-dimensional, based on different levels of interaction and engagement.

First, one-dimensional media refers to the traditional, linear flow of information from a central source to a passive audience. In this model, content flows in one direction, typically from the media producer (e.g., television stations, newspapers) to the consumer. For example, from website, online television, newspapers, television, digital notice boards, RSS feeds, newsletters, audio recordings, podcasts etc. Such media is often associated with a broadcast or less interactive static website that does not allow users to partake in the conversation.<sup>50</sup> One-dimensional media resembles the initial phase of the internet (Web 1.0) that was mainly read only, thus creating a situation of user read only engagement.<sup>51</sup>

Second, two-dimensional media is a more complex flow of content that creates interaction between the users and senders. This model of communication has a feedback loop. Which

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<sup>47</sup> L. H. Hoffman, 'Participation or communication? An explication of political activity in the Internet age'. *Journal of Information Technology & Politics* 9(3) 2012, pp. 217-233. Accessed at: <https://doi.org/10.1080/19331681.2011.650929>

<sup>48</sup> Hoffman, 'Participation or communication?'

<sup>49</sup> D. C. Mutz, *Hearing the Other Side: Deliberative Versus Participatory Democracy*. Cambridge: Cambridge University Press, 2006. Accessed at: <https://doi.org/10.1017/CBO9780511617201>

<sup>50</sup> Chadwick, *Internet Politics*.

<sup>51</sup> O'Reilly, 'What is Web 2.0'.

means the consumer not only can get information but also can respond to it through reply, comments, polls or social media interactions. For example, they can ask for information, comment on articles or engage in discussions on sites, thus replacing the one-way communication with interaction.<sup>52</sup> This form aligns with the development of Web 2.0, that enables contents generated by the users and greater collaboration between media producers and consumers.<sup>53</sup> For example: email, social media sites, online discussion forums etc.

Third, three-dimensional media are more integrated and complex in terms of participation of the users. Such media do not only operate as a medium of conveying information, but as a venue of political and social engagement as well. It involves the interplay between media exposure, interpersonal discussion, and political participation.<sup>54</sup> These types of digital platforms allow a citizen to use the content or communicate through the content to mobilise and organise campaigns. It also enables the public to debate with public representatives about a policy. Social media platforms like Facebook, X or Instagram are the examples of three-dimensional media. Users can interact, comment, chat and share opinions on national issues and political processes in these platforms. A few examples also include Instagram, X, LinkedIn, Flickr, Google Plus etc.

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<sup>52</sup> Coleman and Taylor, 'Parliament in the age of the Internet'

<sup>53</sup> **O'Reilly, 'What is Web 2.0'**

<sup>54</sup> Hoffman, 'Participation or communication?'

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**Table 1. Dimensions of Digital Media Tools<sup>55</sup>**

<i>Dimensions</i>	<i>Interaction</i>	<i>Digital Media Tools</i>
<b>One-dimensional</b>	One way	Website, Web Apps, Online Television, Digital Notice Boards, RSS feeds, E-newsletters, Virtual Tour, Video Recordings, Audio Recordings, Podcasts etc.
<b>Two-dimensional</b>	Back-and-forth	Email, Social Media Platforms, Online Forums etc.
<b>Three-dimensional</b>	Networked	Social media platforms like Facebook, Instagram, X, LinkedIn, Flickr, Google+ etc.

To rank the parliaments based on the existence of parliament's website and the tools listed on 'Table 3' on that website, we adopted the code from Schwanholz and Busch.<sup>56</sup> In that study, they employed a binary coding approach to assess the presence or absence of online tools. A value of '0' was assigned if the tool was not provided, while a value of '1' was assigned if it was available. However, in this study, we expanded upon the methodology by not only assessing the presence of certain tools, but also evaluating their functional efficacy. A value of '0' was assigned to tools that were not found on the research. A value of '1' was assigned to the tools that were found without proper functioning (e.g. the button or link not redirecting to the desired webpage), or it requires special plugins in the browser, or wrong redirects. Tools that were provided in their whole functionality were assigned a value of '2'. A comprehensive search was conducted for a total of 15 unique digital media tools (see Appendix 1). When these tools are successfully integrated and operating efficiently, a parliament can achieve its highest potential value of '30'.

Once the Parliamentary Digital Media Score is calculated using the availability and functionality of 15 digital tools, this study moves on to address the connection between digital participation

<sup>55</sup> Prepared by authors.

<sup>56</sup> J. Schwanholz and A. Busch, '„Like' Parliament?'. *Zeitschrift für Vergleichende Politikwissenschaft* 10(Suppl 2) 2016, pp. 15-39.

and the quality of democracy in South Asia. To do that, the study uses the Pearson correlation coefficient to evaluate the correlation between the parliamentary digital media score and the quality of democracy as represented by the Liberal Democracy Index (LDI) and the Participatory Component Index (PCI). Both the indices used are from the V-Dem Institute's 2024 Democracy Report.<sup>57</sup> This correlation analysis will help us to explore the premise that the quality of democracy and civic engagement in a state would make its parliament able to connect to its citizens via digital media tools.

The Pearson correlation coefficient ( $r$ ) is computed by looking at the position of the subject on both variables against their mean, and estimating how closely the scores move upwards and downwards relative to the mean.<sup>58</sup> It is calculated using the formula:

$$r = \frac{\sum_{i=1}^n (X_i - \bar{X})(Y_i - \bar{Y})}{\sqrt{\sum_{i=1}^n (X_i - \bar{X})^2} \sqrt{\sum_{i=1}^n (Y_i - \bar{Y})^2}}$$

Here, the variable  $X$  represents the Parliamentary Digital Media Score, and the variable  $Y$  represents the V-Dem indices (LDI and PCI). Also,  $X_i$  and  $Y_i$  represent individual observations for the two variables,  $\bar{X}$  and  $\bar{Y}$  are the sample means and  $n$  denotes the number of observations (in this case,  $n=8$  countries). The coefficient  $r$  ranges from  $-1$  to  $+1$ . A value of  $r = 0$  means there is no linear relationship, the closer to  $-1$  or  $+1$  the value of  $r$ , the stronger the negative or positive linear relationship, respectively.<sup>59</sup> The sample mean ( $\bar{X}$  and  $\bar{Y}$ ) is calculated by summing all individual observations ( $X_i$  or  $Y_i$ ) and dividing by the number of observations ( $n$ ).

The analysis computed two SEPARATE Pearson correlation coefficients:

1. Between Parliamentary Digital Media Score and Liberal Democracy Index (LDI)
2. Between Parliamentary Digital Media Score and Participatory Component Index (PCI)

<sup>57</sup> M. Coppedge, J. Gerring, C. H. Knutsen, S. I. Lindberg, J. Teorell, D. Altman, M. Bernhard, S. Fish, A. Glynn, A. Hicken, J. Krusell, A. Lührmann, K. L. Marquardt, K. McMann, V. Mechkova, P. Paxton, D. Pemstein, L. Saxer and S. Wilson, \*V-Dem Dataset v12\*. Varieties of Democracy (V-Dem) Project, 2024. Accessed at: <https://doi.org/10.23696/vdemds22>

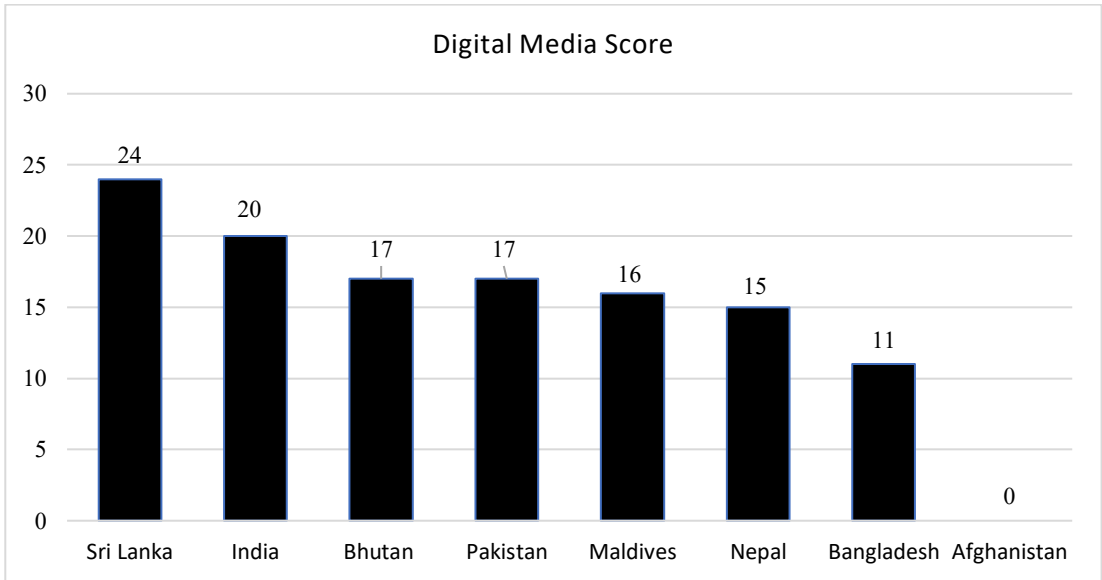
<sup>58</sup> D. Weisburd, C. Britt, D. B. Wilson and A. Wooditch, 'Measuring association for scaled data: Pearson's correlation coefficient', in D. Weisburd, C. Britt, D. B. Wilson and A. Wooditch (eds), *Basic Statistics in Criminology and Criminal Justice*. Cham: Springer International Publishing, 2021, pp. 479-530. Accessed at: [https://doi.org/10.1007/978-3-030-47967-1\\_14](https://doi.org/10.1007/978-3-030-47967-1_14)

<sup>59</sup> P. Schober, C. Boer and L. A. Schwarte, 'Correlation Coefficients: Appropriate Use and Interpretation'. *Anesthesia & Analgesia* 126(5) 2018, pp. 1763-1768. Accessed at: <https://doi.org/10.1213/ANE.0000000000002864>

## INTEGRATION OF DIGITAL MEDIA: COMPARATIVE EMPIRICAL ANALYSIS OF SOUTH ASIAN PARLIAMENTARY WEBSITES

Results of this study reveal a broad spectrum of digital media use across South Asian parliaments, from a total of 24 to a low of 11. Afghanistan received zero since their legislative website was not available at all during the research. Different scores show notable differences in the range and efficiency of the instruments deployed by different South Asian Parliaments. According to the data, there is a bimodality: some governments embrace the sophisticated digital tools while others still use antiquated or basic tools.

**Figure 1. Digital media score by South Asian parliaments<sup>60</sup>**



With a remarkable score of 24, Sri Lanka is at the top of the best since it reflects its aggressive approach of using many digital Media tools for legislative participation. From Facebook to Twitter (X) and YouTube, Sri Lanka's parliament has a thorough digital presence on multiple sites communicating with the public. This lets the people watch parliament sessions, express their ideas, and participate in real-time interactive debates. Highly successful, the nation's

<sup>60</sup> Source: Compiled by the researcher from website queries in December 2024.

website and mobile app give quick access to significant multimedia content including RSS feeds, virtual tours, video records, and online TV access. To show even more its dedication to openness, Sri Lanka leads also in providing downloadable e-newsletters. Though Sri Lanka has been doing a great job in terms of its digital engagement, it has potential to improve especially in the production of video contents of parliamentary sessions, audio recordings, and e-petitions, which may further increase the participation of the people and make the legislative process an interactive affair.

With a score of 20, India also leads the other countries in terms of using digital tools by parliaments. Still, Indian parliament has some lacking in its digital presence. For example, various forms of multimedia tools including video and audio contents, virtual tours, and e-petitions are not available even though the legislative site links to live TV, e-newsletter, notices, forms and RSS feeds. These little flaws point out areas that need work, particularly guaranteeing the operational efficiency of digital tools. India has a strong platform; nevertheless, using interactive tools would help to better serve its people.

Although both Bhutan and Pakistan have a score of 17, their digital footprint remains relatively low, despite their high efforts in utilising internet channels. The parliament of Bhutan offers basic tools such virtual tours, emails, and RSS feeds; but it displays inconsistencies in more sophisticated tools like video recordings, e-petitions and mobile App, therefore restricting its capacity to foster participatory public interaction. Pakistan excels in several spheres, including social media involvement as well. Still, its website and multimedia resources fall short of the strength of those of Sri Lanka and India. Mobile App, e-petitions and virtual tours are not accessible; the online TV capability is not fully used. Especially in terms of expanding the interactivity of their digital tools, these nations show significant promise for development.

Nepal's and the Maldives' scores of 15 and 16 point to a modest degree of online participation. Both countries use the fundamental tools like email and forms for correspondence; but they neglect to use other interactive tools as RSS feeds, virtual tours, and e-petitions, which can improve public participation. Nepal has improved website, online TV, video contents and email communication; but, its capacity to provide a better and interactive online experience is limited since it lacks legislative mobile application. The Maldives follows similar tendencies; they have simple digital tools but lack sophisticated tools to enable engagement.

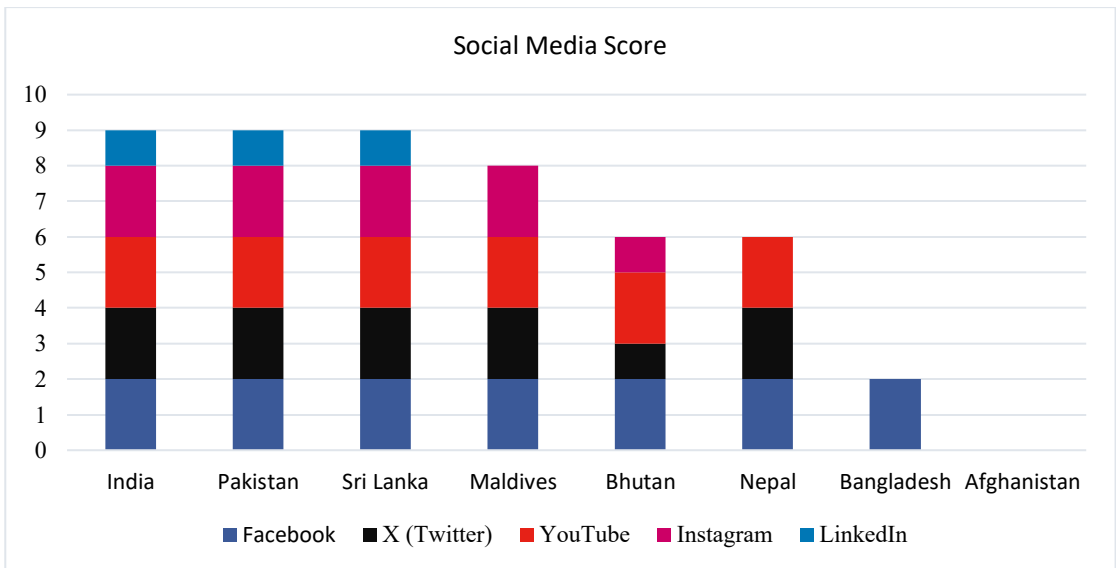
With a score of 11, Bangladesh reflects a low parliamentary usage of digital resources. Bangladesh offers basic resources including email and Forms; yet, the parliamentary website and social media profiles lack services such as RSS feeds, video and audio contents and virtual tours. The absence of interaction in these fields suggests a poorly designed digital communication strategy that might be much improved by optimizing these features to better engage the public.

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Finally, a concerning score of zero by Afghanistan parliament denotes the whole lack of a legislative website. This could point to a significant lack of resources or political unrest stopping it from building a simple web communication system. Afghanistan's parliament has not yet acquired any notable online presence. The reason might be the low internet penetration and social media usage among the general people.

Moreover, the research explains that social media have much potential than one-way communication tools such as websites and newsletters in terms of being used to create three-dimensional communication where people can connect, participate, and offer feedback comments. Social media tools—especially Facebook and X—allows a dynamic interaction between the public and policymakers. Conversely, in the absence of social media tools, information flow tends to be more one-dimensional whereby citizens simply receive the information rather than contributing with feedback.

**Figure 2. Social Media Score by South Asian Parliaments<sup>61</sup>**



Interestingly, this study finds a significant gap between the presence of the Parliament on social media and the large number of social media users among the general public. While nations like

<sup>61</sup> Source: Compiled by the researchers from website queries in December 2024.

India, Pakistan, Sri Lanka and Maldives use social media to improve their digital footprint, Bangladesh, Nepal, and Bhutan are either absent or inactive from most major platforms including X (Twitter), YouTube and Instagram. Given that many of these population currently use social media and that usage is rising, this is shocking. Lack of legislative participation in these spheres limits opportunities for democratic discussion and citizen engagement. Bangladesh is a clear example of this discrepancy; although the Bangladeshi people are quite active on social media, the legislative website does not utilise the social media networks other than Facebook to their full potential.

The Social Media Score is a significant component in the evaluation of digital media strategy within parliamentary systems. This number shows how well parliaments embrace interactive communication methods including Facebook, X (Twitter), Instagram, YouTube, and similar social media, thereby enabling two-way communication between representatives and voters and multilinear communication with other fellow citizens. A high Social Media Score shows a parliament's will to participate in democracy via modern and responsive channels of communication.

India, the biggest democracy in South Asia, is rather visible on the main social networking sites. Its national parliament makes the full use of most popular three-dimensional media sites such as Facebook, X (Twitter), YouTube, and Instagram to reach out to the public, interact in political debate, and provide information on legislative operations. Given its professional networking emphasis, LinkedIn stands out as the only platform showing low utilisation. Pakistan reflects India's social media use on many platforms. Like India, its legislative body makes great use of Facebook, X, YouTube, and Instagram. LinkedIn use is still very low, though, which suggests that parliamentary leaders mostly utilise the network for business needs rather than social interaction. Sri Lanka exhibits similar trends of interaction with well-known social media platforms such Facebook, X, YouTube, and Instagram.

The Maldives has a substantial presence on Facebook, X, YouTube, and Instagram; social media use in the nation is practically exactly like that of bigger South Asian countries. Its low LinkedIn involvement can be attributed most likely to the smaller professional network of the country's parliamentary system. Bhutan uses social media less than the other South Asian nations. Though Facebook and YouTube are quite popular, Bhutan's parliament makes little use of Instagram and X (formerly Twitter), and does not use LinkedIn at all. On social media networks including Facebook, X and YouTube - Nepal is rather well represented. Nonetheless, Instagram is the least used medium and LinkedIn is glaringly absent from the parliamentary internet presence of the nation.

Unlike others, Bangladesh hardly participates directly in social media networks as X (Twitter), YouTube, and Instagram. The most common platform is Facebook; but, the parliament of the country shows no presence on LinkedIn. Afghanistan has no legislative website; hence it does not show up on any social media networks. Its parliamentary correspondence with social media

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platforms is almost non-existent. This could stem from many sociopolitical concerns the country is facing, including significant political unrest, limited technology, and restrictions on digital liberties.

The most often used tools for legislative involvement in the South Asian area are social media sites such as Facebook, X (previously Twitter), and YouTube. These websites offer a useful medium for the citizens to interact with their politicians, engage in discussions, and learn about legislative actions. Furthermore, widely available in many nations, websites and apps are the main source of government information, press releases, and parliamentary announcements. Most parliaments now efficiently include email correspondence to enable direct contact with government departments and authorities.

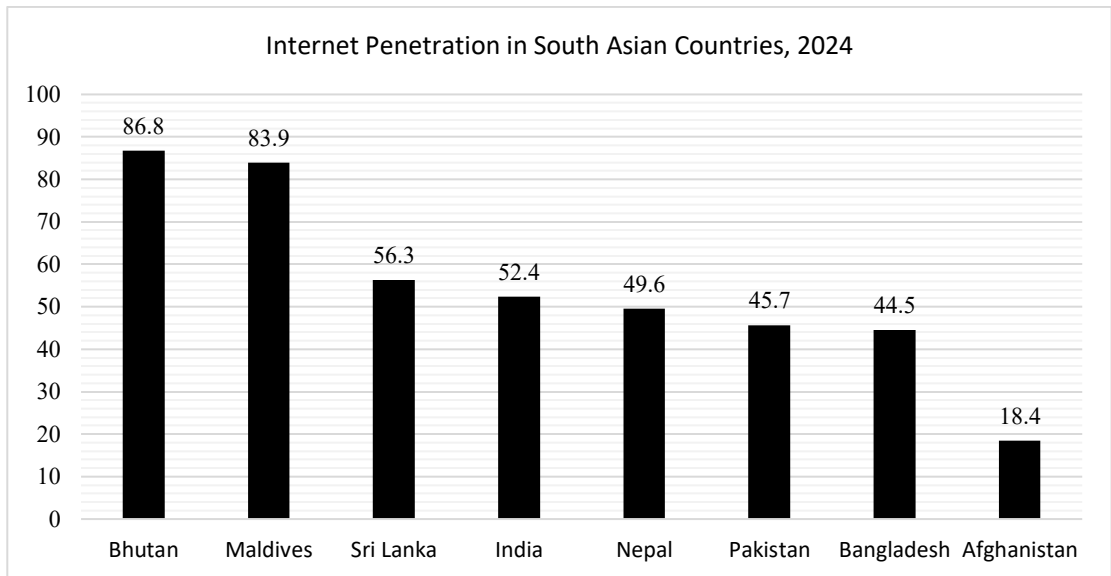
While many nations have put different digital tools into use, there are still significant chances for improvement in fields requiring more interaction and citizen participation. Video material is not equally available; some nations provide it while others either lack it completely or have non-operational links. Although they are accessible in some countries, e-newsletters and RSS feeds may be more widely used to increase openness and provide consistent information about parliamentary operations. Virtual tours are another exciting field that, with proper implementation, may provide residents a more immersive knowledge of legislative procedures.

Many digital tools are mostly lacking all around the region. All studied parliaments lack e-petitions, which might be a direct avenue for citizens to influence government. All nations lack audio recordings, which would improve accessibility for those who prefer or need aural knowledge. Furthermore, underused professional networking sites like LinkedIn limit possibilities for official connections between legislators and experts in governance, law, and policy. Even with significant increases in digital participation via official websites and social media, South Asian parliaments still show extreme shortcomings in interactive and participatory digital tools. While Bangladesh and Afghanistan have great potential for development, Sri Lanka, India and Pakistan show a notable digital presence. The presence of e-petitions, virtual tours and multimedia tools in the parliaments in this region will enhance transparency and ensure citizen participation in legislation.

This study also examines some of the factors that will compel South Asian parliaments to incorporate digital media tools. Countries with low internet penetration are likely to lag behind on using digital media tools. In many South Asian countries, particularly in rural areas, intermittent electricity and poor internet connectivity pose significant barriers to digital

governance efforts.<sup>62</sup> Afghanistan and Bangladesh are the two lowest scoring parliaments, scoring 0 and 11 respectively, as their legislatures are not capable of adopting advanced digital platforms as they lack good internet infrastructure and possess the lowest internet penetration rate in the region. Better availability of the internet facilitates more citizens to access digital tools, thereby increasing participation and transparency of parliamentary websites.

**Figure 3. Internet use by individuals in South Asian Countries, 2024<sup>63</sup>**



Another critical factor that significantly impacts the adaptation of digital tools in South Asian Parliaments is the prevailing level of digital literacy among the populace. Digital education is directly linked to the successful implementation of digital initiatives.<sup>64</sup> Digital literacy gaps in

<sup>62</sup> D. Koryzis, A. Dalas, D. Spiliotopoulos and F. Fitsilis, 'Parltech: Transformation framework for the digital parliament'. *Big Data and Cognitive Computing* 5(1) 2021, p. 15. Accessed at: <https://doi.org/10.3390/bdcc5010015>

<sup>63</sup> Source: DataReportal. (n.d.). Reports on Southern Asia. Kepios. Retrieved January, 2025, from <https://datareportal.com/reports/?tag=Southern+Asia>. Note: % of individuals aged over 18; Internet use in first quarter of 2024.

<sup>64</sup> S. Livingstone, S. S. Lim, A. Nandi and B. Pham, 'Comparative global knowledge about the use of digital technologies for learning among young children', in O. Erstad, R. Flewitt, B. Kümmerling-Meibauer and I. S. Pires Pereira (eds), *The Routledge Handbook of Digital Literacies in Early Childhood*. Abingdon: Routledge, 2019, pp. 79-91. Accessed at: <https://doi.org/10.4324/9780203730638-6>

South Asia might limit both government officials and citizens from engaging effectively through the digital tools. The gap in digital literacy underscores larger socio-economic disparities, which may lead to significant differences in the readiness and capability of people to use new technologies.<sup>65</sup>

Using digital solutions also requires regular feedback loop on how effective the tools are. The idea is to fine-tune them for improved application. As citizen needs and government operations change, digital tools must change with them. This highlights the need for adaptive learning mechanisms within the governance landscape.<sup>66</sup> South Asian parliaments lack the feedback mechanism of an assessment to ensure that digital platforms do not lose relevance and are helping in fulfilling the purpose for which they are used for.

Additionally, median age of a country also has a direct impact on the consumption of digital media. Statistics reveal that about 90% of individuals aged 18 to 29 report utilising social media, significantly higher than the approximately 40% of adults aged 65 and over who engage in similar practices.<sup>67</sup> In countries with a lower median age, parliaments usually show more competence in digital media use. But in this case, Sri Lanka, India and Bhutan have stood first, second and third with comparatively higher median age. This might signify that younger population are less politically conscious than the middle-aged population.

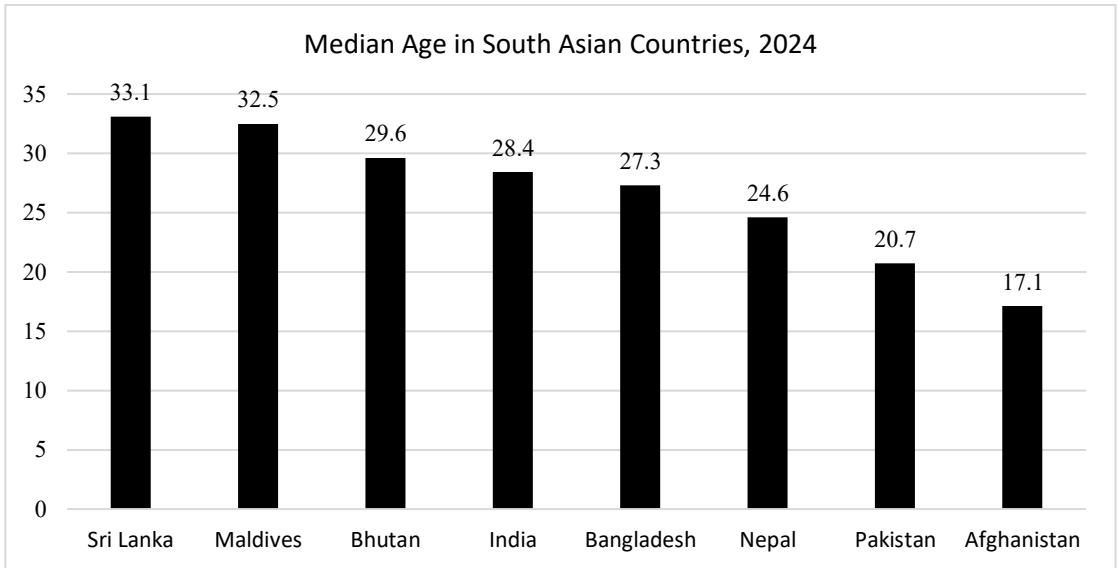
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<sup>65</sup> M. M. Hossain and W. Weng, *Digital Health Divide in South Asia: Ethical Concerns, Challenges, and Recommendations* (No. qxecj\_v1). Center for Open Science, 2020. Accessed at: <https://doi.org/10.31235/osf.io/qxecj>

<sup>66</sup> L. Evans, J. Evans, A. Abdullah, Z. Ahmed and RESPIRE Group, 'Mapping Respiratory Health Digital Interventions in South and Southeast Asia: A Scoping Review'. *medRxiv*, 2024. Accessed at: <https://doi.org/10.1101/2024.12.12.24318897>

<sup>67</sup> J. L. Doty, J. Dworkin and J. H. Connell, 'Examining digital differences: Parents' online activities'. *Family Science Review* 17(2) 2012, pp. 18-39. Accessed at: <https://doi.org/10.26536/fsr.2012.17.02.02>

**Figure 4. Median age in South Asian Countries, 2024<sup>68</sup>**

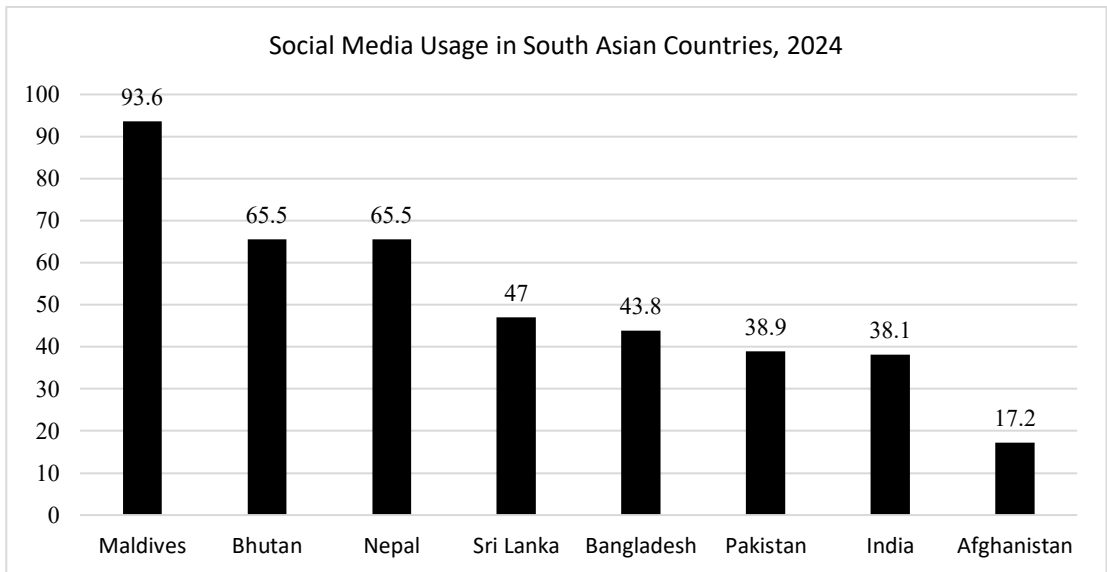


Another major determinant of digital media participation by parliaments can be the general frequency of social media use among the people, especially among the youth. In countries where people use social media extensively, parliaments are more likely to embrace and include several social media platforms to interact with the people. Afghanistan and Bangladesh highlight the discrepancy by showing lower social media and general digital media scores aligning with lower social media usage. On the other hand, Maldives and Nepal with the highest social media usage in the region could not beat Sri Lanka, India and Pakistan who have comparatively lower social media usage in terms of digital media usage by parliaments.

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<sup>68</sup> Source: DataReportal. (n.d.). Reports on Southern Asia. Kepios. Retrieved January, 2025, from <https://datareportal.com/reports/?tag=Southern+Asia>. Media age in first quarter of 2024.

**Figure 5. Social media use by individuals in South Asian Countries, 2024<sup>69</sup>**



Lastly, but most importantly, the political and organizational will to embrace digital transformation determines the digital presence of parliaments in South Asia. The responsiveness of governmental bodies to adopt digital means is often contingent upon leadership and managerial attitudes towards innovation.<sup>70</sup> Reluctance or scepticism among key decision-makers can significantly stall the process of digital presence of the parliaments. This explains why countries with higher social media usage and lower median age fail to top the digital media adaptation score. Research shows that democratic governance plays a positive role in enabling digital innovation in public institutions.<sup>71</sup> The more democratic a country is in

<sup>69</sup> Source: DataReportal. (n.d.). Reports on Southern Asia. Kepios. Retrieved January, 2025, from <https://datareportal.com/reports/?tag=Southern+Asia>. Note: % of individuals of total population (aged over 18); Social media use in first quarter of 2024.

<sup>70</sup> . Qiu, S. Wang, Y. Hou and S. Xu, 'What drives infrastructure participants to adopt digital technology: a Nexus of internal and external factors'. *Sustainability* 15(23) 2023, p. 16229. Accessed at: <https://doi.org/10.3390/su152316229>

<sup>71</sup> P. Norris, *Democratic Deficit: Critical Citizens Revisited*. Cambridge: Cambridge University Press, 2011. Accessed at: <https://tinyurl.com/y54ff5p2> ; L. Dahlberg, 'Re-constructing digital democracy: An outline of four 'positions''. *New Media & Society* 13(6) 2011, pp. 855-872. Accessed at: <https://doi.org/10.1177/1461444810389569>

its establishment, the more it is likely to show the political will to accept and adopt digital tools for parliamentary affairs. To substantiate that, we employed a Pearson Correlation Test between our findings of the Digital Media Score of 8 South Asian countries and two V-Dem indices, the Liberal Democracy Index (LDI) and the Participatory Component Index (PCI).

## **RELATIONSHIP BETWEEN PARLIAMENTARY DIGITAL MEDIA USE AND DEMOCRATIC INDICATORS IN SOUTH ASIA**

The Digital Media Score of the south Asian parliaments were computed to investigate to which extent these parliaments use digital media tools to engage directly with the citizens. In these scores, the higher the score, the better the use of digital media tools. To correlate with this finding, we included two V-Dem indices (the Liberal Democracy Index (LDI) and the Participatory Component Index (PCI)) that ranks the countries based on their democratic condition. It is worth mentioning that the lower the ranks in the LDI and PCI, the better the democratic conditions and the level of political participation.

The Liberal Democracy Index (LDI) incorporates electoral as well as liberal dimensions of democracy into two sub-indices namely, the Electoral Democracy Index (EDI) and the Liberal Component Index (LCI). The EDI measures institutional factors that determine the fairness of elections like liberty of expression and association. The LCI analyses the degree to which the power of government is limited with an emphasis being made on areas such as protection of individual rights. There is also the Participatory Component Index (PCI) which measures the extent of citizen participation in election and non-election affairs. It covers four aspects: civil society organizations (CSO), direct democracy mechanisms and participation through local and regional governments. All these are captured by V-Dem indices forming the PCI.

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**Table 2. Parliamentary Digital Media Score and Related Indicators for South Asian Countries<sup>72</sup>**

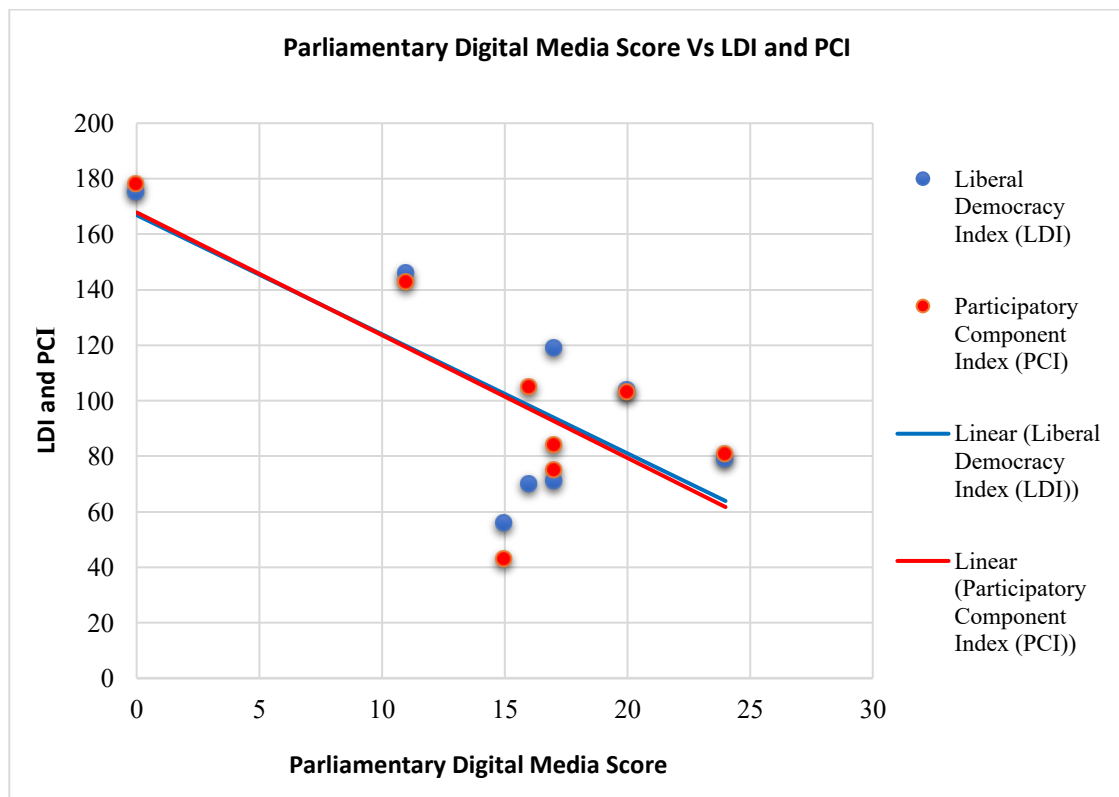
<i>Country</i>	<b>Parliamentary Digital Media Score</b>	<b>LDI</b>	<b>PCI</b>
<i>Afghanistan</i>	0	175	178
<i>Bangladesh</i>	11	146	143
<i>Bhutan</i>	17	71	75
<i>India</i>	20	104	103
<i>Maldives</i>	16	70	105
<i>Nepal</i>	15	56	43
<i>Pakistan</i>	17	119	84
<i>Sri Lanka</i>	24	79	81

The results of Pearson correlation coefficients computed to assess the linear relationship between parliamentary digital media scores and each V-Dem index show a strong negative correlation for both indices:

- Correlation with LDI:  $r = -0.73$ ,  $p\text{-value} = 0.038$
- Correlation with PCI:  $r = -0.75$ ,  $p\text{-value} = 0.033$

<sup>72</sup> Source: Findings of the research and V-Dem Institute. 2024. *Democracy Report 2024: Democracy Winning and Losing at the Ballot*. University of Gothenburg: V-Dem Institute.

**Figure 6. Correlation Between Parliamentary Digital Media Score and Liberal Democracy Index (LDI) and Participatory Component Index (PCI)<sup>73</sup>**



The p-values were obtained from significance testing to evaluate the null hypothesis  $H_0 : r = 0$  (no correlation). The p-value is less than the standard level of 0.05 in both cases, which indicates that the two correlations have a statistical significance to them and are unlikely to have occurred randomly

The results show a strong negative linear correlation between Parliamentary Digital Media Scores and the Liberal Democracy Index (LDI) and Participatory Component Index (PCI). Since the lower values on both indexes refer to the increased level of democratic quality and the degree of political participation, this means that countries with stronger liberal democratic institutions and greater citizen engagement tend to employ digital media tools more in their

<sup>73</sup> Source: Author's analysis using data from table 2.

parliamentary affairs, which will eventually lead to enhanced digital engagement within their parliaments and countries with robust digital media adaptation in parliamentary engagement are tend to have better democratic environment. The results are consistent with democratic theory which postulates that strong democracies facilitate transparency, accessibility, and citizen engagement.<sup>74</sup> Digital media can help legislatures convey messages to citizens, allow access information and participation in governance. Thus, democracies with better V-Dem indices are in a better position to utilise digital platforms more effectively.

For instance, Sri Lanka and India, which have relatively lower V-Dem score which shows better democratic conditions, have higher scores for parliamentary digital media (24 and 20 respectively). On the other hand, Afghanistan and Bangladesh have poorer engagement with digital media as their V-Dem scores are higher due to weaker democracies (0 and 11 respectively).

This correlation emphasises how digital innovation in parliamentary functions and democratic health are interdependent. It implies that attempts to enhance democracy and political participation may simultaneously bolster the digital capabilities and transparency of national parliaments. However, these correlations indicate association only and do not imply causation. Other factors may influence both digital media adoption and democratic quality. Further research is needed to establish causal mechanisms between them. The small sample size (n=8) and cross-sectional nature of the data also limit the ability to infer causality or generalisability.

## **DISCUSSION AND CONCLUSION**

Although the strong negative correlations support the association between democratic quality and parliamentary digital media adoption, certain outliers highlight additional mediating factors. Notably, despite ranking among the highest in regional internet and social media penetration, the Maldives and Nepal achieved only moderate Digital Media Scores (16 and 15, respectively) and fell below expectations compared to Sri Lanka, India, and Pakistan. This discrepancy suggests that parliamentary digital engagement depends not only on societal digital readiness and democratic quality but can also be the result of institutional inertia, lack of political will, and limited budgets, expertise, or strategic prioritization within parliamentary administrations.

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<sup>74</sup> Norris, *Democratic Deficit*; Dahlberg, 'Re-constructing digital democracy'.

In light of Hoffman's Three-Dimensional Model of Political Communication in the South Asian parliamentary context, Sri Lanka, India, and Pakistan have incorporated a range of three- and two-dimensional tools like social media and email. The dominant presence of one-dimensional tools like websites, Apps, RSS feeds, and newsletters shows a common regional pattern for the dissemination of parliamentary information. However, two- and one-dimensional tools like e-petitions and audio recordings remain regionally absent. These scenarios show that South Asian parliaments have not yet fully moved toward the interactive and mobilising potential that three-dimensional communication offers, which makes it harder for citizens to get more involved in governance.

Notwithstanding the progress many parliaments have made in embracing digital media, the study reveals certain issues that demand attention. The parliaments in South Asia still fall behind the global standards in terms of using such tools in an effort to build a stronger connection with citizens. The variety of tools implemented in different parliaments of the region shows that there is no one-model-fits-all approach; instead, each parliament should come up with its own strategy based on its own situation. The finding of the research shows that democratic and participatory governance has a positive and remarkable impact on the adaptation of digital technologies and vice-versa. So, in order to improve the adaptation of digital media tools in parliaments, South Asian countries must focus on the improvement of their democratic and participatory governance. Along with the efforts to deal with issues such as digital literacy, digital divide, and insufficient resources, parliaments should also focus on aspects such as feedback loop, regular maintenance, and prioritise user-friendliness of their digital tools.

The inclusion of digital media tools in parliamentary communication with citizens enables a dynamic shift in citizen participation in parliamentary affairs. This change in direct communication between the parliament and citizens creates a more open and accountable legislative system. Social media has contributed to this change by democratizing the political discourse through the direct and multilateral communication among parliaments, politicians, and the citizens. Thus, social media has established a three-dimensional communication that was impossible to achieve previously. The emergence of 'Parliament 2.0' has fuelled the demand for a more interactive and open parliamentary system using the internet and digital tools. India and Sri Lanka are leading the region in this regard by closing the distance between parliaments and citizens using digital media tools.

Despite the true promise towards the adaptation of digital media tools in South Asian parliaments, there exists variation in tools and approaches based on a variety of factors. Sri Lanka, India and Pakistan are comparatively more promising in this regard than other countries within the region. On the flip side, Bangladesh and Afghanistan need some tailored strategies and planning to establish a stronger digital presence in parliamentary affairs offered by the digital tools and technologies. As South Asian parliaments enhance their digital infrastructures,

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opportunities for increased citizen engagement and improved democratic governance will emerge, hence fostering more inclusive and transparent governance across the region.

## APPENDIX 1: CODEBOOK<sup>75</sup>

Tool	Code	Score
<b>Website and Application</b>	Both are available	2
	Only website or application available	1
	Unavailable	0
<b>Online TV</b>	Available and linked with the website	2
	Available	1
	Unavailable	0
<b>RSS feed</b>	Available	2
	Unavailable	0
<b>E-newsletter/ News/ Press Release</b>	Available as downloadable document (pdf)	2
	Available	1
	Unavailable	0
<b>Video</b>	Parliament Session	2
	General Information	1
	Unavailable	0
<b>Audio recordings</b>	Available	2
	Link available, but not working	1
	Unavailable	0
<b>Virtual tour</b>	Available	2

<sup>75</sup> Source: Adopted and modified by the researcher from Theiner, P., Schwanholz, J., & Busch, A. (2018). Parliaments 2.0? Digital media use by national parliaments in the EU. *Managing Democracy in the Digital Age: Internet Regulation, Social Media Use, and Online Civic*

	Link available, but not working	1
	Unavailable	0
<b>Email</b>	Department specific Email	2
	Only administrator Email	1
	Parliamentarian's Email	1
	Unavailable	0
<b>E-petition</b>	Available	2
	Unavailable	0
<b>Forms</b>	Available for specific purpose	2
	Available for general purpose	1
	Unavailable	0
<b>Facebook</b>	Active Facebook account	2
	Inactive Facebook account	1
	Unavailable	0
<b>X (Twitter)</b>	Active X account	2
	Inactive X account	1
	Unavailable	0
<b>YouTube</b>	Available	2
	Link not working	1
	Unavailable	0
<b>Instagram</b>	Available	2
	Link not working	1
	Unavailable	0
<b>LinkedIn</b>	Available	2
	Link not working	1
	Unavailable	0

**Table 3: Results of coding by country (data collected on December 2024, prepared by the researchers)**

Country	Website and Mobile App	Online TV	RSS Feed	E-news/ Press Release	Video	Audio	Virtual Tour	Email	E-petition	Forms	Facebook	X (Twitter)	YouTube	Instagram	LinkedIn	Total Score
Afghanistan	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bangladesh	2	2	0	1	0	0	0	2	0	2	2	0	0	0	0	11
Bhutan	1	1	2	2	1	0	2	1	0	1	2	1	2	1	0	17
India	2	2	2	2	0	0	0	2	0	1	2	2	2	2	1	20
Maldives	1	2	0	2	1	0	0	1	0	1	2	2	2	2	0	16
Nepal	1	2	0	0	2	0	0	2	0	2	2	2	2	0	0	15
Pakistan	1	1	0	2	2	0	0	1	0	1	2	2	2	2	1	17
Sri Lanka	2	2	2	2	1	0	2	2	0	2	2	2	2	2	1	24