



Recognized by: Higher Education Commission (HEC), Government of Pakistan

Data privacy laws in Pakistan: A comparative analysis with the EU's General Data Protection Regulation

Alizeh Jhokio

LLB Scholar, Department of Law, Dadabhoj Institute of Higher Education, Pakistan
alizehimdad@gmail.com

Dr. Tansif Ur Rehman

Assistant Professor, Department of Law, Dadabhoj Institute of Higher Education, Pakistan
tansif@live.com

Kaleemullah

LLB Scholar, Department of Law, Dadabhoj Institute of Higher Education, Pakistan
kaleemabbasi572@gmail.com

ABSTRACT

The research looks at the similarities and differences between Pakistan's laws and the GDPR of EU countries. This report explores how well Pakistan is managing current rapid digitization and the related increase in information breaches. Comparing data minimization, consent, and accountability, it is clear that both Pakistan's data protection legislation and the GDPR offer both Senator's data privacy rights and cover many of the same situations. According to the study, Pakistani law suffers from problems such as infrequent enforcement and poorly informed stakeholders, and it suggests measures to enforce international standards in the country. To foster trust and joint efforts in digital business, this research highlights the importance of strict data privacy laws by studying various case studies and practices. Our results are designed to be part of the discussion on updating data protection laws happening in Pakistan.

Keywords: comparative analysis, data privacy, data protection regulations, GDPR, Pakistan

INTRODUCTION

The increase in digitalization now leads people, companies, and governments around the world to care more about data privacy (Bhatti, 2023). Because we rely on digital systems more for governing, buying and selling, and communication, data

breaches, identity theft, and people-watching others are now more common (Greenleaf, 2021; Solove & Schwartz, 2021). Strong data privacy laws help keep people's rights safe and bring trust to the digital economy (Shah, 2023).

Pakistan, like most poor countries, is still at the starting point of establishing data protection laws, but developed countries such as the EU have implemented complete systems like the GDPR (Malik, 2022). Pakistan has to deal with many threats to personal information, mainly due to the rise in internet use and the expansion of the country's digital industry (Kuner, 2020). Since there is no comprehensive data privacy law in the country, people can be easily exploited by misusing their data and businesses are having difficulty following international rules (Ahmed, 2022; Farooq, 2024).

Recently, the Pakistani government introduced the Personal Data Protection Bill. Yet, it is hard to see it work effectively because of issues with how it is enforced, not enough awareness, and this Bill broadly includes international best practices (Hussain, 2023; Rizvi, 2023). This paper looks at how Pakistan's data protection laws stand against the GDPR, which is recognized as the best regulation in this field (Ali & Rehman, 2022; Iqbal, 2022). The document outlines areas where Pakistan's legal system is lacking and provides possible improvements by exploring data minimization, consent, and accountability (Javed, 2024; Khan, 2023).

The objective of this study is to help in the existing discussions about changes to data privacy in Pakistan and guide stakeholders, businesses, and policymakers as they follow international standards (Raza, 2024).

Research Justification

As Pakistan has undergone rapid digital transformation and seen increased internet usage and increased digital services, this has led to growing concern about data security and privacy. Yet despite the increasing dependence of Pakistan on using internet platforms for communication, governance and business, there is yet no legal and binding data protection system in the country. As well as undermining people's rights, weak data privacy laws also hinder the country from meeting international data protection standards, including the European Union's General Data Protection Regulation (GDPR). This misalignment complicates the running of Pakistani businesses, which are operating in other countries where data protection is much more rigorous.

A comparative analysis of the data protection laws of Pakistan and the GDPR is vital to determine gaps and weaknesses in the current legal framework. The GDPR, being a world standard, provides essential lessons on best practices in data protection, such as the principles of transparency, accountability, and consent of the user. Through the application of these principles in Pakistan, this study seeks to deliver practical recommendations for enhancing the data privacy laws in the country. In addition, the study tackles the imperative of informing stakeholders, such as policymakers, businesses, and citizens, about the development of a data protection culture. Finally, this study adds to the larger conversation on data privacy reforms so that Pakistan's digital economy is secure, reliable, and competitive globally.

Research Objectives

1. To discuss the historical context of data privacy laws in Pakistan.
2. To highlight the theoretical context of data privacy laws.
3. To analyze the leading laws that govern data privacy laws in Pakistan.
4. To identify the key challenges regarding data privacy laws in Pakistan.
5. To explore the opportunities for minimizing the degradation of data privacy laws in Pakistan.
6. To propose effective prevention and intervention strategies.

RESEARCH METHODOLOGY

This study employed a systematic review methodology, with research objectives established accordingly. A comprehensive literature review was conducted (Komba & Lwoga, 2020). Research findings were categorized based on their content (Hiver et al., 2021; Petticrew & Roberts, 2006), and classified information was incorporated into the study by organizing it into headings (Gan et al., 2021; Pawson et al., 2005). The evaluation of classified information and titles formed the basis of the study (Page, 2021; Rahi, 2017), ensuring the integrity of the research subject and its contents (Egger et al., 2022; Victor, 2008). The criteria for selection are enlisted.

1. **Relevance:** Researches that directly addressed the questions posed by this study are included.
2. **Quality:** Studies that meet a certain quality threshold (e.g., methodological rigor, bias risk) are included. Most of the researches are from Scopus indexed and Clarivate Analytics journals and reputed publishers.
3. **Recency:** Consideration of the publication date to ensure that the review reflects the most current evidence. Most of the studies are from the last three years.
4. **Language:** Only studies published in English are included.
5. **Data Completeness:** Previous studies must provide sufficient data on outcomes of interest for practical synthesis; it is also ensured in this research.

This study did not use primary data from human participants; therefore, no ethics clearance letter from the ethics committee was required.

LITERATURE REVIEW

The quick pace of digital economic transformation across the globe has put data privacy at the forefront of legal and regulatory debates. The General Data Protection Regulation (GDPR) of the European Union, adopted in 2018, is still the strongest data protection regime anywhere in the world (Kuner, 2020). It codifies principles like transparency, accountability, data minimization, and user consent so that individuals get more control of their personal information. Significantly, the extraterritorial application of the GDPR forces companies across the globe to implement robust data protection policies (Iqbal, 2022). Conversely, Pakistan's data privacy regime is piecemeal, with wide legislative loopholes and enforceability gaps (Ahmed, 2022).

Pakistan's data protection legislation is dispersed throughout a series of

legislations without a coherent framework. The Prevention of Electronic Crimes Act (PECA) 2016 and the Pakistan Telecommunication (Re-organization) Act 1996 deal mainly with cybersecurity and telecommunication, having limited provisions relating to personal data protection (Khan, 2021). Understanding these loopholes, the government presented the Personal Data Protection Bill in 2021 to govern the collection, processing, and storage of personal data (Malik, 2022). Despite this, the Bill has been criticized as being overly general in its definition, with weak enforcement processes and insufficient concurrence with international norms like the GDPR (Ali & Rehman, 2022).

Lacking information about data privacy rights and responsibilities among the public means it is more difficult to enforce data protection rules effectively (Rizvi, 2023). When looking at the GDPR with other data protection laws, international best practices are highlighted (Greenleaf, 2021). The GDPR has made a big difference to data protection laws in South Africa, Japan and India. Shah (2023) shows that the POPIA of South Africa and the DPDPA of India prove that compliance with global standards increases data sharing between countries and supports the economic development of each nation. As shown by these stories, Pakistan should adopt GDPR-style principles so it can manage its data privacy problems better (Raza, 2024).

Establishing strong data privacy regulations is difficult in many newly developed countries. A lack of institutional ability, technical understanding, and knowledge among the people has made data protection less effective (Bhatti, 2023). Not having a dedicated data protection agency in Pakistan makes it very hard to keep an eye on and enforce data laws (Farooq, 2024).

Consequently, citizens and businesses continue to be at risk of data breaches and abuse. Comparative analysis indicates that incremental reform to data protection, complemented by specialized capacity-building, can facilitate closing the developing-developed gap between countries (Khan, 2023). Notwithstanding such issues, Pakistan can take advantage of creating a strong data protection framework by learning from the GDPR (Javed, 2024).

Trust and the protection of individual rights in the digital economy can be achieved by adding responsibility, transparency, and user permission to its rules. A visible move in this direction would be to form a separate data protection authority, step up public education on the issue, and update laws to match international standards (Hussain, 2023). Besides, such reforms can draw in global investment, ease data sharing across different countries, and help Pakistan's digital sector grow. Data protection laws must be strong to face the many difficulties of the modern age. Even with the GDPR as the main law, Pakistan's legal system should be significantly improved (Solove & Schwartz, 2021). Pakistan could act as a role model for data privacy in developing countries and have both a safe and successful digital future thanks to GDPR-based best practices.

Historical Context of Data Privacy Laws in Pakistan

Pakistan's path towards data privacy law has been uneven and piecemeal. Initial legislation, including the Pakistan Telecommunication (Re-organization) Act 1996, targeted telecommunications but did not include protection for personal data

(Khan, 2021). The Prevention of Electronic Crimes Act (PECA) 2016 was a landmark measure addressing cybercrimes and data breaches, although it focused more on cybersecurity than complete data privacy. Even with these efforts, however, Pakistan's legal infrastructure lagged behind international models such as the European Union's General Data Protection Regulation (GDPR) that came into force in 2018 (Greenleaf, 2021; Kuner, 2021).

The GDPR, premised on the 1995 Data Protection Directive, established an international standard for data privacy, prioritizing transparency, accountability, and human rights (Iqbal, 2022; Shah, 2023). Its extraterritorial reach impacted numerous nations, such as Pakistan, to revisit their data protection legislation. In 2018, Pakistan prepared the Personal Data Protection Bill, updated in 2021, to govern the handling of personal data (Malik, 2022; Raza, 2024). Nonetheless, procedural delays, insufficient enforcement mechanisms, and low levels of public awareness have slowed advancement (Ahmed, 2022; Rizvi, 2023).

Pakistan's efforts on data privacy came later than those taken by the European Union. There are still many weaknesses in Pakistan's data protection regulations, so they need to improve to comply with up-to-date international standards (Ali & Rehman, 2022; Bhatti, 2023). The history points out that looking at data privacy practices in other countries can teach Pakistan a lot about its policies.

Theoretical Context of Data Privacy Laws in Pakistan

Data privacy laws are based on the concept of protecting citizens' fundamental rights to privacy and autonomy in the digital sphere. Based on work by Alan Westin (1967), the idea of privacy as the right to control personal data is the bedrock of today's data protection programs. The theory builds the basis of the General Data Protection Regulation (GDPR) of the European Union, which grants individuals control of their data through the principles of accountability, transparency, and user permission. Broadly, these reflect the idea of informational self-determination whereby individuals must possess control over their personal information.

On the other hand, Pakistan's data privacy initiatives, Personal Data Protection Bill 2021, for instance, are relatively nascent, undeveloped, and do not have a strong theoretical foundation. While the Bill is modeled after the GDPR, its implementation has little to depend on fragile institutional mechanisms and, again, uneven privacy rights understanding. The shortcomings of Pakistan's strategy are also theoretical: Pakistan has not placed adequate weight and resources on autonomy and has struggled with enabling mechanisms to hold people accountable. Through a comparative review of Pakistan's data protection laws vis-à-vis the GDPR, this dissertation shows that the reason why Pakistan's data protection laws do not align with theoretical conceptions of privacy and autonomy is that they are still premised on legal principles that are not consonant with these conceptions. With this integration, Pakistan can build on its data protection regime that provides for the protection of individual rights and confidence in the digital economy. Theoretical background brings the imperative to reform to close the gap between policy and practice back to the forefront.

Leading Data Privacy Laws in Pakistan

However, Pakistan's main data privacy law is the Personal Data Protection Bill

2021, which acts to regulate the obtaining, usage, and preservation of personal data. The Bill stipulates data minimization, consent, and accountability-based guidelines, which are in consonance with global best practices, as in the case of the General Data Protection Regulation (GDPR) of the EU. But while it has no jurisdiction nor enforcement powers of the GDPR. Pakistan's Bill faces enforcement challenges in weak and under-informed institutions as opposed to the GDPR, which mandates harsh penalties for noncompliance that come with independent supervisory authorities.

Introduced in 2018, the GDPR is seen as the gold standard of data protection rules, putting consumer rights first and requiring transparency as well as extraterritorial application. It makes people part of the data story, not just onlookers, by granting access, rectification, and erasure rights, which are not adequately covered in Pakistan's Bill.

Moreover, unlike Pakistan's draft law, which depends on the creation of an as-yet unformed data protection agency, the GDPR also has a strong enforcement mechanism. A comparison is made with Pakistan's data privacy law, revealing gaping holes, including weak provisions for cross-border data flows and weak protection against breaches of data.

Thus, alignment of Pakistan's practices and principles with GDPR may lead to Pakistan's emergence of its data protection framework, which may enhance confidence in its digital economy and compliance with international standards. With this comparison, we show that modifications are needed to handle new data privacy risks properly.

Challenges for Data Privacy Laws in Pakistan

1. Weak Legal Framework

The GDPR lays out conditions that are not yet fully implemented as Pakistan's existing data privacy legislation, like the Personal Data Protection Bill 2021, is in their infancy and lacks depth compared to the GDPR. The GDPR represents a detailed and enforceable framework, but the Bill has ambiguous provisions, narrow scope, and weak enforcement mechanisms. For instance, while Pakistan's proposed penalties are weak and unclear, the GDPR requires stiff penalties for noncompliance. What is more, our Bill is devoid of any definition for core concepts such as data rights, data controllers or data processors.

2. Institutional Challenges

The biggest challenge faced is Pakistan's absence of a specific data protection authority. Accountability and surveillance are provided by independent supervisory bodies in each EU member state that applied the GDPR. In that respect, Pakistan's Bill also envisages the founding of a data protection authority whose establishment and working out remain unaddressed, leaving a vacuum in enforcement and oversight. With no technical authority, compliance is voluntary, and the private sector has no idea how to apply the data protection mechanisms appropriately, let alone the government institutions. It also means that people don't have a well-defined channel to lodge complaints about data breaches or misuse.

3. Shortage of Awareness and Capacity

One of Pakistan's most significant problems is the broad lack of knowledge regarding individuals, companies, and even policymakers' data privacy rights and duties. In contrast to the EU, which has a GDPR with rich media coverage, Pakistan has not yet reached a stage at which data protection is part of the media discussion. In general, people don't know what their rights are regarding data collection, processing, and storage, and many corporates still use personal data without any safeguards.

4. Technological and Cybersecurity Constraints

Pakistan's technology infrastructure is still in its infancy, and its cybersecurity procedures are not good enough. Most companies and governmental organizations are vulnerable to data breaches because of their lack of technical ability to realize strong security measures. To fulfill data protection, organizations are expected to have measures of encryption, audits, and incident response. Pakistan needs to invest in education for cybersecurity, technical infrastructure and strict security compliance part.

5. Surveillance and State Excessiveness

Data privacy issues in Pakistan have another legal issue regarding state surveillance. In this uncertain climate of accountability, state agencies have been granted broad powers of surveillance under The Prevention of Electronic Crimes. There are fewer but stronger protection levers against bulk surveillance and data abuse data in Pakistan compared to the GDPR, which necessitates and makes data collection proportionate. The privacy rights of individuals are threatened by state excessiveness, thereby imperiling confidence in the law.

6. Enforcement and Compliance Issues

The legal basis doesn't even always matter; the enforcement is still an issue. There is no funding, undertrained personnel, and ineffective bureaucracy, hindering the enforcement of data protection laws. The enforcement process for the GDPR's well-established penalties for noncompliance is severe. Pakistan has regulatory bodies with the proper funding and power to ensure compliance through audits, investigations, and punishments.

Opportunities for Data Privacy Laws in Pakistan

1. Embracing Global Best Practices

The GDPR is, by and large, the gold standard for data protection, focusing not so much on what you can't do but on sound principles like transparency, accountability, and user consent. It may be taken during the enactment of Pakistan's Personal Data Protection Bill 2021. With the GDPR, Pakistan can bring its data privacy legislation in line with international standards all, ow cross border data transfers, and develop trust with international partners. This alliance will also help Pakistani companies abide by global standards and, consequently, make them more competitive in the worldwide platform.

2. Strengthening the Digital Economy

A firm data privacy policy, therefore, can improve consumer confidence in online service, thereby encouraging wider use of fintech, e-commerce, and other digital platforms. The GDPR has been a significant enabler in growing the EU's digital economy by ensuring that data processing is being done safely. Similarly, data privacy

laws can be used by Pakistan to encourage foreign investment, build its digital economy, and encourage innovation and entrepreneurship in new areas.

3. Setting up a Data Protection Authority

The idea of setting up an autonomous data protection authority that Pakistan's Bill envisages offers a very real opportunity to make sure there is good enforcement and monitoring. Modeling the authority over the supervisory authorities set under the GDPR, Pakistan can also bring forth a strong organization that can take care of compliance monitoring, complaints investigation, and raising awareness of data privacy rights. This body can also represent an area of focus for capacity-building interventions aimed at ensuring that businesses and government organizations have access to and are capable of implementing data protection procedures.

4. Strengthening International Cooperation

This collaboration can allow them to be an easy target for international partnership and cooperation by adhering to the guidelines of the GDPR. For instance, with countries that have made themselves compliant with its data protection standards, the EU can allow uncensored data exchange (commission's adequacy rulings). In this regard, Pakistan can associate itself with the EU and other countries by changing its laws and becoming a safe partner of multinational corporations. This collaboration can also enable the parties to share technical assistance and information to enhance the technical environment of data protection in Pakistan.

5. Capacity Building and Awareness

Implementation of data privacy laws presents the opportunity to invest in capacity building for businesses, government agencies, and people. Stakeholders can learn their rights and obligations and embrace data protection culture via workshops, training programs, and public awareness campaigns. We can all look to the GDPR's success in awareness building throughout the EU as a model. As Pakistan moves towards implementing data privacy laws, the first step is to ensure that data privacy is given utmost significance in order to build an educated populace that is aware enough that the rules will be effectively enforced and commonly adopted.

6. Fostering Innovation

The provision of regulatory guidelines for responsible data management can act as a stimulant for innovation in the form of a transparent and enforceable data protection regime. Finally, take the example of the GDPR, which has kick-started innovation in privacy enhancement technologies (PETs) in the EU. Pakistan can also advance innovation in data encryption, anonymization, and cyber security that will pave the way for tech startups and traditional companies.

7. Meeting Emerging Challenges

New challenges arise as technology such as artificial intelligence (AI) and the Internet of Things (IoT) develop and so data privacy legislation must evolve. The challenges presented by these legal and regulatory questions are tackled proactively by the GDPR. This moment provides an opportunity for Pakistan to future-proof its data protection legislation to remain relevant in an ever-changing data protection environment.

DISCUSSION

Pakistan's data privacy laws are very different and can be revised quite significantly from the General Data Protection Regulation (GDPR) of the EU. Pakistan's Personal Data Protection Bill 2021 is a very weak piece of draught legislation, with few adequate enforcement tools or robust penalties, without an independent oversight body, nor robust guidelines on data transboundary flows sharing that assure reliability and trust in the new digital economy, that is central to the Western world's success of GDPR. Pakistan bill has unclear clauses, inadequate institutional capability and low public awareness, in contrast. The enforcement of individual rights is one of the main realms of divergence.

Pakistan's legislation deals with some of these rights but not all of them, which is in contrast with what the GDPR provides to individuals who have control and rights over their data, for instance, access, rectification, and erasure. Moreover, as there is no specialized data protection authority, unlike the robust enforcement structure of the GDPR, oversight and accountability are both challenging to impose. However, the best practices of the GDPR can also work well for Pakistan. These gaps may be closed by Pakistan by strengthening its legal base, setting up a separate and impartial data protection body, and raising awareness. Following the principles of GDPR, Pakistan can become a more competitive economy in the world economy by favoring international investment and cross border data flows, thus can take an effective stance to deal with such mega organizations.

While Pakistan doesn't yet have data protection laws, a comparison with GDPR reveals that their laws must conform to modern issues and are inadequate to match international standards. By using a GDPR-style strategy, Pakistan could develop a strong data protection system based on people's rights, which would lead to the development of its digital economy.

CONCLUSION

A comparison of Pakistan's data privacy regulations with the EU General Data Protection Regulation (GDPR) reveals that, currently, Pakistan's data protection framework needs to be strengthened. While the GDPR is a universal standard with robust principles, severe enforcement, and a focus on individuals' rights, the Personal Data Protection Bill 2021 of Pakistan is incomplete, ambiguous, receives no institutional support, and has meager public awareness.

By importing the GDPR-esque notions of accountability, transparency, and user consent, Pakistan may iron out these open ends and become more robust in its data privacy framework. A step forward would be strengthening capacity-building initiatives, tasking an independent data protection authority, and coming into line with international standards. Besides protecting individual rights, these reforms will also enable global cooperation, bring foreign investment, and so create confidence in Pakistan's digital economy. Doing better than the GDPR success, in the long run, can give Pakistan the niche it needs and put Pakistan in the position to be the leader in data protection for developing countries, enabling us to create innovative technology

to lead a competitive and secure digital future.

Recommendations

Securing digital privacy in Pakistan really calls for tackling the problem from multiple angles. For starters, organizations need to be held responsible, and that means having some real consequences for those who don't play by the rules. Stiff penalties are essential here, without a doubt. Then, there's the matter of setting up a data protection authority. An independent and empowered body seems vital for building public trust. This organization would provide clear direction and ensure oversight.

Adopting key principles from GDPR – such as only gathering necessary data, getting consent that's fully informed, and allowing people to exercise their 'right to be forgotten' – this approach looks like a smart place to begin. We also need to make sure everyone knows their rights. National campaigns to boost public awareness are essential, targeting both citizens and businesses. Furthermore, we must teach our enforcement agencies, regulators, and IT people about keeping data safe.

Now, enabling smooth cross-border data flow is key for digital commerce, so secure frameworks for this are absolutely needed. Encouraging innovation in areas like encryption and data anonymization is also a smart move lets support the development of Privacy-Enhancing Technologies (PETs). It should be noted that a data protection law cannot be written once in stone; periodic revisions are essential and crucial to keep up with tech changes. Providing support to small and medium businesses (SMEs) so that they can comply with privacy laws is a further critical point; SMEs must have access to resources and information. Lastly, we should be talking with other countries in the world to find out best practices, and make our regulatory ability better by working with international data protection groups.

Research Limitations

A comparison of Pakistan's data privacy laws with the EU's GDPR here is a somewhat tricky task. In the first place, since Pakistan data protection laws are a fledgling and the Personal Data Protection Bill 2023 is yet to be put into force, there is simply no actual case study or enforcement precedent. Second, limited access to official documents, regulatory standards and so forth may make it hard to acquire a comprehensive understanding of the legal system of Pakistan. Thirdly, cultural, economic, and infrastructure differences between Pakistan and the EU, where GDPR-like regulations could be applied, are challenging to quantify. Fourth, the analysis is too reliant on secondary sources that may not reflect relatively the recent conditions on the ground. Finally, the depth and relevance of the findings may be limited by a lack of external viewpoints by stakeholders: Pakistani regulators, companies, or citizens, when resources or accessibility are limiting factors. So, these restrictions collaborate to affect the soundness of the analysis.

Research Implications

The research has important implications for policy formulation, business activities, and citizens' rights in Pakistan. By comparing Pakistan's legislation on data protection with the EU's GDPR, policymakers can learn from gaps and adopt best practices to improve legal protection. Observations on GDPR's enforcement processes could inform Pakistan's Personal Data Protection Bill 2023 implementation,

developing regulatory competency and enforcement models. For companies, knowledge of GDPR-like standards can enable them to enter international markets, building trust and supporting cross-border trade.

The research also underscores the advantages for citizens, ranging from enhanced privacy rights to improved data security. The research could further feed into public education campaigns, improving digital literacy and giving individuals the confidence to assert their rights. This comparative analysis ultimately favors Pakistan's bid to join international data protection standards, reconciling economic development with human rights and helping create a more robust digital environment in a world where countries are more interdependent.

Future Research Directions

In future research on Pakistan's data protection laws, important areas will be studied. The approval of the Personal Data Protection Bill 2023 would give cause to analyze its enforcement issues in terms of capabilities and barriers at the institutional level. Research about assessing the socioeconomic impacts of the adoption of GDPR-style standards, e.g., compliance costs for SMEs and privacy benefits for people, could be conducted. Analyses of cross-border data flows may look at compliance with international standards for data transfer and what effect they have on trade and Internet services. Regional comparisons with sets of frameworks in ASEAN or Africa help us understand the data privacy situation better in emerging economies.

Finally, the stakeholder perspective would be examined by drawing on surveys and interviews conducted with companies, authorities, and citizens, improving knowledge on the complexity of such opportunity and challenge to orient such policy change. These research paths would also facilitate international efforts to update Pakistan's legal framework in accordance with the best practices prevailing elsewhere in the world and increase the understanding of Pakistan's evolving data privacy environment.

REFERENCES

- Ahmed, S. (2022). *Data privacy laws in Pakistan: Challenges and opportunities*. Pakistan Law House.
- Ali, T., & Rehman, H. (2022). Data privacy in Pakistan: A comparative analysis with the GDPR. *Journal of Information Policy*, 12(3), 45-60.
- Bhatti, A. (2023). The role of data protection authorities in developing countries: Lessons from the GDPR. *International Journal of Law and Technology*, 8(2), 112-130.
- Egger, M., Higgins, J. P., & Smith, G. D. (Eds.). (2022). *Systematic reviews in health research: Meta-analysis in context*. John Wiley & Sons
- Farooq, S. (2024). Challenges in implementing data privacy laws in Pakistan. *Pakistan Journal of Legal Studies*, 15(1), 78-95.
- Gan, J., Xie, L., Peng, G., Xie, J., Chen, Y., & Yu, Q. (2021). Systematic review on modification methods of dietary fiber. *Food Hydrocolloids*, 119, 106872. <https://doi.org/10.1016/j.foodhyd.2021.106872>
- Greenleaf, G. (2021). *Global data privacy laws: 2021 Survey*. Oxford University Press.
- Hiver, P., Al-Hoorie, A. H., Vitta, J. P., & Wu, J. (2021). *Engagement in language*

- learning: A systematic review of 20 years of research methods and definitions. *Language Teaching Research*, 13621688211001289. <https://doi.org/10.1177/13621688211001289>
- Hussain, Z. (2023). Digital transformation and data privacy: A case study of Pakistan. *Asian Journal of Cybersecurity and Privacy*, 7(4), 201-220.
- Iqbal, R. (2022). The impact of GDPR on global data protection standards. *European Data Protection Law Review*, 6(1), 34-50.
- Javed, M. (2024). Data privacy and cybersecurity in Pakistan: A roadmap for reform. *Journal of Cybersecurity and Privacy*, 9(2), 145-160.
- Khan, M. A. (2021). *Cybersecurity and data protection in Pakistan*. National Book Foundation.
- Khan, S. (2023). Comparative analysis of data protection laws in South Asia. *South Asian Journal of Law and Policy*, 10(3), 89-104.
- Komba, M. M., & Lwoga, E. T. (2020). Systematic review as a research method in library and information science. <https://doi.org/10.4018/978-1-7998-1471-9.ch005>
- Kuner, C. (2020). *The EU General Data Protection Regulation (GDPR): A commentary*. Oxford University Press.
- Malik, A. (2022). The personal data protection bill 2021: A step forward for Pakistan? *Pakistan Law Review*, 14(2), 56-72.
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., & Moher, D. (2021). Updating guidance for reporting systematic reviews: Development of the PRISMA 2020 statement. *Journal of Clinical Epidemiology*, 134, 103-112. <https://doi.org/10.1016/j.jclinepi.2021.02.003>
- Pawson, R., Greenhalgh, T., Harvey, G., & Walshe, K (2005). Realist review - A new method of systematic review designed for complex policy interventions. *Journal of Health Services Research Policy*, 10(1), 21-34. <https://doi.org/10.1258/1355819054308530>
- Petticrew, M., & Roberts, H. (2006). *Systematic reviews in the social sciences: A practical guide*. Blackwell Publishing. <https://doi.org/10.1002/9780470754887>
- Rahi, S. (2017). Research design and methods: A systematic review of research paradigms, sampling issues, and instruments development. *International Journal of Economics Management Sciences*, 6(2). <https://doi.org/10.4172/2162-6359.1000403>
- Raza, H. (2024). Aligning Pakistan's data privacy laws with international standards. *Journal of International Data Privacy Law*, 11(1), 23-40.
- Rizvi, S. H. (2023). *Digital rights and privacy in Pakistan*. Legal Edge Publications.
- Shah, F. (2023). The future of data privacy in developing countries: Lessons from the GDPR. *Global Privacy Law Review*, 5(4), 301-320.
- Solove, D. J., & Schwartz, P. M. (2021). *Information privacy law*. Wolters Kluwer.
- Victor, L. (2008). Systematic reviewing in the social sciences: Outcomes and explanation. *Enquire*, 1(1), 32-46. <https://www.nottingham.ac.uk/sociology/documents/enquire/volume-1-issue-1-victor.pdf>