# Intellectual Property Rights in BRICS Countries: Legal Frameworks, Enforcement Challenges, and Economic Implications

Haryono<sup>1</sup>, Woro Utari<sup>2</sup>, Diah Ayu Rahmawati<sup>3</sup>, Budi Endarto<sup>4</sup>, Bagus Teguh Santoso<sup>5</sup>

- <sup>1</sup>Universitas Bhayangkara Surabaya and <a href="mailto:haryono@ubhara.ac.id">haryono@ubhara.ac.id</a>
- <sup>2</sup>Universitas Wijaya Putra Surabaya and woroutari@uwp.ac.id
- <sup>3</sup> Universitas Bhayangkara Surabaya and <u>diahayu@ubhara.ac.id</u>
- <sup>4</sup> Universitas Wijaya Putra Surabaya and <u>budiendarto@uwp.ac.id</u>
- <sup>5</sup>Universitas Bhayangkara Surabaya and bagus.ts@ubhara.ac.id

#### **ABSTRACT**

This study explores the legal frameworks, enforcement challenges, and economic implications of Intellectual Property Rights (IPR) in BRICS countries-Brazil, Russia, India, China, and South Africa-using a normative juridical approach and qualitative analysis. The findings reveal significant disparities in the governance of IPR among these nations, with China and India leading in innovation and enforcement reforms, while Brazil, Russia, and South Africa face persistent challenges related to institutional capacity and judicial delays. Despite progress in aligning with international standards such as TRIPS, enforcement gaps and socio-economic priorities influence the effectiveness of IPR systems. The study also highlights the dual economic impact of IPR: fostering innovation and investment while raising concerns over access to essential goods. This research underscores the need for harmonized frameworks, enhanced enforcement mechanisms, and a balanced approach to innovation and equity in BRICS countries.

**Keywords**: Intellectual Property Rights, BRICS Countries, Legal Frameworks, Enforcement Challenges, Economic Implication

## 1. INTRODUCTION

Intellectual Property Rights (IPR) play a crucial role in fostering innovation and economic growth, particularly within the BRICS nations, which face unique challenges in their diverse legal and economic landscapes. As these countries navigate globalization and technological advancements, effective IPR protection becomes essential for maintaining competitiveness. IPR encourages creativity and innovation by providing exclusive rights to creators, which can lead to economic benefits through commercialization. Strong IPR systems also attract foreign investment, as companies seek environments where their innovations are protected [1]. However, BRICS countries face significant challenges, including counterfeiting and piracy, which undermine IPR and economic stability [2]. Diverse legal frameworks and enforcement mechanisms further complicate the harmonization of IPR across these nations, leading to inconsistent protection levels [3]. While IPR is vital for innovation, it can also restrict access to essential technologies, particularly in healthcare and education, raising ethical concerns [4]. This highlights the need for flexible IPR frameworks to ensure that innovation does not come at the expense of equitable access to intellectual assets [5].

The BRICS nations—Brazil, Russia, India, China, and South Africa—demonstrate diverse approaches to the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), shaped by their unique historical, economic, and political contexts. While all BRICS countries are signatories to TRIPS, their implementation and enforcement of intellectual property rights (IPR) vary significantly, leading to challenges that hinder foreign investment and innovation. Each BRICS nation has developed distinct IPR laws influenced by local needs and conditions, often prioritizing

public health and economic development over strict adherence to TRIPS standards [6], [7]. For instance, India employs compulsory licensing to enhance access to medicines, reflecting its focus on public welfare [7]. However, common enforcement issues, such as insufficient institutional capacity, lack of public awareness, and inconsistent judicial application, undermine IPR protection [8], [9]. These challenges deter foreign investment, as companies often perceive a high risk of IPR infringement in these markets [6]. The inadequate protection of intellectual assets not only stifles innovation but also complicates the economic growth trajectories of BRICS nations, as they struggle to balance local needs with international obligations [9], [10].

The economic implications of intellectual property rights (IPR) in BRICS countries are multifaceted, balancing the need for foreign direct investment (FDI) and technological advancement against the challenges of equitable access to essential resources. Strong IPR protections can foster a conducive environment for FDI and innovation, particularly in technology-driven sectors, by reducing the risk of imitation [11]. Empirical studies show that patent filings and IPR enforcement positively correlate with FDI inflows in BRICS nations [11]. Additionally, IPR protection encourages research and development (R&D) investments, which are crucial for economic growth and technology spillovers, especially in developing countries [12]. However, excessive protection may stifle domestic innovation by limiting technology diffusion, particularly in less developed economies [12]. Moreover, stringent IPR enforcement can create barriers to affordable access to essential medicines, raising concerns about public health and social equity [13]. Policymakers must carefully navigate these trade-offs to ensure that IPR frameworks support both economic growth and developmental goals.

The effective governance of Intellectual Property Rights (IPR) has become increasingly urgent in the context of globalization and the knowledge-driven economy. For BRICS countries—Brazil, Russia, India, China, and South Africa—this urgency is amplified as they seek to enhance their competitiveness and secure a stronger position in the global market. Despite significant economic growth, these nations face persistent challenges in aligning their legal frameworks with international standards, such as the TRIPS Agreement, and ensuring consistent enforcement of IPR laws. Weak IPR enforcement not only undermines domestic innovation but also deters foreign investment, limits technology transfer, and affects overall economic development. Addressing these challenges is critical to unlocking the full potential of intellectual property as a driver of innovation and economic growth in these emerging economies.

Despite being signatories to international agreements like TRIPS, BRICS countries exhibit variations in their IPR laws and regulations, resulting in inconsistencies that hinder effective governance and cross-border collaboration. The enforcement of IPR laws is further hampered by inadequate institutional capacity, lack of specialized judicial mechanisms, corruption, and insufficient resources for monitoring and prosecution. These challenges adversely affect innovation ecosystems, discourage foreign direct investment, and limit the commercialization of intellectual assets, while overly stringent enforcement may create barriers to equitable access to technology and essential goods. Additionally, BRICS countries face the dual challenge of fostering innovation and economic growth while ensuring that IPR protections do not impede access to critical technologies, particularly in sectors like healthcare and agriculture. The disparities in IPR governance within these nations also risk diminishing their collective ability to contribute effectively to the global intellectual property landscape, thereby affecting their long-term economic ambitions. These issues underline

the necessity of addressing the gaps in IPR governance and enforcement to achieve a balanced and sustainable approach to intellectual property management in BRICS countries.

## 2. LITERATURE REVIEW

## 2.1 Theoretical Foundations of Intellectual Property Rights

The concept of Intellectual Property Rights (IPR) is essential for fostering innovation and economic growth, particularly in the context of developing nations. While strong IPR protections incentivize investment in research and development, critics highlight the potential for monopolistic barriers that restrict access to essential goods. IPR incentivizes investment in R&D by granting exclusive rights to creators, fostering entrepreneurship and economic growth, and stimulating sectors like technology and pharmaceuticals, driving both national and global economic progress [5], [14]. However, overly rigid IPR systems can limit access to essential goods, exacerbating inequalities in healthcare and education, while the monopolistic control of IPR by developed nations can hinder knowledge sharing and economic independence in developing countries [15]. The TRIPS Agreement provides a framework for global IPR governance by setting minimum standards for protection while allowing for compulsory licensing, enabling developing nations to prioritize public health and access [15], [16]. This flexibility is vital for BRICS countries as they navigate the dual goals of fostering innovation and ensuring equitable access to resources [15].

## 2.2 Legal Frameworks in BRICS Countries

The legal frameworks governing intellectual property rights (IPR) in BRICS countries exhibit notable differences, reflecting each nation's unique challenges and approaches. While Brazil aligns with TRIPS, enforcement issues hinder its effectiveness, particularly in protecting biodiversity [17]. Russia has enacted reforms to meet international standards, yet rampant piracy undermines these efforts [18]. India's IPR system is recognized for balancing innovation and public health, especially in pharmaceuticals, but enforcement remains weak [15]. China leads in patent filings, showcasing its commitment to innovation, though concerns about IP theft persist [19]. South Africa's IPR framework prioritizes public health but suffers from low awareness and enforcement challenges [20].

# 2.3 Enforcement Challenges in BRICS Countries

The enforcement of Intellectual Property Rights (IPR) laws in BRICS countries faces significant challenges that hinder their effectiveness, including limited institutional capacity, prolonged litigation processes, and high levels of counterfeiting and piracy. Many BRICS nations lack the financial and human resources necessary for effective IPR enforcement [21], and the absence of specialized courts for IPR cases leads to inefficiencies in handling disputes [18]. Additionally, insufficient training for enforcement personnel results in a lack of expertise in IPR matters (Kumar & Jawed, 2024). Prolonged litigation processes discourage rights holders from pursuing claims, exacerbating enforcement gaps [21], while complex legal frameworks contribute to delays in litigation [18]. High levels of counterfeiting, particularly in countries like China and Russia, further undermine IPR effectiveness [15]. Limited awareness of IPR

laws among small and medium enterprises (SMEs) exacerbates these challenges, reducing compliance and enforcement efficiency [15], [22]. Addressing these issues requires a multifaceted approach to strengthen IPR enforcement mechanisms across BRICS nations.

## 2.4 Economic Implications of IPR in BRICS Countries

The economic implications of Intellectual Property Rights (IPR) governance in BRICS countries are complex, influencing innovation, access to essential goods, and global competitiveness. Strong IPR systems attract foreign direct investment (FDI) and stimulate domestic innovation by protecting intellectual assets, which is crucial for research and development (R&D) efforts [15]. Effective governance enhances the attractiveness of BRICS nations for FDI, fostering economic growth [23]. However, stringent IPR protections can restrict access to affordable medicines, exacerbating health inequalities [15]. The biosimilar market in BRICS highlights the need for balanced IPR policies to ensure affordable healthcare options [17]. Harmonized regulatory frameworks can improve the global competitiveness of BRICS nations by facilitating technology transfer and innovation [20]. Conversely, weak enforcement of IPR can deter technology transfer from developed to developing economies, hindering growth potential [24]. Balancing these aspects is critical for aligning IPR governance with both economic and social objectives in BRICS nations.

While existing literature provides valuable insights into IPR governance in BRICS countries, several gaps remain. Few studies offer a comparative analysis of enforcement mechanisms across these nations. Moreover, the economic implications of IPR are often examined in isolation, with limited focus on their interconnectedness with social equity and developmental goals. Addressing these gaps requires an integrated approach that considers the socio-economic and political contexts of BRICS countries.

## 3. METHODS

### 3.1 Type

This study employs a normative juridical approach to analyze legal texts, policies, and international agreements related to IPR in BRICS countries, focusing on the interpretation and application of laws to provide insights into their alignment with international standards such as the TRIPS Agreement. Complementing this, qualitative analysis is used to explore enforcement challenges and economic implications, drawing on primary and secondary data sources, including legal documents, academic literature, and case studies. Together, these methodologies enable a comprehensive understanding of the complexities of IPR governance in BRICS countries, addressing both the legal frameworks and their practical implementation.

#### 3.2 Data Collection

The study relies on secondary data sources to ensure a thorough and contextual analysis of the subject matter. Data collection encompasses a range of materials, including national IPR laws, policies, and regulations within BRICS countries, as well as international agreements like the TRIPS Agreement that govern intellectual property. Academic literature, such as peer-reviewed journal articles and books, provides insights into IPR governance, enforcement challenges, and economic implications specific to BRICS nations. Additionally, reports and case studies from international organizations like the World Intellectual Property Organization (WIPO) and the World Trade Organization (WTO), along with country-specific examples, highlight enforcement practices and

their economic effects. Official reports and government data on IPR filings, enforcement activities, and economic outcomes further enrich the analysis, ensuring a comprehensive understanding of the topic.

#### 3.3 Data Analysis

The collected data are analyzed using qualitative content analysis, comparative analysis, and thematic analysis to provide a comprehensive understanding of IPR governance in BRICS countries. Content analysis involves examining legal documents and policies to identify commonalities and differences in IPR frameworks, while also analyzing enforcement challenges and economic implications as highlighted in academic literature and case studies. Comparative analysis focuses on cross-country comparisons to identify patterns, gaps, and best practices in IPR governance, alongside an evaluation of the socio-economic impact of these frameworks. Thematic analysis further explores recurring issues such as institutional capacity, judicial delays, and piracy, as well as economic themes like innovation, foreign direct investment, and access to essential goods, ensuring a nuanced examination of the subject matter.

#### 4. RESULTS AND DISCUSSION

## 4.1 Legal Frameworks in BRICS Countries

The BRICS countries have distinct legal frameworks governing Intellectual Property Rights (IPR), shaped by their socio-economic, historical, and political contexts. These frameworks align, to varying degrees, with international standards such as the TRIPS Agreement, yet differences in implementation and enforcement reveal critical gaps.

#### 1. Brazil

Brazil's IPR regime is built on the foundation of the TRIPS Agreement, with laws designed to safeguard patents, trademarks, copyrights, and industrial designs. Specific legislation, such as the Industrial Property Law (Lei da Propriedade Industrial), demonstrates Brazil's commitment to protecting intellectual assets. However, the system struggles with procedural delays and inefficiencies, particularly in patent approvals, which can take several years. Brazil's emphasis on protecting biodiversity and traditional knowledge reflects its unique ecological and cultural heritage but introduces complexities in enforcement.

# 2. Russia

Russia's IPR framework underwent significant reforms following its accession to the WTO in 2012. The Civil Code Part IV consolidates intellectual property laws and provides a comprehensive legal structure for protecting IPR. However, enforcement remains inconsistent, with pervasive counterfeiting and piracy undermining these protections. Despite government initiatives to combat intellectual property violations, weak institutional capacity and corruption in enforcement agencies continue to pose significant challenges.

## 3. India

India's approach to IPR is characterized by its focus on public interest. The Patents Act, 1970, amended to comply with TRIPS, includes flexibilities such as compulsory licensing, particularly in the pharmaceutical sector. This provision has enabled India to address public health emergencies by producing affordable generic medicines. Despite its robust legal framework, enforcement challenges persist, particularly in addressing patent infringement and reducing litigation timelines.

## 4. China

China has positioned itself as a global leader in intellectual property, filing the highest number of patents worldwide. Its IPR framework has undergone extensive reforms, including the establishment of specialized IPR courts and the implementation of punitive damages for infringement. However, concerns about intellectual property theft and inconsistent enforcement practices persist, undermining global trust in its IPR regime.

#### 5. South Africa

South Africa's IPR laws prioritize access to essential goods, particularly in healthcare, leveraging TRIPS flexibilities to promote public health. The Copyright Act and Patents Act form the backbone of its IPR framework. However, the enforcement of these laws is hampered by resource constraints and low awareness among stakeholders, particularly small and medium enterprises (SMEs).

## 4.2 Enforcement Challenges in BRICS Countries

The enforcement of IPR laws in BRICS countries faces significant challenges due to inadequate institutional capacity, including limited resources, training, and personnel, which hinder effective enforcement [15]. These deficiencies lead to delays in processing patent applications, particularly in Brazil and South Africa, weakening the overall IPR system [17]. The lack of specialized training further complicates enforcement efforts [18], eroding trust among rights holders and stakeholders and discouraging innovation and investment [15].

Judicial inefficiencies further exacerbate enforcement challenges, particularly in Brazil and India, where prolonged litigation deters rights holders from pursuing legal recourse. The absence of specialized IPR courts adds to these delays, resulting in inconsistent rulings and reducing confidence in the legal system. Meanwhile, counterfeiting and piracy pose significant problems, especially in Russia and China. Despite legal reforms aimed at improving enforcement, both nations continue to struggle with the production and distribution of counterfeit goods, undermining the credibility of their IPR frameworks and affecting their economic reputation.

Awareness gaps and cross-border enforcement issues add to the complexities of IPR governance in BRICS countries. Limited understanding of IPR laws among SMEs, particularly in South Africa and Brazil, leads to reduced compliance and enforcement effectiveness. Many small enterprises lack the knowledge or resources to protect their intellectual assets, further exposing them to infringement risks. Additionally, the absence of harmonized enforcement mechanisms across BRICS nations complicates the resolution of cross-border disputes, a challenge that is especially pronounced in the digital economy where intellectual property violations often transcend national boundaries. These combined challenges underscore the need for improved institutional frameworks, judicial reforms, and collaborative efforts among BRICS countries to strengthen IPR enforcement.

#### 4.3 Economic Implications of IPR Governance in BRICS Countries

The economic implications of Intellectual Property Rights (IPR) governance in BRICS countries are significant, shaping innovation, foreign direct investment (FDI), access to essential goods, and global competitiveness. Strong IPR systems in China and India foster innovation, attract substantial FDI, and enhance technological advancements [15], while weak enforcement in Russia and Brazil hampers R&D investment and limits global competitiveness [23]. Effective IPR governance boosts investor confidence, evident in India's pharmaceutical sector and China's technology industry [24], whereas inconsistent enforcement in Russia and South Africa reduces FDI appeal [23]. Utilizing TRIPS flexibilities, India and South Africa produce affordable generic medicines, balancing innovation with public health [15], but overly stringent protections in other BRICS nations may restrict access to essential goods, raising equity concerns [15]. While China leads in technology and India excels in pharmaceuticals, enforcement issues in Brazil, Russia, and South Africa hinder their ability to compete globally [23], [24].

#### 4.4 Comparative Analysis of IPR Governance in BRICS Countries

The comparative analysis of Intellectual Property Rights (IPR) governance across BRICS nations reveals both advancements and challenges. China and India exemplify progress in aligning their IPR frameworks with international standards, notably the TRIPS Agreement, while South Africa emphasizes public health through similar flexibilities. China leads in patent filings, demonstrating a robust commitment to innovation [25], while India leverages compulsory licensing to balance innovation with public health needs [15]. South Africa focuses on social equity in IPR by utilizing TRIPS flexibilities to enhance public health access [15]. However, weaknesses persist, particularly in Brazil and Russia, where significant judicial delays and weak enforcement mechanisms discourage rights holders [25]. Additionally, counterfeiting and piracy remain prevalent in China and Russia, undermining the effectiveness of legal reforms [15].

## 4.5 Policy Implications and Recommendations

Based on the findings, several policy recommendations are proposed to address the challenges of IPR governance in BRICS countries. Enhancing institutional capacity by investing in training and resources for enforcement agencies is critical to overcoming capacity constraints. Establishing specialized IPR courts can streamline litigation processes and ensure consistent judicial outcomes. Raising awareness through educational campaigns and capacity-building initiatives can improve knowledge of IPR laws among SMEs and other stakeholders, fostering better compliance. Harmonizing IPR frameworks and enforcement mechanisms across BRICS countries can facilitate cross-border collaboration and efficient dispute resolution. Additionally, leveraging technology through digital tools and platforms can enhance the efficiency and transparency of enforcement processes. Lastly, policymakers must balance innovation and access by creating IPR frameworks that incentivize innovation while ensuring that essential goods and services remain accessible to the public. These measures collectively aim to strengthen IPR governance and its contribution to sustainable economic growth.

#### **CONCLUSION**

The governance of Intellectual Property Rights (IPR) in BRICS countries reflects a complex interplay of legal frameworks, enforcement challenges, and economic priorities. Despite progress in aligning IPR laws with international standards, disparities in enforcement and policy implementation persist. China and India have emerged as leaders in leveraging IPR for innovation and economic growth through robust legal frameworks and proactive enforcement measures, while Brazil, Russia, and South Africa continue to grapple with institutional capacity constraints, judicial inefficiencies, and widespread counterfeiting and piracy. The economic implications of IPR governance are significant, with strong systems driving foreign direct investment (FDI), innovation, and competitiveness, whereas weak enforcement hinders economic development and deters investment. Moreover, balancing IPR protection with equitable access to essential goods remains a critical issue, particularly in sectors like healthcare. To overcome these challenges, BRICS countries must strengthen enforcement mechanisms, harmonize legal frameworks, raise stakeholder awareness, and leverage technology to enhance transparency and efficiency. Policymakers must also adopt a balanced approach that promotes innovation while ensuring access to critical goods and technologies. By addressing these issues, BRICS countries can fully realize the potential of IPR as a catalyst for sustainable economic growth and global competitiveness.

## **REFERENCES**

- [1] S. Ramesh, "Intellectual Property in the Business World: Safeguarding Innovations in Commerce and Management," *J. Leg. Subj.*, vol. 2, pp. 11–15, Dec. 2022, doi: 10.55529/jls.21.11.15.
- [2] W. G. Park and D. C. Lippoldt, "Technology transfer and the economic implications of the strengthening of intellectual property rights in developing countries," 2008.

- [3] H. P. Rahman, N. A. E. Permana, V. K. Nissa, R. M. Kartina, and G. Y. Andri, "Legal protection of intellectual property rights in the context of economic globalization: A case study of copyright enforcement in international markets," *Indones. J. Multidiscip. Sci.*, vol. 3, no. 9, 2024.
- [4] R. A. Mashelkar, "Intellectual property rights and the Third World," Curr. Sci., pp. 955–965, 2001.
- [5] N. Kumar, R. Gour, and N. Sharma, "Intellectual Property Rights and Economical Development: A Brief Overview," J. Sci. Res. Reports, vol. 30, no. 5, pp. 145–162, 2024.
- [6] R. C. Bird and D. R. Cahoy, "The emerging BRIC economies: Lessons from intellectual property negotiation and enforcement," Nw. J. Tech. Intell. Prop., vol. 5, p. 400, 2006.
- [7] F. M. Abbott, C. M. Correa, and P. Drahos, "Emerging markets and the world patent order: the forces of change," in *Emerging Markets and the World Patent Order*, Edward Elgar Publishing, 2013, pp. 3–34.
- [8] F. M. Abbott, C. M. Correa, and P. Drahos, Emerging markets and the world patent order. Edward Elgar Publishing, 2013.
- [9] A. Fitzgerald and R. Olwan, "Intellectual property, TRIPS and development," 2013.
- [10] M. Carlos, "Intellectual Property and International Trade: The TRIPs Agreement," [KIIP] 한국지식제산연구원 도서 DB, p. 0, 1998.
- [11] R. Kumar, S. K. Yadav, and S. Verma, "Intellectual property rights protection and foreign direct investment: a study of BRICS countries," *World Rev. Entrep. Manag. Sustain. Dev.*, vol. 14, no. 6, pp. 694–704, 2018.
- [12] X. Yi and A. Naghavi, "Intellectual property rights, FDI, and technological development," J. Int. Trade Econ. Dev., vol. 26, no. 4, pp. 410–424, 2017.
- [13] P. Kumar and A. S. A. Al-Ausi, "Protection and Promotion of Intellectual Property Rights (IPR) for Economic Competitiveness and Growth," in *Transitioning From Globalized to Localized and Self-Reliant Economies*, IGI Global, 2022, pp. 147–156.
- [14] Y. T. Perminov, "Theoretical aspects of criminal protection of intellectual property rights," *Uzhhorod Natl. Univ. Herald. Ser. Law*, vol. 3, no. 84.
- [15] K. Kumar and S. Jawed, "Emerging Issues of IPR in Developing and Under Developed Countries," *Int. J. Soc. Sci. Res. Rev.*, vol. 7, pp. 202–210, Oct. 2024, doi: 10.47814/ijssrr.v7i10.2379.
- [16] S. Shadofa, "Intellectual Property Rights and Scientific Plagiarism," Int. J. Law Res. Stud., pp. 31–40, Sep. 2024, doi: 10.59992/IJLRS.2024.v3n3p3.
- [17] N. Patil *et al.*, "Navigating Biosimilar Regulatory Pathways in Emerging Markets: Insights from Brics Nations," *Appl. Drug Res. Clin. Trials Regul. Aff.*, 2024.
- [18] L. Munnik, "A critical comparative analysis of anti-bribery legislation in the BRICS countries." Stellenbosch: Stellenbosch University, 2016.
- [19] M. R. -, V. R. -, and D. S. R. -, "Intellectual Property Challenges in Cross-border Business Transations," Int. J. Multidiscip. Res., vol. 6, no. 3, pp. 1–11, 2024, doi: 10.36948/ijfmr.2024.v06i03.22079.
- [20] H. Pawar and M. Patel, "Harmonization of Regulatory Frameworks for Medical Devices in BRICS Countries: A Path to Enhanced Trade and Investment," in *Annales Pharmaceutiques Françaises*, Elsevier, 2024.
- [21] G. Widjaja, "Law enforcement role in the management of sustainable natural resources," *J. Ecohumanism*, vol. 3, no. 3, pp. 388–398, 2024.
- [22] R. Thiébaut, "The role of transnational legal process in advancing a sustainable agenda within the brics," *J. Law Sustain. Dev.*, vol. 12, no. 10, pp. e3997–e3997, 2024.
- [23] A. Malik and A. N. Sah, "Can stronger governance and institutional quality drive growth through inward foreign direct investments in BRICS nations?," South African J. Econ. Manag. Sci., vol. 27, no. 1, pp. 1–13, 2024.
- [24] S. Maity and A. Majumder, "An Empirical Study on Assessment of Effective Governance on Economic Growth in BRICS Countries," in *Good Governance and Economic Growth*, Routledge India, 2024, pp. 84–106.
- [25] R. Baki, "Comparison of Innovation Performances of BRICS Countries through CRITIC and GRA Methods," Gaziantep Univ. J. Soc. Sci., vol. 23, no. 4, pp. 1561–1570, 2024.