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Assessment of Political Stability, Human Development and Economic Freedom Performance of BRICS-T Countries: A Hybrid MCDM Approach *

BRICS-T Ülkelerinin Siyasi İstikrar, İnsani Kalkınma ve Ekonomik Özgürlük Performansının Değerlendirilmesi: Hibrit MCDM Yaklaşımı

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ÖZ

Bu çalışma, BRICS-T ülkelerinin siyasi istikrar, beşerî kalkınma ve ekonomik özgürlük performanslarını hibrit çok kriterli karar verme (ÇKKV) yöntemleriyle değerlendirmektedir. Literatür taramasına dayanarak belirlenen kriterler; katılım ve hesap verebilirlik, siyasi istikrar ve şiddet/terörün yokluğu, devlet etkinliği, düzenleyici kalite, hukukun üstünlüğü, yolsuzluk kontrolü, ekonomik özgürlük endeksi ve insani gelişme endeksidir. Veriler Dünya Bankası, Heritage Foundation ve UNDP raporlarından elde edilmiştir. Kriter ağırlıkları MEREC yöntemiyle hesaplanmış; BRICS-T ülkelerinin performans sıralamaları ise CRADIS, SPOTIS ve RSMVC yöntemleriyle yapılmıştır. MEREC sonuçlarına göre en önemli kriterler insani gelişme endeksi, düzenleyici kalite ve katılım ve hesap verebilirlik olarak belirlenmiş; en az önemli kriterler ise sırasıyla yolsuzluk kontrolü, devlet etkinliği ve ekonomik özgürlük endeksidir. Genel sıralama sonuçları Birleşik Arap Emirlikleri, Güney Afrika ve Hindistan'ın en yüksek performansa; Rusya Federasyonu, Etiyopya ve İran'ın ise en düşük performansa sahip olduğunu göstermektedir.

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ABSTRACT

This study evaluates the performance of BRICS-T countries in terms of political stability, human development, and economic freedom using hybrid multi-criteria decision-making (MCDM) methods. Based on a literature review, the criteria were determined as voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, control of corruption, economic freedom index, and human development index. The data were obtained from the World Bank, Heritage Foundation, and UNDP reports. The weights of the criteria were calculated using the MEREC method, while the performance rankings of the countries were determined through CRADIS, SPOTIS, and RSMVC methods. According to the MEREC results, the most important criteria were identified as human development index, regulatory quality, and voice and accountability, whereas control of corruption, government effectiveness, and economic freedom index were the least important. Overall findings indicate that the United Arab Emirates, South Africa, and India show the highest performance, while the Russian Federation, Ethiopia, and Iran rank lowest in terms of the evaluated indicators.

1. Introduction

Political stability, human development, and economic freedom are interrelated concepts that significantly influence each other within the framework of national governance and economic performance. The relationship between these elements is particularly pronounced in

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developing countries, where political turmoil can severely hinder economic progress and human welfare. Political stability is often regarded as a prerequisite for sustainable economic development. A stable political environment fosters confidence among investors and citizens alike, creating a conducive atmosphere for economic activities. Firmansyah et at. emphasizes that political stability is crucial for economic development, suggesting that a stable political climate allows for the effective implementation of policies that promote economic growth and social welfare (Firmansyah et al., 2023). This idea is supported by Wibowo that notes that political stability directly impacts human development indicators, such as income, education, and health, thereby reinforcing the notion that a stable political framework is essential for improving the quality of life in a nation (Wibowo, 2023). Moreover, political instability has a more pronounced negative effect on economic growth in poorer and middle-income countries, where institutional frameworks are often weaker (Dzihny et al., 2023). This vulnerability underscores the importance of establishing robust political institutions that can withstand internal and external shocks. Also, Çalışkan (2019) elaborates on this relationship by indicating that political decisions significantly influence economic outcomes, suggesting that political stability is a critical determinant of financial development and overall economic health. The interplay between political stability and economic performance is thus evident, as stable governance can lead to improved economic indicators and vice versa.

Economic freedom, defined as the ability of individuals to control their own economic resources, is another vital component that interacts with political stability and human development. Uzelac et al. (2020) analyzed 19 Central and Eastern European countries between 1999 and 2016 by constructing an economic freedom index using PCA and estimating its effects through a Random Effects panel model, and found that control of corruption, democracy, political stability, the rule of law, and economic freedom significantly enhance economic growth, while regulatory quality shows no meaningful impact. Taken together, these findings imply that greater economic liberty tends to coexist with stronger institutional environments, which in turn may foster citizen support for stable and effective governance structures. Conversely, a lack of economic freedom can lead to political unrest and instability, which can further hinder economic growth. The significance of corruption in this triad cannot be overstated. Shabbir et al. (2016) argue that political stability is essential for curbing corruption, which in turn promotes economic growth. Their findings indicate that countries with stable political environments tend to have lower levels of corruption, facilitating better governance and economic performance. Also, political stability reduces social unrest and encourages investment, thereby fostering economic growth. The control of corruption, therefore, emerges as a crucial factor that links political stability and economic performance.

Human Development Index (HDI) serves as a comprehensive measure that reflects the well-being of a nation's citizens. Wibowo (2023) indicates that political stability is a significant determinant of HDI, as stable governance allows for the effective allocation of resources towards education, healthcare, and social services (Wibowo, 2023). The relationship between economic freedom and human development is also noteworthy. Economic freedom facilitates individual entrepreneurship and innovation, which are critical drivers of economic growth and, consequently, human development. Yevdokimov et al. (2018) highlighted that economic freedom is positively correlated with macroeconomic stability, which in turn supports human development initiatives. This correlation suggests that policies promoting economic freedom can enhance the overall well-being of citizens by providing them with the means to improve their living standards. Moreover, the role of democracy in fostering political stability and economic growth is a subject of considerable debate. Baklouti and Boujelbène (2020) argue that there exists a complementarity between political stability and democracy, where both elements work synergistically to promote economic growth (Baklouti & Boujelbene, 2020). This perspective aligns with the findings of Abdillah et al. (2020), who assert that strong political stability, coupled with effective governance, is essential for enhancing economic growth in Asian countries (Abdillah et al., 2020).

The interplay between democracy, political stability, and economic performance thus underscores the importance of democratic governance in achieving sustainable development. Overall, the intricate relationships among political stability, human development, and economic freedom reveal a complex web of interactions that significantly influence national outcomes. Political stability serves as a foundation for economic growth and human development, while economic freedom enhances individual welfare and contributes to a stable political environment. The presence of corruption poses a significant challenge to this triad, as it undermines both political stability and economic performance. Therefore, fostering political stability through effective governance, promoting economic freedom, and addressing corruption are essential strategies for enhancing human development and achieving sustainable economic growth. Overall, the current study attempts to respond to the following research questions:

- *What are the critical factors that influence the Political Stability, Human Development and Economic Freedom performance of BRICS-T countries?*
- *How do BRICS-T countries perform in terms of Political Stability, Human Development and Economic Freedom?*
- *Does the Political Stability, Human Development and Economic Freedom performance of BRICS-T countries differ depending on the MCDM methods applied?*

In this context, this study addresses the political stability, human development and economic freedom of BRICS-T countries from 2018 to 2022 using hybrid MCDM methods.

To achieve this goal, a new model is proposed that incorporates an objective weighting approach (MEREC) with a novel ranking-based method (CRADIS, SPOTIS, RSMVC). Additionally, the results derived from various ranking methods were combined using the Borda Count method. The novelties of this study can be expressed as follows:

- A new hybrid approach is utilized as an integrated decision support model to evaluate the Political Stability, Human Development and Economic Freedom performance of BRICS-T countries.
- A Hybrid framework is applied for the first time in the MCDM field to assess the Political Stability, Human Development and Economic Freedom performance of BRICS-T countries.
- A hybrid model enables a decision support system that helps private sector, policymakers, and other stakeholders investigates the Political Stability, Human Development and Economic Freedom performance of BRICS-T countries.
- This study offers comprehensive insight through extending the time period (2018-2022).

The rest of the paper is organized as follows: Section 2 provides an overview of the indexed and BRICS-T economies. Section 3 reviews previous research in the relevant field. Section 4 outlines the research methodology, including the MEREC, CRADIS, SPOTIS, RSMVC, and Borda Count methods. Section 5 presents the findings from the hybrid MCDM methods. Section 6 concludes with a summary of the results and offers future recommendations and implications. The editing and proofreading of this study were assisted by the artificial intelligence tool, ChatGPT 4.0.

2. Conceptual Framework

2.1. World Governance Index (WGI)

The Worldwide Governance Index (WGI) is a composite index developed by the World Bank that assesses the quality of governance across countries. It encompasses six key dimensions: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. These dimensions are derived from a variety of data sources, including surveys, expert assessments, and administrative records, which provide a comprehensive overview of governance performance globally (Gerged & Elheddad, 2020; Kaufmann et al., 2023). The WGI serves as a critical tool for policymakers, researchers, and international organizations to evaluate and compare governance quality across nations. It allows for the identification of strengths and weaknesses in governance systems, facilitating targeted interventions aimed at improving public service delivery and governance practices (Araujo & Andrade, 2022). For instance, the index highlights the importance of government effectiveness in ensuring the quality of public services and the reliability of government policies, which are essential for fostering economic development and social welfare (Eştürk & Mert, 2022). Furthermore, the WGI is instrumental in understanding the relationship between governance and various socio-economic outcomes. Research indicates that higher governance scores correlate with better human development outcomes, as effective governance promotes transparency, accountability, and citizen participation in decision-making processes (Lopes et al., 2023). This relationship underscores the significance of governance in achieving sustainable development goals and enhancing the overall quality of life for citizens.

2.2. Human Development Index (HDI)

The Human Development Index (HDI) is a composite statistic used to measure and rank countries based on human development levels. Developed by the United Nations Development Programme (UNDP), the HDI incorporates three key dimensions: health, education, and standard of living. Specifically, it is calculated using indicators such as life expectancy at birth (as a proxy for health), mean years of schooling and expected years of schooling (as proxies for education), and gross national income (GNI) per capita (as a measure of standard of living) (Asadi, 2019; Pinar et al., 2015; Suhaili et al., 2020). The HDI aims to provide a broader understanding of development beyond mere economic growth, which is often measured by Gross Domestic Product (GDP). By focusing on human capabilities and well-being, the HDI emphasizes the importance of enhancing individuals' quality of life and expanding their choices (Radovanovic, 2011; Uddin, 2023). This approach aligns with Amartya Sen's capabilities theory, which posits that development should be assessed by the freedoms and opportunities available to individuals rather than solely by economic indicators. The HDI is calculated using a geometric mean of normalized indices for each of the three dimensions, ensuring that a deficiency in one dimension cannot be fully compensated by high performance in another (Imaningsih et al., 2020). This methodological choice reflects the interconnectedness of health, education, and income, highlighting that improvements in one area can significantly influence overall human development outcomes (Sofilda et al., 2022). Moreover, the HDI serves as a valuable tool for policymakers and researchers, facilitating comparisons between countries and tracking progress over time. It has been widely adopted in various studies to analyze the determinants of human development and to assess the impact of different policies on HDI scores (Arisman, 2018; Ipmawan et al., 2022; Wolff et al., 2011). HDI is also instrumental in identifying disparities in human development within and between countries, thereby guiding targeted interventions aimed at improving the well-being of populations (Pinar et al., 2015; Suhaili et al., 2020).

2.3. Economic Freedom Index (EFI)

The Economic Freedom Index (EFI) is a composite measure

that evaluates the degree of economic freedom in various countries. It is primarily designed to assess how policies and institutions support individual economic choices, voluntary exchange, and competition in the marketplace. The index is constructed using a range of indicators that reflect the extent to which individuals can engage in economic activities without undue restrictions (Gwartney et al., 2022). The EFI is often associated with the Economic Freedom of the World (EFW) index, which is published annually by the Fraser Institute. This index categorizes economic freedom into several key areas, including the size of government, property rights and legal systems, trade freedom, sound money, and regulatory efficiency. Each of these categories is assigned a score, and the overall index score is derived from the average of these individual scores, typically scaled from 0 to 10, where a higher score indicates greater economic freedom (Garrett & Rhine, 2014). Economic freedom is defined as the ability of individuals to control their own economic resources, engage in voluntary transactions, and operate in a competitive market environment. It encompasses aspects such as the protection of property rights, the absence of excessive government intervention in the economy, and the presence of a stable monetary system (Garrett & Rhine, 2014; Gwartney et al., 2022). The EFI serves as a critical tool for researchers and policymakers, as it provides insights into the relationship between economic freedom and various socio-economic outcomes, including economic growth, income inequality, and overall prosperity (Carter, 2007; Heckelman, 2000). Empirical studies have shown that higher levels of economic freedom are generally associated with better economic performance, including higher GDP growth rates and improved living standards (Belanová et al., 2023; Rode & Coll, 2012). This correlation suggests that policies promoting economic freedom can lead to more robust economic development and improved quality of life for citizens. Furthermore, the EFI is utilized to compare economic freedom across countries and to track changes over time, making it a valuable resource for understanding global economic trends (Gwartney et al., 2022).

2.4. BRICS and the Beyond

After the creation of BRIC by Brazil, Russia, India and China in 2006, South Africa joined in this group and BRICS has shaped in 2010. The group was formed with the aim of bringing together the world's most significant developing countries, seeking to counterbalance the political and economic power of North America and Western Europe. Egypt, Ethiopia, Iran, Saudi Arabia, and the United Arab Emirates (UAE) have been invited to join as members, effective from January 1, 2024 (BBC, 2024). The enlarged group represents a population of approximately 3.5 billion people, accounting for 45% of the world's population. Together, the economies of its members are valued at over $28.5 trillion, making up around 28% of the global economy. China has long been the largest economy within the BRICS bloc and is the world's second-largest economy, trailing the United States (World Bank, 2025). Over recent decades, its growth has been faster than that of other BRICS countries. For example, in 2000, China's GDP was less than twice Brazil's (US$1.22 trillion vs. US$0.66 trillion); by 2021, it was about eleven times Brazil's (US$18.20 trillion vs. US$1.67 trillion) (World Bank, 2025). Between 2000 and the mid-2010s, the BRICS country with the second-largest GDP has alternated among Brazil, Russia, and India due to various economic factors. However, India has held this position since 2015, when Brazil and Russia experienced recessions (World Bank, 2017; IMF, 2015a, 2015b; Reuters, 2017). India's growth is projected to surpass China's in the coming decade, positioning it to become the next economic powerhouse. South Africa, meanwhile, has consistently been the smallest BRICS economy, though it's one of Africa's most advanced and stable major economies, contributing to its strategic importance in the block (IMF, 2025; COFR, 2023). Projections suggest that China's GDP could overtake that of the U.S. by the late 2020s, while India might surpass the U.S. around the mid-21st century. Beyond economic alliances, the BRICS bloc, through initiatives like the New Development Bank founded in 2014, has expanded its focus to include global investments in sustainable infrastructure and renewable energy. Although BRICS nations had less cohesion or influence in the 20th century, they now hold greater sway internationally, particularly within their regions. With the original BRICS nations and the Group of Seven (G7) among the 12 largest global economies, the BRICS are expected to move even further up the rankings in the coming decades (O'Neill, 2024). In 2024, BRICS countries account for about 36% of global GDP following the recent expansion. With the addition of Saudi Arabia, Iran, the United Arab Emirates, Egypt, and Ethiopia, the BRICS group has boosted its economic power, establishing itself as a structure with a larger global impact. Argentina formally announced that it will not join the BRICS bloc, with President Javier Milei stating the timing was "not opportune" for membership (Associated Press, 2023). Before this expansion, BRICS countries held around 26% of the global GDP. With the new members, BRICS also now represents 47% of the world population, further strengthening its demographic significance (Glauben & Duric, 2024).

3. Literature Review

The table reveals a diverse array of studies exploring the interplay between socio-economic development, governance, and sustainability, utilizing a range of analytical methods and indicators. These studies frequently employ approaches such as panel data analysis, cluster analysis, and empirical methods, along with innovative frameworks like multi-criteria decision-making (MCDM) and artificial neural networks (ANNs).

The research focuses on varied contexts, encompassing regions like ECOWAS countries, BRICS nations, and OECD member states, as well as specific countries like the Czech Republic, Slovak Republic, and Singapore. Indicators such as the Human Development Index (HDI), World Governance Indicators (WGI), and Index of Economic Freedom (EFI) form the basis for examining critical developmental themes, including economic freedom, governance quality, and public health expenditure.

Notable findings underscore the pivotal role of governance and institutional quality in fostering human development. For instance, public health expenditures have been linked to improvements in HDI, while governance frameworks influence investment patterns and economic resilience. Moreover, MCDM methods, such as TOPSIS and VIKOR, are particularly effective in addressing strategic challenges, facilitating resource allocation, and prioritizing initiatives, especially in regions like BRICS and the Balkans. These studies collectively highlight the significance of tailored governance and economic policies in driving sustainable development outcomes.

Table 1. List of Previous Researchs

Author(s)	Year	Indicator(s)	Method	Data and Results
Aisen & Vega	(2011)	Political instability, economic freedom (EFI), institutional quality, GDP per capita growth	Dynamic panel-data estimation (System-GMM)	Political instability significantly reduces per-capita GDP growth across a 169-country panel for 1960–2004, while economic freedom (EFI) has a positive and significant effect, underscoring the importance of institutional quality and stability for growth.
Guarini et al.	(2017)	WGI, EFI, HDI	Analytic Hierarchy Process (AHP)	The study concludes that selecting an appropriate MCDA method requires matching the method to the specific characteristics of the decision problem, and it therefore proposes a taxonomy that systematizes this selection process.
Erilli	(2018)	Economic freedom evaluation for 178 countries, data from 2013 to 2016	Fuzzy clustering method (FCM)	Using cross-country data from the Heritage Foundation's 2013–2016 Economic Freedom Index, the study shows that the FCM-based methodology can reliably reproduce country rankings—indicating that countries' relative positions are driven by consistent underlying factors across years and that FCM is a valid alternative tool for measuring economic freedom.
Kinnunen et al.	(2019)	HDI, market economy, democracy, governance	Qualitative analysis, artificial neural network (ANN), logistic regression	Using data on 124 'transition' countries for 2008–2016, the study finds that higher levels of market-economy quality, governance and democracy (as measured by the Bertelsmann Stiftung index) significantly predict higher values of the Human Development Index (HDI), and demonstrates that an artificial neural-network model classifies countries' HDI categories more accurately than logistic regression.
De Lima Silva & De Almeida Filho	(2020)	Economic freedom as evaluated using a set of 12 criteria grouped	TOPSIS-Sort B & C	Using data on 180 countries, the study demonstrates that the newly proposed TOPSIS-Sort-C (and its variant TOPSIS-Sort-B) reliably classifies countries into five ordered categories in a way that is coherent with established economic-freedom rankings proving these methods as valid alternatives for multicriteria ordinal classification problems.
Kašťáková & Chlebcová	(2020)	Economic freedom assessment for Western Balkan countries	The abstraction method	Based on 2010–2019 data for Western Balkans countries, the study finds that overall economic freedom remains low to moderate in the region (with North Macedonia showing the highest and Bosnia and Herzegovina the lowest scores) highlighting pervasive structural problems (weak rule of law, corruption, shadow economy) that hinder the business and investment environment.
Chowdhury & Paul	(2020)	Corporate sustainability research integrating	Bibliometric analysis on MCDM methods	Based on a systematic literature and bibliometric review of over 480 peer-reviewed studies on corporate sustainability from different countries

		sustainability considerations		and sectors, the authors show that single-method MCDM approaches dominate but rarely are multiple MCDM methods combined or compared, highlighting a methodological gap and calling for future research to integrate multiple MCDM techniques, optimization tools, and cross-economy comparisons.
Mukhametzyanov	(2021)	Project prioritization with TOPSIS and VIKOR methods	TOPSIS, VIKOR	Analysing several benchmark decision-matrices, the study demonstrates that objective criteria-weighting methods based purely on formal transformation of the decision matrix (Entropy, CRITIC, Standard Deviation) are unreliable and proposes modified weighting schemes (EWM-DF, EWM-dsp, or an integrated EWM-Corr) to reduce contradictions and improve robustness in MCDM applications.
Araujo & Andrade	(2022)	WGI, HDI	MCDM Frameworks	Using the case of São Tomé e Príncipe, the study applies an international-ranking-aware strategy-formulation method for e-government (EGOV), and finds that integrating global benchmark data into national EGOV planning yields a tailored strategic roadmap covering health, education, fiscal policy, social security, environment, tourism, justice & citizenship, labor, and agriculture; demonstrating that international ranking–based frameworks can effectively guide e-governance strategy in developing countries.
Stryzhak et al.	(2022)	HDI, WDI	Cluster analysis, Spearman Rank, Kendall Tau correlations	Using 2017–2019 data for 188 countries, the study finds a robust positive association between the quality of institutional environment (as measured by Worldwide Governance Indicators) and human development (HDI), with the relationship being stronger for countries with higher institutional quality.
Ecer & Zolfani	(2022)	Economic freedom	MEREC and DNMA (double-normalization-based multi-aggregation)	Applying a MEREC–DNMA composite indicator model to data from OPEC member countries, the study finds that the resulting economic-freedom rankings differ meaningfully from the traditional simple-aggregation rankings, suggesting that multi-criteria weighted aggregation provides a more nuanced and potentially more accurate assessment of economic freedom across countries.
Çalık et al.	(2023)	Logistics performance indices for trade and transportation	Hybrid MCDM methods (AHP, TOPSIS)	Using logistics-performance data for 160 countries, the study applies a novel hybrid MCDM approach and demonstrates that this integrated method produces a more robust and discriminating ranking of countries' logistics performance compared to traditional MCDM methods.
Sukarno & Nurmandi	(2023)	WGI, HDI	MCDM Frameworks	Using data from Southeast Asian countries, the study shows that higher values of the E-Government Development Index (EGDI) are positively associated with better scores on the Worldwide Governance Indicators (WGI), suggesting that e-government development significantly contributes to governance quality in the region.
Puška et al.	(2023)	EFI	MCDM Techniques, entropy method and CRADIS	Applying a multi-criteria ranking on Balkan countries using the Entropy method for weighting and CRADIS (with double normalization) for ranking, the study finds that Bulgaria exhibits the highest level of economic freedom while Montenegro ranks lowest, and validates that the double-normalization approach yields stable and robust results across sensitivity analyses.

Sahoo & Goswami	(2023)	Advancements and applications of MCDM methods	Review of MCDM advancements and classifications	By systematically reviewing the MCDM literature, examining both classical and modern (fuzzy, data-driven, hybrid) methods along with their applications in fields such as engineering, environment, healthcare and public policy, the study demonstrates that while traditional methods remain dominant, recent advances significantly expand the MCDM toolkit which offers enhanced flexibility, robustness under uncertainty, and broader applicability for complex decision problems.
Chew et al.	(2023)	Waste management of medicals in public health sectors	Fuzzy decision-making techniques	Using data from ten Iraqi hospitals during the COVID-19 pandemic, the study integrates MCDM (AHP + LDFN-FDOSM) with neural network analysis and finds that among multiple disposal techniques, ozone — followed by incineration, microwave, pyrolysis, autoclave chemical, vaporized hydrogen peroxide, dry heat, and ultraviolet light — is identified as the most effective method for achieving circular-economy-oriented medical waste management in the evaluated hospitals.
Aggarwal et al.	(2024)	Project prioritization for economic growth and socio-environmental impacts	TOPSIS, VIKOR	Using a Women Vulnerability Index constructed for multiple developing countries, the study shows that different MCDM techniques and weighting mechanisms significantly alter country rankings — indicating that the choice of technique and weighting method matters critically when assessing social-vulnerability across contexts.
Heritage Foundation	(2024)	Economic Freedom Index (EFI): property rights, judicial effectiveness, government integrity, tax burden, government spending, business freedom, trade freedom, investment freedom, financial freedom	Annual composite index; country-level scoring	The 2024 Index shows that the UAE ranks among the highest globally and leads the MENA region in economic freedom, while Turkey, Russia, Iran, and Ethiopia score significantly lower, reflecting structural weaknesses in regulatory quality and market efficiency.
United Nations Development Programme (UNDP)	(2024)	Human Development Index (HDI): life expectancy, education index, GNI per capita	Global statistical analysis; HDI composite index	UNDP data indicate that the UAE, South Africa, and India maintain relatively high or improving HDI levels; Turkey shows moderate progress, while Iran, Russia, and Ethiopia remain below global averages, highlighting persistent disparities in human development.
World Bank	(2024)	Worldwide Governance Indicators (WGI): Voice & Accountability (VA), Regulatory Quality (RQ), Government Effectiveness (GE), Control of Corruption (CC), Rule of Law (RL), Political Stability (PS)	Global governance dataset; cross-country aggregate indicators	WGI 2024 reveals that Turkey, Russia, Iran, and Ethiopia underperform in CC, GE, and RQ, whereas the UAE and South Africa achieve substantially higher governance scores, indicating stronger institutional capacity.
Transparency International	(2024)	Corruption Perceptions Index (CPI)	Survey-based perception index; expert and business assessments	CPI 2024 ranks Turkey, Russia, Iran, and Ethiopia as countries with high corruption perception, while the UAE performs significantly better, consistent with broader governance and institutional quality differences.

3.1. Research Gap

Based on previous research, it is evident that analyses have been conducted using various methods on BRICS countries' data due to the availability of secondary data. On the other hand, studies have also been carried out using qualitative analysis methods with different samples related to BRICS countries, such as sector-specific or macro-level data.

However, with the addition of new countries to the BRICS group, the existing sample has expanded, creating a need for research in this area. In this context, the absence of studies conducted with the newly formed sample constitutes the primary motivation for this research.

Moreover, the lack of observation of the data used in this study specifically within BRICS+ countries, combined with the fact that these data have not been tested with new multi-criteria decision-making methods, highlights a significant gap in the literature that warrants further investigation.

4. Data and Methodology

This study investigates the political stability, human development and economic freedom of BRICS-T (Brazil, Russian Federation, India, China, South Africa, Egypt, Ethiopia, Iran, United Arab Emirates (UAE) and Türkiye) countries from 2018 to 2022, using eight criteria: voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, role of law, control of corruption, economic freedom index and human development index. These criteria were determined based on a literature review (An et al., 2023; Ardielli, 2019; Atan et al., 2024; Ecer & Zolfani, 2022a; Karaköy et al., 2023; Krylovas et al., 2019; Omrani et al., 2020; Puška et al., 2023; Yuliantini & Nurmandi, 2023). Nigeria and Argentina were not included in the BRICS-T framework considered in this study because Argentina formally declined BRICS membership in December 2023 (Associated Press, 2023; Reuters, 2024), while Nigeria has not been officially invited to join the grouping, despite occasional discussions in policy and media debates (Onuah, 2023). The data were obtained from various international reports (WGI, 2024; The Heritage Foundation, 2024; UNDP, 2024). Due to data availability, this study focuses on assessing performance of BRICS-T countries over the past five years (2018-2022). All the criteria used in this study are benefit-oriented, aiming for maximization. The weight of the criteria was computed using the MEREC method.

MCDM methods have been widely recognized for their ability to integrate heterogeneous indicators into a unified evaluation framework, particularly in contexts where governance, economic performance, and human development interact in complex ways (Greco et al., 2016; Zavadskas et al., 2014). Their theoretical foundation lies in the structured evaluation of alternatives across multiple, often conflicting criteria, making them highly suitable for country-level performance assessments (Mardani et al., 2015; Zopounidis & Pardalos, 2010). Furthermore, prior studies have demonstrated that MCDM findings can inform policy design and institutional reforms (Govindan et al., 2015).

Once the weight of criteria was calculated, the alternatives were ranked with novel MCDM methods, such as, CRADIS, SPOTIS and RSMVC. Subsequently, the aggregate ranking was determined through the Borda count method. Table 2, 3 and 4 presents an overview of criteria, definition of criteria, and summary of indicators and methods, respectively.

Table 2. Overview of Criteria

Criteria	Abbreviation	Optimization	Source
Voice and Accountability	VA	Benefit	World Bank-WGI
Political Stability and Absence of Violence/Terrorism	PS	Benefit	World Bank-WGI
Government Effectiveness	GE	Benefit	World Bank-WGI
Regulatory Quality	RQ	Benefit	World Bank-WGI
Rule of Law	RL	Benefit	World Bank-WGI
Control of Corruption	CC	Benefit	World Bank-WGI
Economic Freedom Index	EF	Benefit	The Heritage Foundation
Human Development Index	HD	Benefit	UNDP

Table 3. Definition of Criteria

Criteria	Description
Voice and Accountability	It captures perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.
Political Stability and Absence of Violence/Terrorism	It measures perceptions of the likelihood of political instability and/or politically motivated violence, including terrorism.
Government Effectiveness	It captures perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures.
Regulatory Quality	It captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.
Rule of Law	It captures perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the

	courts.
Control of Corruption	It captures perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption.
Economic Freedom Index	It measures the impact of liberty and free markets around the globe.
Human Development Index	It measures average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and having a decent standard of living.

Source: WGI (2024); The Heritage Foundation (2024); UNDP (2024)

Table 4. Indicators and Methods

Performance Indicators	Weighting Determination	MCDM Techniques	Aggregate Ranking
Voice and Accountability			
Political Stability and Absence of Violence/Terrorism		CRADIS	
Government Effectiveness			
Regulatory Quality	MEREC	SPOTIS	Borda Count
Rule of Law			
Control of Corruption			
Economic Freedom Index		RSMVC	
Human Development Index			

4.1. MEREC

Method based on the Removal Effects of Criteria (MEREC) method was developed by Keshavarz-Ghorabaee et al. in 2021. It's a new objective weighting method for calculating the criteria weights. It utilizes each criterion's removal effect on the performance of alternatives to calculate the criteria weights. The steps of the MEREC method are as follows (Keshavarz-Ghorabaee et al., 2021):

Step 1. The decision matrix is constructed.

Step 2. The decision matrix is normalized using Eqs. (1-2).

$$N_{ij} = \left\{ \frac{min_k x_{kj}}{x_{ij}} \right\} \; if \; j \in B \tag{1}$$

for beneficial/maximum set of criteria

$$N_{ij} = \left\{ \frac{x_{ij}}{max_k x_{kj}} \right\} \; if \; j \in B \tag{2}$$

for non-beneficial/minimum set of criteria

Step 3. The overall performance of the alternatives (S_i) is calculated based on Eq. (3).

$$S_i = \ln\left(1 + \left(\frac{1}{m}\sum_j \left|\ln(N_{ij})\right|\right)\right) \tag{3}$$

Step 4. According to Eq. (4), the performance of the alternatives by removing each criterion is computed.

$$S'_{ij} = \ln\left(1 + \left(\frac{1}{m}\sum_{k,k\neq j} \left|\ln(N_{ij})\right|\right)\right) \tag{4}$$

Step 5. The summation of absolute deviations is calculated by Eq. (5).

$$E_j = \sum \left|S'_{ij} - S_i\right| \tag{5}$$

Step 6. The final weights of criteria are determined using Eq. (6).

$$w_i = \frac{E_i}{\sum_K E_k} \tag{6}$$

4.2. CRADIS

Compromise Ranking of Alternatives from Distance to Ideal Solution (CRADIS) method was proposed by Puška et al. in 2021. This method is a combination of various MCDM techniques, such as ARAS, MARCOS and TOPSIS. The steps of the CRADIS method are shown below (Puška et al., 2023):

Step 1. The decision matrix is created.

Step 2. The decision matrix is normalized by Eqs. (7-8).

$$n_{ij} = \frac{x_{ij}}{x_{jmax}} \quad (7)$$

$$n_{ij} = \frac{x_{jmin}}{x_{ij}} \quad (8)$$

Step 3. Based on Eq. (9), the aggravated decision matrix is obtained.

$$v_{ij} = n_{ij} \,.\, w_j \quad (9)$$

Step 4. The ideal and anti-ideal solution is determined using Eqs. (10-11).

$$t_i = max v_{ij} \quad (10)$$

$$t_{ai} = min v_{ij} \quad (11)$$

Step 5. The deviations from ideal and anti-ideal solutions are computed based on Eqs. (12-13).

$$d^+ = t_i - v_{ij} \quad (12)$$

$$d^- = v_{ij} - t_{ai} \quad (13)$$

Step 6. According to Eqs. (14-15), the grades of the deviation of individual alternatives from ideal and anti-ideal solutions are determined.

$$s_i^+ = \sum_{j=1}^{n} d^+ \quad (14)$$

$$s_i^- = \sum_{j=1}^{n} d^- \quad (15)$$

Step 7. Based on Eqs. (16-17), the utility function for each alternative is calculated.

$$K_i^+ = \frac{s_0^+}{s_i^+} \quad (16)$$

$$K_i^- = \frac{s_i^-}{s_0^-} \quad (17)$$

Step 8. The final order is obtained using Eq. (18).

$$Q_i = \frac{K_i^+ + K_i^+}{2} \quad (18)$$

The best alternative is the one that has the greatest value Q_i

4.3. SPOTIS

Stable Preference Ordering Towards Ideal Solution (SPOTIS) method was proposed by Dezert, Tchamova, Han and Tacnet in 2020. It's one of the recent approaches used in ranking of alternatives based on ideal solution point, and it has a very low complexity. The steps of the SPOTIS method as follows (Dezert et al., 2020):

Step 1. Eq. (19) is used to normalize the distances to the ideal solution point

$$d\ (A_i S_j^* = \frac{\left|S_{ij} - S_j^*\right|}{\left|S_j^{max} - S_j^{min}\right|} \quad (19)$$

Step 2. According to Eq. (20), the weighted normalized distances are calculated.

$$d\ \left(A_i, S^*\right) = \sum_{j=1}^{N} w_j d_{ij}\left(A_i, S^*\right) \quad (20)$$

Step 3. The final ranking is determined through the values of $d\left(A_i, S^*\right)$. Smaller values of $d\left(A_i, S^*\right)$are desirable.

4.4. RSMVC Method

Ranking the Solutions based on the Mean Value of Criteria (RSMVC) method was proposed by Van Dua and Thinh in 2023. It's one of the recent approaches used in ranking of alternatives based on the mean value of the criteria. The steps of the RSMVC method as follows (Van Dua & Thinh, 2023):

Step 1. The decision matrix is formed.

Step 2. Eq. (21) is utilized to calculate the average values of the criteria.

$$\bar{x}_{ij} = \frac{a_{ij} - b_{ij}}{2} \quad (21)$$

Step 3. The ranking of each criterion is determined by its mean value.

For the benefit criterion, the solution with the highest average value is positioned first, while the one with the lowest average value is placed last.

For the cost criterion, the solution with the lowest average value is assigned the top rank, while the one with the highest average value is positioned at the bottom.

Step 4. Based on Eq. (22), the scores of the alternatives are computed.

$$S_i = r_{ij}.w_j \quad (22)$$

Step 5. The final ranking is obtained based on S_i score, the lowest one is the best solution.

4.5. Borda Count

Using Borda's method, the alternatives are ranked in order of preference from the most to the least preferred. The lowest-ranked alternative receives 1 point, the second lowest receives 2 points, and this continues incrementally, with the top-ranked alternative receiving a number of points equal to the total number of alternatives. The points allocated to each alternative are then summed across all rankings, and the alternative with the highest Borda count is considered the best option (Reilly, 2002).

5. Results

5.1. The results obtained from the MEREC method

As previously mentioned, this study evaluates the performance of political stability, economic freedom, and human development over a five-year period. Although the dataset spans the period 2018–2022, the MEREC method is typically applied on a cross-sectional basis for a single reference year, as in similar applications (Ecer & Zolfani, 2022a; Puška et al., 2023; Sahoo & Goswami, 2023). Therefore, this study focuses on 2022 results to ensure comparability with the literature and to maintain methodological consistency.

At first, the decision matrix was formed (Table 6), then the decision matrix was normalized based on Eq. (1) and illustrates in Table 7. According to Eqs. (3-4), the overall performance of alternatives (S_i) and the performance of alternatives by removing each criterion (S'_{ij}) was computed and shown in Table 8-9, respectively. Eqs. (5-6) was used to determine the summation of absolute deviations (E_j) and the final weights of the criteria (w_i), respectively. Table 10 demonstrates the final ranking of the MEREC method.

Table 5. Decision Matrix (2022)

Alternatives/ Criteria	CC	GE	PS	RQ	RL	VA	EF	HD
Brazil	32,0755	30,6604	33,9623	43,8679	43,3962	55,5556	53,30	0.76
Russian Federation	19,3396	25,9434	16,0377	13,2075	12,2642	14,4928	56,10	0.821
India	44,3396	63,2075	24,5283	50,9434	55,1887	49,2754	53,90	0.644
China	55,1887	68,3962	28,3019	36,7925	52,8302	6,2802	48,00	0.788
South Africa	44,8113	48,1132	19,8113	44,3396	54,2453	68,5990	56,20	0.717
Egypt	26,4151	33,9623	14,1509	24,5283	42,4528	9,1787	49,10	0.728
Ethiopia	36,7925	24,0566	4,7170	16,9811	26,4151	20,7729	49,60	0.492
Iran	14,1509	18,3962	8,4906	4,2453	17,4528	8,6957	42,40	0.78
UAE	83,4906	88,6792	70,2830	82,0755	78,7736	18,3575	70,20	0.937
Türkiye	34,9057	43,8679	13,6792	43,3962	36,7925	23,1884	56,90	0.855

Table 6. Normalized Decision Matrix

Alternatives/ Criteria	CC	GE	PS	RQ	RL	VA	EF	HD
Brazil	0,4412	0,6000	0,1389	0,0968	0,2826	0,1130	0,7955	0,6474
Russian Federation	0,7317	0,7091	0,2941	0,3214	1,0000	0,4333	0,7558	0,5993
India	0,3191	0,2910	0,1923	0,0833	0,2222	0,1275	0,7866	0,7640
China	0,2564	0,2690	0,1667	0,1154	0,3304	1,0000	0,8833	0,6244
South Africa	0,0098	0,0125	0,0070	0,0022	0,0052	0,0016	0,0142	0,6862
Egypt	0,0167	0,0177	0,0098	0,0039	0,0067	0,0123	0,0154	0,6758
Ethiopia	0,0087	0,0121	0,0294	0,0049	0,0084	0,0054	0,0152	1,0000
Iran	0,0181	0,0146	0,0164	0,0196	0,0127	0,0130	0,0178	0,7683
UAE	0,0001	0,0001	0,0001	0,0000	0,0001	0,0001	0,0002	0,6396
Türkiye	0,0003	0,0003	0,0005	0,0001	0,0001	0,0001	0,0002	0,7009

Table 7. The values of S_i

Alternatives/ Criteria	S_i
Brazil	0,7706
Russian Federation	0,4124
India	0,8167
China	0,6981
South Africa	1,6965
Egypt	1,5963
Ethiopia	1,6139
Iran	1,5247
UAE	2,2064
Türkiye	2,1426

Table 8. The values of S'_{ij}

Alternatives/ Criteria	CC	GE	PS	RQ	RL	VA	EF	HD
Brazil	0,7221	0,7406	0,6493	0,6255	0,6947	0,6358	0,7328	0,7451
Russian Federation	0,3862	0,3835	0,3056	0,3137	0,4124	0,3407	0,3488	0,3691
India	0,7515	0,7460	0,7212	0,6690	0,7299	0,6958	0,8000	0,8017
China	0,6097	0,6129	0,5800	0,5539	0,6268	0,6981	0,7058	0,6842
South Africa	1,5846	1,5906	1,5759	1,5452	1,5681	1,5377	1,5939	1,4901
Egypt	1,4869	1,4885	1,4717	1,4452	1,4605	1,4782	1,4846	1,3713
Ethiopia	1,4882	1,4975	1,5221	1,4720	1,4873	1,4749	1,5040	1,3804
Iran	1,4091	1,4026	1,4060	1,4116	1,3983	1,3989	1,4086	1,2864
UAE	2,0735	2,0763	2,0709	2,0498	2,0644	2,0692	2,0819	1,9476
Türkiye	2,0149	2,0150	2,0248	1,9857	2,0033	1,9916	2,0128	1,8704

Table 9. Results of the MEREC method

	CC	GE	PS	RQ	RL	VA	EF	HD
E_j	0,9516	0,9247	1,1508	1,4065	1,0325	1,1571	0,8204	1,5319
w_i	0,1060	0,1030	0,1282	0,1567	0,1150	0,1289	0,0914	0,1707
Rank	6	7	4	2	5	3	8	1

The MEREC results showed that human development index, regulatory quality and voice and accountability are the most important criteria, while control of corruption, government effectiveness and economic freedom index are the least important criteria, respectively. The general ranking as follows: HD > RQ > VA > PS > RL > CC > GE > EF.

5.2. The results obtained from the CRADIS method

At first, Eq. (7) was used the normalization of the decision matrix (Table 10), then the aggravated normalized decision matrix was obtained based on Eq. (9) (Table 12). To compute the ideal and anti-ideal solutions, it was necessary to calculate the maximum and minimum values of the aggravated normalized decision matrix. Afterwards, Eqs. (12-13) was employed to determine the deviation between the ideal and anti-ideal solutions. According to Eqs. (14-15), the calculation of the assessment of the deviation of the individual alternatives from the ideal and anti-ideal solutions, which was accomplished by calculating the sum of the deviations for the individual alternatives. Then, it was necessary to calculate the utility function for the optimal alternative (Eqs. 16-17). The alternatives should be as close as possible to the optimal alternative to be better ranked (Puška et al., 2023). Lastly, Eq. (18) was used to calculate the ranking of the alternatives (Table 13).

Table 10. Normalized Decision Matrix

Alternatives/ Criteria	CC	GE	PS	RQ	RL	VA	EF	HD
Brazil	0,3842	0,3457	0,4832	0,5345	0,5509	0,8099	0,7593	0,8111
Russian Federation	0,2316	0,2926	0,2282	0,1609	0,1557	0,2113	0,7991	0,8762
India	0,5311	0,7128	0,3490	0,6207	0,7006	0,7183	0,7678	0,6873
China	0,6610	0,7713	0,4027	0,4483	0,6707	0,0915	0,6838	0,8410
South Africa	0,5367	0,5426	0,2819	0,5402	0,6886	1,0000	0,8006	0,7652
Egypt	0,3164	0,3830	0,2013	0,2989	0,5389	0,1338	0,6994	0,7769
Ethiopia	0,4407	0,2713	0,0671	0,2069	0,3353	0,3028	0,7066	0,5251
Iran	0,1695	0,2074	0,1208	0,0517	0,2216	0,1268	0,6040	0,8324
UAE	1,0000	1,0000	1,0000	1,0000	1,0000	0,2676	1,0000	1,0000
Türkiye	0,4181	0,4947	0,1946	0,5287	0,4671	0,3380	0,8105	0,9125

Table 11. The Aggravated Normalized Decision Matrix

Alternatives/ Criteria	CC	GE	PS	RQ	RL	VA	EF	HD	
Brazil	0,0407	0,0356	0,0620	0,0838	0,0634	0,1044	0,0694	0,1384	
Russian Federation	0,0246	0,0301	0,0293	0,0252	0,0179	0,0272	0,0730	0,1495	
India	0,0563	0,0734	0,0447	0,0973	0,0806	0,0926	0,0702	0,1173	
China	0,0701	0,0795	0,0516	0,0702	0,0771	0,0118	0,0625	0,1435	
South Africa	0,0569	0,0559	0,0361	0,0847	0,0792	0,1289	0,0732	0,1306	
Egypt	0,0335	0,0395	0,0258	0,0468	0,0620	0,0172	0,0639	0,1326	
Ethiopia	0,0467	0,0279	0,0086	0,0324	0,0386	0,0390	0,0646	0,0896	
Iran	0,0180	0,0214	0,0155	0,0081	0,0255	0,0163	0,0552	0,1421	
UAE	0,1060	0,1030	0,1282	0,1567	0,1150	0,0345	0,0914	0,1707	
Türkiye	0,0443	0,0510	0,0250	0,0829	0,0537	0,0436	0,0741	0,1557	
max	0,1060	0,1030	0,1282	0,1567	0,1150	0,1289	0,0914	0,1707	0,1707
min	0,0180	0,0214	0,0086	0,0081	0,0179	0,0118	0,0552	0,0896	0,0081

Table 12. Results of the CRADIS method

Alternatives/ Criteria	s_i^+	K_i^+	s_i^-	K_i^-	Q_i	Rank
Brazil	0,7677	0,4760	-0,5328	3,2148	1,8454	4
Russian Federation	0,9885	0,3697	-0,3121	1,8828	1,1262	8
India	0,7330	0,4985	-0,5676	3,4244	1,9615	3
China	0,7990	0,4573	-0,5016	3,0261	1,7417	5
South Africa	0,7199	0,5076	-0,5807	3,5034	2,0055	2
Egypt	0,9440	0,3871	-0,3566	2,1514	1,2692	7
Ethiopia	1,0179	0,3590	-0,2827	1,7054	1,0322	9
Iran	1,0634	0,3436	-0,2372	1,4311	0,8874	10
UAE	0,4598	0,7947	-0,8407	5,0724	2,9335	1
Türkiye	0,8352	0,4375	-0,4654	2,8078	1,6227	6
A_0	0,3654		-0,1657			

The CRADIS results showed that the United Arab Emirates, South Africa and India have the highest performance, while Russian Federation, Ethiopia and Iran have the lowest performance, respectively. The general ranking as follows:

the UAE > South Africa > India > Brazil > China > Türkiye > Egypt > Russian Federation > Ethiopia > Iran.

5.3. The results obtained from the SPOTIS method

Initially, Eq. (19) was employed to normalize the distances to the ideal solution point (Table 13). Then, the weighted normalized distances were calculated using Eq. (20). The final ranking was determined through the values of $d(A_i,S^*)$. The best solution is the one with the smallest of $d(A_i,S^*)$ score (Table 15).

Table 13. Normalized Decision Matrix

Alternatives/ Criteria	CC	GE	PS	RQ	RL	VA	EF	HD
Brazil	0,7415	0,8255	0,5540	0,4909	0,5319	0,2093	0,6079	0,3978
Russian Federation	0,9252	0,8926	0,8273	0,8848	1,0000	0,8682	0,5072	0,2607
India	0,5646	0,3624	0,6978	0,4000	0,3546	0,3101	0,5863	0,6584
China	0,4082	0,2886	0,6403	0,5818	0,3901	1,0000	0,7986	0,3348
South Africa	0,5578	0,5772	0,7698	0,4848	0,3688	0,0000	0,5036	0,4944
Egypt	0,8231	0,7785	0,8561	0,7394	0,5461	0,9535	0,7590	0,4697
Ethiopia	0,6735	0,9195	1,0000	0,8364	0,7872	0,7674	0,7410	1,0000
Iran	1,0000	1,0000	0,9424	1,0000	0,9220	0,9612	1,0000	0,3528
UAE	0,0000	0,0000	0,0000	0,0000	0,0000	0,8062	0,0000	0,0000
Türkiye	0,7007	0,6376	0,8633	0,4970	0,6312	0,7287	0,4784	0,1843

Table 14. Results of the SPOTIS method

Alternatives/ Criteria	CC	GE	PS	RQ	RL	VA	EF	HD	Σ	Rank
Brazil	0,0786	0,0850	0,0710	0,0769	0,0612	0,0270	0,0556	0,0679	0,5232	4
Russian Federation	0,0981	0,0920	0,1061	0,1387	0,1150	0,1119	0,0464	0,0445	0,7526	8
India	0,0599	0,0373	0,0895	0,0627	0,0408	0,0400	0,0536	0,1124	0,4961	3
China	0,0433	0,0297	0,0821	0,0912	0,0449	0,1289	0,0730	0,0571	0,5502	5
South Africa	0,0591	0,0595	0,0987	0,0760	0,0424	0,0000	0,0460	0,0844	0,4661	2
Egypt	0,0873	0,0802	0,1098	0,1159	0,0628	0,1229	0,0694	0,0802	0,7284	7
Ethiopia	0,0714	0,0947	0,1282	0,1311	0,0906	0,0989	0,0677	0,1707	0,8533	9
Iran	0,1060	0,1030	0,1208	0,1567	0,1061	0,1239	0,0914	0,0602	0,8682	10
UAE	0,0000	0,0000	0,0000	0,0000	0,0000	0,1039	0,0000	0,0000	0,1039	1
Türkiye	0,0743	0,0657	0,1107	0,0779	0,0726	0,0939	0,0437	0,0315	0,5703	6

The SPOTIS results showed that the United Arab Emirates, South Africa and India have the highest performance, while Russian Federation, Ethiopia and Iran have the lowest performance, respectively. The general ranking as follows: the UAE > South Africa > India > Brazil > China > Türkiye > Egypt > Russian Federation > Ethiopia > Iran.

5.4. The results obtained from the RSMVC method

Firstly, Eq. (21) was used to calculate the average values of the criteria (Table 15). Then, the ranking of each criterion was determined by its mean value. Since this study was carried out only benefit criterion, the solution with the highest average value was positioned first, while the one with the lowest average value was placed last (Table 17). Eq. (22) was employed to determine the scores of the alternatives and the alternatives were ranked based on S_i score. The best solution is the one with the smallest S_i score (Table 18).

Table 15. The Average of the Criteria

Alternatives/ Criteria	CC	GE	PS	RQ	RL	VA	EF	HD
Brazil	16,0377	15,3302	16,9811	21,9340	21,6981	27,7778	26,65	0,38
Russian	9,6698	12,9717	8,0189	6,6038	6,1321	7,2464	28,05	0,41

Federation								
India	22,1698	31,6038	12,2642	25,4717	27,5943	24,6377	26,95	0,32
China	27,5943	34,1981	14,1509	18,3962	26,4151	3,1401	24,00	0,39
South Africa	22,4057	24,0566	9,9057	22,1698	27,1226	34,2995	28,10	0,36
Egypt	13,2075	16,9811	7,0755	12,2642	21,2264	4,5894	24,55	0,36
Ethiopia	18,3962	12,0283	2,3585	8,4906	13,2075	10,3865	24,80	0,25
Iran	7,0755	9,1981	4,2453	2,1226	8,7264	4,3478	21,20	0,39
UAE	41,7453	44,3396	35,1415	41,0377	39,3868	9,1787	35,10	0,47
Türkiye	17,4528	21,9340	6,8396	21,6981	18,3962	11,5942	28,45	0,43

Table 16. Ranking the solutions for each criterion

Alternatives/ Criteria	**CC**	**GE**	**PS**	**RQ**	**RL**	**VA**	**EF**	**HD**
Brazil	7	7	2	4	5	2	6	6
Russian Federation	9	8	6	9	10	7	4	3
India	4	3	4	2	2	3	5	9
China	2	2	3	6	4	10	9	4
South Africa	3	4	5	3	3	1	3	9
Egypt	8	6	7	7	6	9	8	9
Ethiopia	5	9	12	9	8	5	7	13
Iran	11	10	10	13	10	11	10	9
UAE	1	1	1	1	1	7	1	6
Türkiye	6	5	9	5	7	4	2	8

Table 17. Results of the RSMVC method

Alternatives/ Criteria	**CC**	**GE**	**PS**	**RQ**	**RL**	**VA**	**EF**	**HD**	S_i	**Rank**
Brazil	0,7421	0,7212	0,2564	0,6268	0,5752	0,2578	0,5484	1,0241	4,7521	4
Russian Federation	0,9542	0,8242	0,7693	1,4104	1,1503	0,9024	0,3656	0,5120	6,8884	7
India	0,4241	0,3091	0,5129	0,3134	0,2301	0,3868	0,4570	1,5361	4,1694	3
China	0,2120	0,2060	0,3846	0,9402	0,4601	1,2892	0,8227	0,6827	4,9977	5
South Africa	0,3181	0,4121	0,6411	0,4701	0,3451	0,1289	0,2742	1,5361	4,1257	2
Egypt	0,8482	0,6181	0,8975	1,0970	0,6902	1,1603	0,7312	1,5361	7,5786	8
Ethiopia	0,5301	0,9272	1,5386	1,4104	0,9203	0,6446	0,6398	2,2188	8,8297	9
Iran	1,1662	1,0302	1,2821	2,0372	1,1503	1,4181	0,9141	1,5361	10,5344	10
UAE	0,1060	0,1030	0,1282	0,1567	0,1150	0,9024	0,0914	1,0241	2,6269	1
Türkiye	0,6361	0,5151	1,1539	0,7835	0,8052	0,5157	0,1828	1,3654	5,9578	6

The RSMVC results showed that the United Arab Emirates, South Africa and India have the highest performance, while Egypt, Ethiopia and Iran have the lowest performance, respectively. The general ranking as follows: the UAE > South Africa > India > Brazil > China > Türkiye > Russian Federation > Egypt > Ethiopia > Iran.

5.5. The results obtained from the Borda count method

The Borda count method was applied to alternatives were ranked in order of preference from the most to the least preferred. The lowest-ranked alternative received 1 point, the second lowest received 2 points, and this continued incrementally, with the top-ranked alternative received a number of points equal to the total number of alternatives. Final ranking of alternatives based on different MCDM methods and Borda count is presented in Table 18.

Table 18. Results of the Borda count method

Country	CRADIS Rank	CRADIS Score	SPOTIS Rank	SPOTIS Score	RSMVC Rank	RSMVC Score	Borda Score	Borda Rank
Brazil	4	6	4	6	4	6	18	4
Russian Federation	8	2	8	2	7	3	7	8
India	3	7	3	7	3	7	21	3
China	5	5	5	5	5	5	15	5
South Africa	2	8	2	8	2	8	24	2
Egypt	7	3	7	3	8	2	8	7
Ethiopia	9	1	9	1	9	1	3	9
Iran	10	0	10	0	10	0	0	10
UAE	1	9	1	9	1	9	27	1
Türkiye	6	4	6	4	6	4	12	6

The Borda count results showed that the United Arab Emirates, South Africa and India have the highest performance, while Russian Federation, Ethiopia and Iran have the lowest performance, respectively. The general ranking as follows: the UAE > South Africa > India > Brazil > China > Türkiye > Egypt > Russian Federation > Ethiopia > Iran. The comparative results are illustrated in Figure 2.

As illustrated in Figure 2, the UAE achieved the top position across all methods, showcasing the highest level of performance, with South Africa securing the second position. India, Brazil, and China maintained their standings in third, fourth, and fifth places, respectively. Türkiye consistently held the sixth rank, while Egypt exhibited minor fluctuations, finishing in seventh overall. Russia ranked eighth in the majority of methods, showing slight improvement in RSMVC, yet remained in eighth place overall. Ethiopia and Iran consistently occupied the lowest ranks, positioned ninth and tenth, respectively. Furthermore, the annual performance of the BRICS-T countries is summarized in Table 19, and the comparative results are visually represented in Figure 2.

Figure 2. Comparison Results

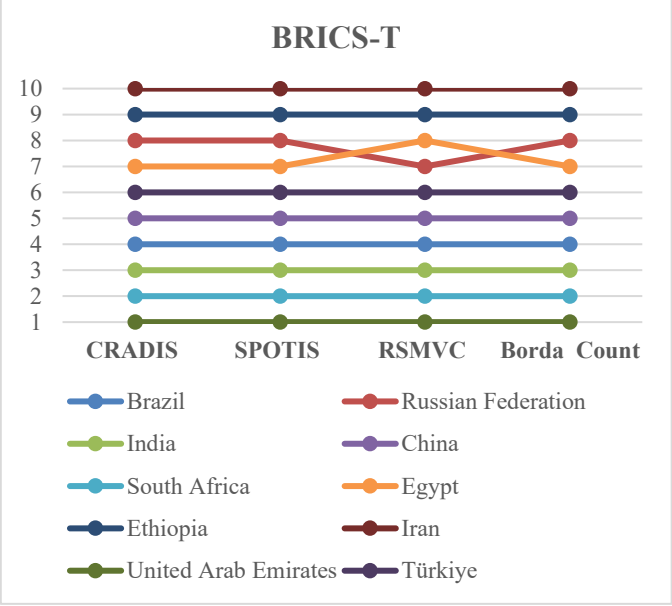

Table 19. Overall Performance of BRICS-T Countries (2018-2022)

Year	2022				Year	2019			
Country	**CRADIS**	**SPOTIS**	**RSMVC**	**Borda Count**	**Country**	**CRADIS**	**SPOTIS**	**RSMVC**	**Borda Count**
Brazil	4	4	4	4	**Brazil**	4	4	4	4
Russian Federation	8	8	7	8	**Russian Federation**	7	8	7	7
India	3	3	3	3	**India**	3	3	3	3
China	5	5	5	5	**China**	5	5	5	5
South Africa	2	2	2	2	**South Africa**	2	2	2	2
Egypt	7	7	8	7	**Egypt**	8	7	8	8
Ethiopia	9	9	9	9	**Ethiopia**	9	9	9	9
Iran	10	10	10	10	**Iran**	10	10	10	10
UAE	1	1	1	1	**UAE**	1	1	1	1
Türkiye	6	6	6	6	**Türkiye**	6	6	6	6

Year	2021				Year	2018			
Country	**CRADIS**	**SPOTIS**	**RSMVC**	**Borda Count**	**Country**	**CRADIS**	**SPOTIS**	**RSMVC**	**Borda Count**
Brazil	4	4	4	4	**Brazil**	4	4	4	4
Russian Federation	7	8	7	7	**Russian Federation**	7	8	7	7
India	3	3	3	3	**India**	3	3	3	3
China	5	5	5	5	**China**	5	5	5	5
South Africa	2	2	2	2	**South Africa**	2	2	2	2
Egypt	8	7	8	8	**Egypt**	8	7	8	8
Ethiopia	9	9	9	9	**Ethiopia**	10	9	9	9
Iran	10	10	10	10	**Iran**	9	10	10	10
UAE	1	1	1	1	**UAE**	1	1	1	1
Türkiye	6	6	6	6	**Türkiye**	6	6	6	6

Year	2020			
Country	**CRADIS**	**SPOTIS**	**RSMVC**	**Borda Count**
Brazil	4	4	4	4
Russian Federation	7	8	7	7
India	3	3	3	3
China	5	5	5	5
South Africa	2	2	2	2
Egypt	8	7	8	8
Ethiopia	9	9	9	9
Iran	10	10	10	10
UAE	1	1	1	1
Türkiye	6	6	6	6

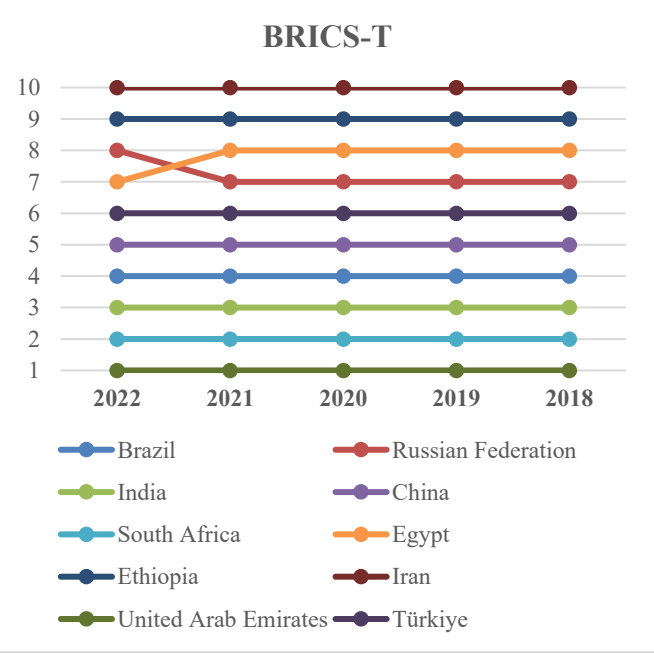

Figure 3. Comparison Results (2018-2022)

It can be seen above, from 2018 to 2022, the UAE maintained its dominance by consistently ranking first, thereby affirming its position as the leading nation throughout the five-year period. South Africa closely followed, consistently securing the 2nd position throughout the same period. In contrast, Iran remained at the bottom of the rankings, consistently occupying the tenth place. Likewise, Ethiopia held the ninth position without any notable improvement over these years. Brazil, India, China, and Türkiye exhibited stable rankings, with Brazil at fourth, India at third, China at fifth, and Türkiye at sixth throughout the entire period. This consistency indicates that these nations did not undergo significant changes in their performance compared to others. The Russian Federation and Egypt experienced minor variations; Russia made a slight regression in 2022, decreasing from seventh to eighth place, while Egypt shifted from seventh in 2022 to eighth in the preceding years.

6. Conclusion and Discussion

Political stability, human development, and economic freedom are deeply interconnected, with each playing a critical role in shaping national governance and economic

outcomes. This relationship is especially significant in developing nations, where political turmoil can disrupt economic progress and hinder improvements in quality of life. A stable political environment not only fosters confidence among citizens and investors but also creates the necessary conditions for implementing policies that drive economic growth and social welfare. By promoting income equality, enhancing education, and improving healthcare systems, political stability serves as a cornerstone for advancing human development (Aisen & Veiga, 2011; Singha, 2022).

On the other hand, political instability can have disproportionately adverse effects on economic performance, particularly in countries with weaker institutional frameworks. Such instability not only impedes policy implementation but also undermines economic growth and societal well-being (Dirks & Schmidt, 2024). Robust political institutions that can withstand internal and external shocks are therefore essential for maintaining stability and ensuring sustainable progress. Moreover, political decisions play a decisive role in shaping economic outcomes, as stable governance often leads to stronger financial systems and improved overall economic health (Acemoglu et al., 2010). The reciprocal relationship between political stability and economic performance underscores the importance of fostering governmental structures that support both sustainable development and enhanced quality of life.

This research explores the political stability, human development, and economic freedom of BRICS-T nations, including Brazil, the Russian Federation, India, China, South Africa, Egypt, Ethiopia, Iran, the United Arab Emirates (UAE), and Türkiye, over the period from 2018 to 2022. The assessment focuses on eight key criteria: voice and accountability, political stability and absence of violence/terrorism, government effectiveness, regulatory quality, rule of law, control of corruption, the economic freedom index, and the human development index, utilizing a hybrid multi-criteria decision-making (MCDM) methodology.

In the findings of this study, the United Arab Emirates (UAE) consistently ranked first in all methods used (CRADIS, SPOTIS, RSMVC, and Borda Count). Previous multi-criteria evaluations of OPEC countries, such as Ecer and Zolfani (2022a) showed that the UAE consistently ranks at the top in terms of economic freedom, institutional performance, and overall competitiveness, demonstrating a strong and stable socio-economic structure relative to other member states. South Africa ranked second in all methods, while India showed a strong performance by ranking third, in line with HDI improvements highlighted in recent UNDP reports (UNDP, 2025). Turkey, on the other hand, showed an average performance by maintaining its sixth place in each method. Turkey scored relatively well in the criteria of economic freedom (EF) and human development (HD) compared to other criteria. However, it performed poorly in areas such as control of corruption (CC) and administrative quality (RQ), a finding consistent with WGI and CPI data indicating structural weaknesses in these domains (World Bank, 2024; Transparency International, 2024). Russia, Ethiopia, and Iran generally ranked lower and performed poorly, especially in the criteria of control of corruption (CC) and administrative effectiveness (GE), again in accordance with WGI and CPI assessments (World Bank, 2024; Transparency International, 2024).

The MEREC method identified human development (HD), administrative quality (RQ), and voice and accountability (VA) criteria as the most important, while the control of corruption (CC), administrative effectiveness (GE), and economic freedom (EF) criteria were identified as the least important. Similar patterns of prioritizing human development and governance-related criteria over economic freedom have been noted in prior multi-criteria decision-making studies (Mardani et al., 2015; Zavadskas et al., 2014). Turkey ranked sixth in the economic freedom (EF) criterion but showed a higher performance in the human development (HD) criterion, which is in line with UNDP (2025) data highlighting Turkey's human development progress. According to the CRADIS method results, the UAE, South Africa, and India were the best-performing countries, while Turkey ranked sixth, consistent with earlier applications of CRADIS to country rankings (Puška et al., 2023). Similarly, the SPOTIS method ranked Turkey sixth, indicating a medium-level performance in the overall ranking, echoing findings from comparative MCDM studies that place Turkey in the mid-range across composite indices (Altıntaş, 2023). In the RSMVC method, Turkey scored lower in the control of corruption (CC) and administrative quality (RQ) criteria but achieved a relatively good ranking in the human development (HD) criterion, findings which align with WGI and CPI assessments (World Bank, 2024; Transparency International, 2024). Finally, the Borda Count method ranked Turkey sixth with the average of all methods, reaffirming its medium-level performance across governance and development metrics.

Between 2018 and 2022, the UAE maintained its stability by ranking first every year, while South Africa remained stable in second place. Countries such as India, Brazil, and China have shown stable performance in the rankings, which is consistent with evidence highlighting their steady progress in human development and economic indicators (World Bank, 2024; UNDP, 2025). Turkey has also maintained its performance by ranking sixth every year. Turkey's scores in the criteria of economic freedom (EF) and human development (HD) have remained stable over the years, but the country has not made progress in areas such as control of corruption (CC) and governance effectiveness (GE), a finding in line with WGI and CPI data (World Bank, 2024; Transparency International, 2024). Ethiopia and Iran continue to remain at the bottom of the rankings, indicating that these countries face structural problems in the economic and governance domains (Acemoglu et al., 2010; Aisen & Veiga, 2011). Russia, on the other hand, has shown slight

fluctuations around the seventh place in some years, reflecting institutional and governance challenges reported in previous literature (Dirks & Schmidt, 2024). The UAE's leadership in all methods clearly demonstrates its strong all-round performance and continuous improvement (Ecer & Zolfani, 2022b; H. Foundation, 2024). India and South Africa showed strong performance in certain criteria, ranking third and second respectively, consistent with comparative MCDM studies that highlight their governance and development strengths (Altıntaş, 2023; Puška et al., 2023).

Findings for Turkey indicate relatively stronger performance in human development (HDI) and economic freedom (EFI) indicators, but weaker outcomes in control of corruption (CC) and regulatory quality (RQ), which place the country behind in the overall ranking. This suggests that policymakers need to take stronger steps particularly in the areas of anti-corruption measures, public sector efficiency, and independence of regulatory institutions. In addition, strengthening voice and accountability (VA) indicators would enhance political stability and accelerate human development. Therefore, in Turkey's medium-term strategies, reforms aimed at improving governance quality and reinforcing anti-corruption policies appear to be critical (WGI, 2024; UNDP, 2024).

Contributions and Limitations

This research makes a significant contribution to the literature by examining the complex relationships among political stability, human development, and economic freedom within the context of BRICS-T countries. Given that political stability is foundational for economic growth and human development, while economic freedom enhances individual welfare and fosters a stable political environment, the study holds both academic and practical significance. By addressing the impact of corruption on these relationships and emphasizing strategies to promote stability, freedom, and development, it further underscores its relevance to sustainable economic growth and human welfare.

One of the study's most novel aspects is its application of an innovative hybrid Multi-Criteria Decision-Making (MCDM) model to evaluate the political stability, human development, and economic freedom performance of BRICS-T countries from 2018 to 2022. The model integrates an objective weighting approach (MEREC) with ranking methods such as CRADIS, SPOTIS, and RSMVC, combining the results using the Borda Count method. The key contributions of this study include:

- For the first time, a hybrid framework is applied in the MCDM field to assess the political stability, human development, and economic freedom performance of BRICS-T countries.
- The proposed hybrid model provides a decision support system that enables policymakers, the private sector, and other stakeholders to investigate these performances in detail.
- The research extends the scope of analysis by evaluating performance over an expanded time frame (2018–2022).

This study not only introduces innovative theoretical approaches but also fills a critical gap in the literature by offering practical decision-support mechanisms for policymakers and stakeholders. By analyzing performance disparities in BRICS-T countries using MCDM methods, it establishes a robust foundation for policy and strategy development.

In addition to the study's distinguishing strengths, it also has certain limitations, which can serve as recommendations for future similar research.

Firstly, the study's sample, representing BRICS+ countries, encompasses a broad geographical area. However, similar research could also be conducted on other geographic samples defined by reputable institutions, such as MSCI-developed countries. Undertaking such a study could provide evidence to enhance the generalizability of the methods applied in this research on a global scale.

Secondly, while the selected time period (2018–2022) is methodologically appropriate, extending the data range could offer a better understanding of the dynamic nature of political and economic variables. Due to data constraints, the current study is limited to this time frame.

Lastly, incorporating external factors with significant global impacts, such as major events like COVID-19 and economic or political upheavals, is recommended for future studies. Including such variables could enrich the analysis and provide deeper insights into the interplay of political and economic stability under extraordinary circumstances.

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