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Challenges and Opportunities of Implementing Digital Payment Systems in Southeast European Countries

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Abstract: Digital transformation significantly impacts all aspects of the economic system, particularly the functioning of monetary policy and the financial sector. As a key process in modernization, digital transformation encompasses innovations that enable faster, safer and more efficient financial transactions, contributing to greater transparency and better economic integration. This paper analyzes the impact of digital transformation on the monetary policies of Southeast European (SEE) countries, with a particular focus on the development and implementation of digital payment systems.

The aim of the research is to examine the potential of digital technologies to improve the monetary policies of these countries, enabling them to achieve greater financial stability and alignment with European Union (EU) standards. The focus is on identifying the benefits of implementing digital payments, including reducing transaction costs, improving trust in monetary institutions, and increasing the transparency of financial flows.

The methodological framework of the research is based on multi-criteria decision-making (MCDM), using the CRITIC and MARCOS methods. The CRITIC method was used to evaluate the importance of individual criteria relevant to digital payments, while the MARCOS method enabled the ranking of countries based on their potential for implementing digital payments.

The results of the research show that alignment with EU legislation is the most important factor, while Romania has the best potential for implementing digital payments among the observed countries. The contribution of this paper is reflected in the development of a strate-

gic framework and the encouragement of regional cooperation, through which SEE countries could realize the full potential of digital transformation to accelerate economic growth and integration with the EU.

Keywords: digital transformation, monetary policy, digital payments, Southeast Europe, multi-criteria analysis methods.

JEL Code: E52, E58, O33, F36

1. Introduction

Digital transformation is changing the functioning of society (Saunavaara, Laine & Salo, 2022) by applying technological solutions that ease people's lives while simultaneously impacting economic and social benefits (Cho and Yi, 2022), and improving the competitiveness of countries (Huang, Ma, Xietian & Huang, 2024). The countries of Southeast Europe (SEE) are aware of the importance of digital transformation, which is a driver of the development of these countries. This is particularly evident in the monetary and financial systems of these countries, which need to contribute to the development of economic flows and ensure their development (Mavlutova et al., 2023). The SEE region consists of developing countries (Kajtazi & Fetai, 2022) that face economic challenges, which they are trying to address by introducing digital technologies (Milošević, Plotnic, Tick, Stanković & Buzdugan, 2024) in order to improve market structures in these countries. In this way, they aim to achieve faster integration into global financial flows. Digitalization enables a more transparent and efficient implementation of monetary policy (Cotugno, Manta, Perdichizzi & Stefanelli, 2024).

Monetary policy in SEE countries is sensitive to global changes in the global market (Thow et al., 2021). Therefore, it is necessary to apply innovative approaches to establish monetary stability. Digital technologies enable faster data analysis (Lytvyn, Kudin, Onyshchenko, Nikolaiev & Chaplynska, 2024), making it possible to make real-time decisions to ensure timely actions (Popescu, 2024). SEE countries face infrastructure challenges (Radosavljević, 2023) and there is a lack of trust in digital processes that could enhance monetary policy. By applying digital transformation, these problems would be reduced, competitiveness of these countries would increase, and integration with European Union (EU) standards would improve (Louzek, 2023).

Key aspects of transformation in monetary policy include the application of innovative payment systems supported by digital technologies (Khan, 2023). SEE countries are lagging behind the EU countries in terms of digital payments. Improving the infrastructure for digital payments would increase trust in electronic

transactions (Xu, Ali, Bhaumik, Yang & Wang, 2023), which are essential for achieving faster economic flows that enable economic growth and development in these countries. Digital transformation must be supported in all aspects, especially in monetary policy, as it can improve the sustainable development of these countries.

The implementation of digital payments is an indispensable tool for the digitalization of payment systems in these countries. Digital payments represent the foundation for the transformation of monetary policies, making payment transactions easier, more cost-effective, and secure (Santamaría, 2021). In order to implement a digital payment system, it is first necessary to have a technologically developed infrastructure, followed by legal regulation, and finally to promote this system to increase trust among future users. The full implementation of digital payments represents a key tool for improving monetary policies and connecting SEE countries with the global market (Jantoń-Drozdowska & Mikołajewicz-Woźniak, 2017). This increases financial inclusion and improves the security of international payments.

The development of digitalization within the payment system of SEE countries affects the speed and security of transactions (Sretenovic & Kovacic, 2020). In this way, the aim is to achieve easier cash flow management and reduce transaction costs, which leads to the development of the competitiveness of these countries. Some SEE countries are already EU members, but the question remains how much they actually use the digital payment system and how much they digitize their monetary policy. Moreover, the challenge is how to fully integrate this form of payment in SEE countries, as it is necessary to legally define and introduce the standards necessary for the implementation of digital monetary policy.

Based on this, the research will examine the potential for the full implementation of digital payments in SEE countries and compare these countries. To achieve this, multi-criteria decision-making (MCDM) methods will be used in this study. Thus, the CRITIC (Criteria Importance Through Intercriteria Correlation) method will be used to determine the importance of individual criteria, while the MARCOS (Measurement Alternatives and Ranking according to Compromise Solution) method will be used to rank countries based on their potential for implementing a digital payment system. By applying this methodology, it will be possible to identify key obstacles and potentials in SEE countries, providing guidelines for the development of payment transactions. Furthermore, this analysis will enable decision-making on setting priorities for reforms to fully implement digital payment systems in all SEE countries.

The motivation of this paper is the digital progress that enables the full implementation of a digital payment system to enhance this system in SEE countries. For this to happen, it is necessary to carry out digital transformation. The aim of this paper is to explore the potential for the development and implementation of a fully digital payment system in SEE countries using MCDM methods. Based on this, the specific objectives of this research are as follows:

- To identify the key criteria necessary for the successful implementation of a fully digital payment system.
- To assess the current capacities of SEE countries in terms of digital transformation.
- To provide guidelines on what is necessary to fully implement digital payment systems.

The contribution of this research is reflected in the multidisciplinary approach, which connects digital transformation, payment systems and MCDM analysis. The results of applying this approach will lead to the improvement of a fully digital payment system.

2. Literature review

In this section, the research focused on digitalization and the development of digital payment systems will first be presented, followed by studies focused on digital payments and the application of MCDM methods in digital transformation and payments.

Digital transformation and the application of digital payment systems have been the subject of numerous studies. Putrevu and Mertzanis (2024) emphasize in their research that it is particularly important to examine digital transformation and the adoption of digital payment systems in developing countries, as these countries lag behind in terms of digitalization. In their research, they emphasize that the reason for the underdevelopment of digital payment systems in these countries is the existence of inherent risks that need to be mitigated in order to develop these systems in these countries. Tsindeliani et al. (2022) have proven that the processes of digitalization and globalization encourage international cooperation among countries and influence the harmonization of legislation to adopt regulations that would control digital payment systems among countries. They pointed out the necessity to improve existing legislation, as well as regulatory and supervisory procedures. Barroso and Laborda (2022) found that the

development of digitalization in payment systems contributed to the emergence of the Fintech sector.

Al-Okaily et al. (2023) examined the factors influencing the adoption of digital payments and found that several factors impact this, including: subjective norms, expected outcomes, price value of services, perceptions of security and privacy in using these systems. Kim et al. (2022) investigated the adoption and implementation of digital transformation in the financial sector and their results proved that it is necessary to justify the concentration of organizational competencies and knowledge. In addition, this transformation leads to the improvement of user satisfaction and improves the quality of life and public infrastructure. Al-Qudah, Al-Okaily, Alqudah & Ghazlat (2024) determined that the COVID-19 pandemic influenced customers' acceptance of digital services, with the development of mobile payment systems particularly impacting this acceptance. They concluded that the accessibility of these services and user perceptions have the greatest effect on the use of these systems.

When observing research on digital payments, certain papers on this topic can be highlighted. Bruggink (2022) investigated the history of the payment card market and showed that, although this payment system works well in the EU, it has not yet met the policy objectives regarding sovereignty in the European market. Kulk (2021) studied the problem of sending payment messages among existing systems in order to enable payment reconciliation. In addition, a solution was proposed to address this issue, which is a key step towards achieving a complete payment ecosystem. Domingos, António & Pinheiro (2023) pointed out that digital payments are an important system for regulating the payment system after the creation of the Euro currency. This system has made national borders within the EU irrelevant and is creating a new competitive environment in the payment system.

In research on digital payments, MCDM methods have also been used to make final decisions. Biswas and Pamucar (2023) evaluated mobile wallet service providers, using the new grey correlation-based Picture Fuzzy-Evaluation based on Distance from Average Solution (GCPF-EDAS) and showed that PhonePe exhibited the best characteristics. Jegerson and Hussain (2023) used the Analytic Hierarchy Process (AHP) method to rank 18 sustainability factors in mobile payment systems, based on the assessment of payment experts. Yadav, Kaur, Kapur & Aggarwal (2024) used intuitionistic fuzzy AHP and intuitionistic fuzzy TOPSIS (Technique for Order Performance by Similarity to Ideal Solution) to rank mobile payment systems.

Darko, Liang, Xu, Agbodah & Obiora (2023) developed a new evaluation model that integrates online consumer reviews (OCR) with MCDM methods. In selecting mobile payment services, they used the positive and negative ideal-based PL-ELECTRE I (ELimination and Choice Expressing REality) method. Fu, Sun & Lee (2023) selected digital payment systems, examining 22 digital platforms in China. In that case, they used the Entropy and TOPSIS methods. Kumar, Kumar, Goel, Singh & Kaur (2024) evaluated payment technologies in e-commerce to select the best digital platforms for consumers. To do that, they used the TOPSIS method. These studies, among others, have shown that MCDM methods can be applied to evaluate digital payments. In contrast to the studies presented, this research aims to examine the digital transformation of SEE countries in order to implement SPES payments.

3. Methodology

This paper evaluates the potential for digital transformation in SEE countries and their readiness for the full implementation of a digital payment system. The potential of these countries can be measured in various ways. In this research, MCDM methods will be used to measure the potential for digital transformation. The steps for conducting this research are presented in Figure 1.

Figure 1: Methodology steps

Source: Authors
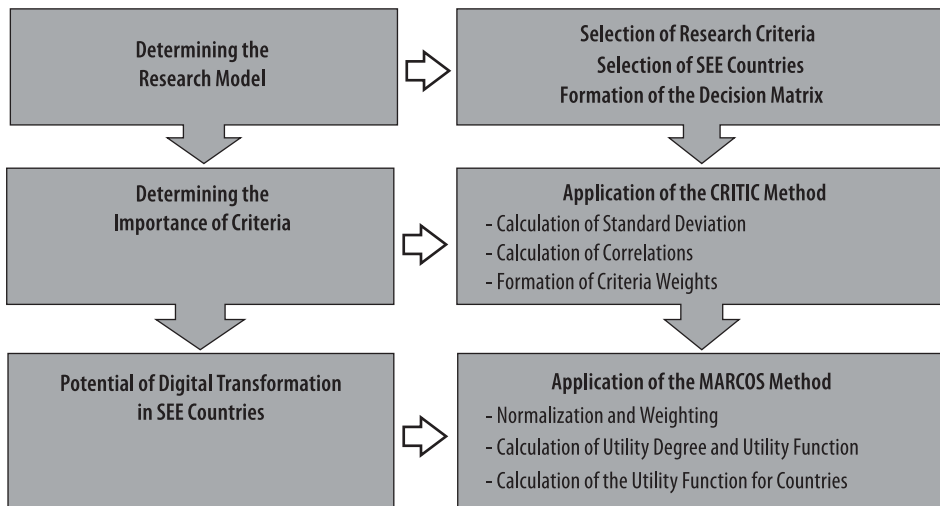
To assess the potential for digital transformation, both qualitative and quantitative data can be used. This research will use quantitative indicators, as the application of qualitative indicators implies the use of expert assessments, which always raises the question of why particular experts were chosen and not some others. In order to address this issue, indicators from world institutions and reports issued by these institutions will be used. Out of the many criteria, a total of nine criteria will be used in this research. The following section will explain these criteria and how their values will be determined.

Internet speed (Mbps) (C1) is crucial for processing digital transactions (Cristea, Noja, Găinaru & Tălăban, 2023), which are fundamental for the implementation of digital payments. The faster and more reliable the internet connection, the lower the likelihood of technical disruptions during transaction processing (Baham, Kalgotra, Nasirpouri Shadbad & Sharda, 2023). In addition, internet speed facilitates the integration of new payment systems. This criterion will be measured based on the Speedtest Global Index, representing the average internet speeds for the observed countries.

The number of digital transactions per person annually (C2) indicates how developed the culture of digital payment usage is. The more developed the culture, the easier the transition to a digital payment system (Azis, Hidayati, Abidin & Sukor Jaafar, 2024). This criterion indicates how willing citizens and companies are to adopt digital technologies for payments (Mansour, 2022). It is characteristic that if there is a higher number of transactions, transaction processing costs decrease, which is why this criterion is significant. To measure this criterion, data from the World Bank (Global Findex Database) will be used.

The use of mobile devices (C3) increases the availability and accessibility of digital payments, allowing transactions to be completed from anywhere. Mobile devices can have digital payment programs installed (Eunice Ratombo & Pleasure Mongale, 2024) through which digital payments are made. This is particularly important in countries with limited digital payment channels (Zatonatskiy & Lavrentiev, 2023). This criterion is measured using the GSMA Intelligence Global Mobile Trends report.

The digitalization of public services (C4) represents the willingness of governments to implement digital systems. A higher degree of digitalization indicates a greater potential for the implementation of digital payments (Akybayeva, Kazbekov, Mambetova & Aikenova, 2024). It is necessary to raise awareness of the importance of digital infrastructure (Oliinyk, 2024), with public services serving as an example for the private sector. This criterion will be measured using the Digi-

tal Economy and Society Index (DESI) for the EU member states, while for other countries similar indicators from the UN E-Government Survey will be used.

Inflation volatility (C5) represents the measurement of inflation over a specific period. Lower inflation creates a stable economic environment (Essien, Umah, Amarachi & Samson, 2024), which is essential for the sustainability of digital payments. Stable prices increase user confidence in using digital payments (Gajović, 2024). This criterion will be measured using data from the International Monetary Fund (IMF).

Alignment with the EU legislation (C6) indicates the extent to which a country's legislation aligns with the EU regulations (Zhelyazkova, 2022). This facilitates the easier implementation of digital payment systems in these countries, as it reduces legal obstacles to introducing such systems. In addition, legislative alignment is also linked to data protection, financial security, and the protection of consumer rights. Greater alignment implies stronger trust between users and partners from the EU (Hristozov & Nozharov, 2024). Data for measuring this criterion will be obtained from the European Commission's progress reports on candidate and potential candidate countries, as well as reports from individual EU countries within the SEE region.

Financial inclusion (C7) indicates how many citizens of a particular country have access to formal financial services. This is one of the prerequisites for greater implementation of a fully digital payment system. This criterion reflects a country's readiness to integrate a larger number of citizens into the financial system (Batta, Arora & Pandey, 2022). Financial inclusion helps reduce informal transactions and promotes economic development (Tay, Tai & Tan, 2022). This criterion will be measured using World Bank data (Global Findex Database).

User trust (C8) refers to the security and reliability of digital payments (Szumski, 2020), and the higher the security and reliability, the greater the user trust. This trust depends on the user's perception of the payment system (Shostak et al., 2024). The greater the users' trust, the more they will use the digital payment system. This criterion will be measured based on Eurobarometer and Gallup World Poll surveys.

Regional harmonization (C9) represents the policy alignment with other countries in the region (Yang, 2023). The higher this harmonization, the greater the level of regional integration. It includes technical and procedural standards that contribute to reducing costs (Kwilinski, Lyulyov & Pimonenko, 2023). A high level of harmonization facilitates cross-border transactions in the region. This

criterion will be measured using the Regional Cooperation Council (RCC) research.

After the criteria were selected, the countries located in the SEE region were also chosen, namely: Croatia, Greece, Bulgaria, Romania, Serbia, Montenegro, North Macedonia, Bosnia and Herzegovina and Albania. The digital transformation potential will be assessed for these countries. It should be noted that Croatia, Greece, Bulgaria and Romania are EU members, while the other countries are striving for EU membership. Therefore, this research will examine the differences between the EU member states and non-EU countries.

The assessment of the digital transformation potential will be carried out using the MCDM methods CRITIC and MARCOS. The CRITIC method is one of the methods for objectively calculating the importance of criterion weights (Biswas, Gazi, Bhaduri & Mondal et al., 2024). This calculation is made based on the dispersion of scores for individual criteria. If the dispersion is greater for a certain criterion, the importance of that criterion will be greater and vice versa. The CRITIC method was first introduced by Diakoulaki, Mavrotas & Papayannakis (1995). This method is based on calculating the standard deviation and the degree of correlation between individual criteria, and based on these analyses, the weights of the criteria are calculated. This method has the following steps:

Step 1: Formation of the initial decision matrix.

Step 2: The process of normalization.

$$r_{ij} = \frac{x_{ij} - x_j^{**}}{x_j^* - x_j^{**}} \text{ ; for maximization criteria} \tag{1}$$

$$r_{ij} = 1 - \frac{x_{ij} - x_j^{**}}{x_j^* - x_j^{**}} \text{ ; for minimization criteria} \tag{2}$$

Where x_j^* is the maximum value of an individual criterion, while x_j^{**} is the minimum value of an individual criterion.

Step 3: Determining the values for the standard deviation and forming the linear correlation matrix for the criteria.

Step 4: Defining the quantity of information

$$C_j = \sigma_j \sum_{k=1}^m (1 - r_{jk}), j = \overline{1, m} \tag{3}$$

Where σ_j is the standard deviation, while r_{jk} is the correlation coefficient.

Step 5: Calculation of the final weights of the criteria.

$$w_j = \frac{c_j}{\sum_{j=1}^{m} c_j} \tag{4}$$

After determining the importance of the criteria, the next step is to calculate the ranking of the SEE countries. To apply this step, the MARCOS method will be used. This method is a very popular MCDM method, as it has been used in over a thousand studies and is relatively new. The method is designed to examine how much individual alternatives deviate from ideal solutions (Radovanović, Jovčić, Petrovski & Cirkin, 2025). The method was developed by Stević, Pamučar, Puška & Chatterjee (2020) and includes the following steps:

Step 1. Formation of the initial decision matrix

Step 2. Expansion of the initial decision matrix.

Step 3. Normalization of the decision matrix.

$$n_{ij} = \frac{x_{ij}}{x_{j\,max}} \quad \text{for maximization criteria} \tag{5}$$

$$n_{ij} = \frac{x_{j\,min}}{x_{ij}} \quad \text{for minimization criteria} \tag{6}$$

where $x_{j\,max}$ is the maximum value of an individual criterion, and $x_{j\,min}$ is the minimum value.

Step 4. Weighting the decision matrix.

$$v_{ij} = n_{ij} \cdot w_j \tag{7}$$

Step 5. Calculation of the aggregate value.

$$S_i = \sum_{i=1}^{n} v_{ij} \tag{8}$$

Step 6. Calculation of the utility degree of the alternative Ki.

$$K_i^- = \frac{S_i}{S_{aai}} \tag{9}$$

$$K_i^+ = \frac{S_i}{S_{ai}} \tag{10}$$

Step 7. Calculation of the utility function.

$$f(K_i^-) = \frac{K_i^+}{K_i^+ + K_i^-} \tag{11}$$

$$f(K_i^+) = \frac{K_i^-}{K_i^+ + K_i^-}$$ (12)

Step 8. Calculation of the utility function of the alternatives $f(K_i)$.

$$f(K_i) = \frac{K_i^+ + K_i^-}{1 + \frac{1 - f(K_i^+)}{f(K_i^+)} + \frac{1 - f(K_i^-)}{f(K_i^-)}}$$ (13)

Step 9. Ranking of the alternatives.

4. Results

In order to determine the potential of digital transformation for the purpose of implementing a digital payment system, it is first necessary to determine the value of the criteria for the observed SEE countries. In this way, an initial decision matrix (Table 1) is formed, and it serves as the basis for calculating the importance of the criteria and determining the potential for digital transformation.

Table 1: Digital transformation values by SEE countries

Country	C1	C2	C3	C4	C5	C6	C7	C8	C9
Albania	50	65	110	55	1.7	70	65	60	65
Bosnia and Herzegovina	40	60	105	50	2.0	65	60	55	55
Bulgaria	70	90	120	70	0.9	90	85	75	80
Croatia	90	120	140	75	0.8	95	90	85	90
Greece	85	100	130	72	1.0	95	88	80	85
Montenegro	45	70	115	60	1.8	70	70	65	65
North Macedonia	40	65	110	55	1.9	70	65	60	60
Romania	110	150	145	78	0.7	90	95	88	88
Serbia	50	80	125	65	1.5	75	75	70	75

Source: Authors

The first step in forming the ranking of SEE countries is to calculate the importance of the criteria using the CRITIC method. After forming the initial decision matrix, the normalization of these data is carried out. In this step, it is necessary to determine which criteria should have the values as high or as low as possible. This determines which normalization method will be used. Only for criterion C5 - Inflation Volatility it is necessary to use expression (2), while for the other criteria, expression (1) is applied. Next, the values for standard deviation and correlation are calculated. Then, the value of inverse correlation is calculated by

subtracting the correlation values (Table 2) from one (1) and computing the cumulative inverse correlation. This value is multiplied by the standard deviation, and at the end of this method, the weights of the criteria are calculated.

According to the results obtained from applying the CRITIC method, the most important criterion is C6 - Alignment with EU legislation, followed by criterion C2 - Number of digital transactions. The least weight was assigned to criterion C8 - User trust and criterion C7 - Financial inclusion. These results indicate that the greatest deviations in the values of the criteria are related to the alignment with EU legislation, which is why this criterion was assigned the greatest weight.

Table 2: Calculation of criteria weights using the CRITIC method

	C1	C2	C3	C4	C5	C6	C7	C8	C9
	0.000	0.029	0.071	0.074	0.058	0.107	0.050	0.047	0.083
	0.029	0.000	0.040	0.082	0.101	0.186	0.074	0.054	0.116
	0.071	0.040	0.000	0.047	0.106	0.158	0.061	0.027	0.060
	0.074	0.082	0.047	0.000	0.033	0.066	0.006	0.006	0.017
$1 - r_{jk}$	0.058	0.101	0.106	0.033	0.000	0.038	0.020	0.038	0.029
	0.107	0.186	0.158	0.066	0.038	0.000	0.046	0.067	0.045
	0.050	0.074	0.061	0.006	0.020	0.046	0.000	0.008	0.022
	0.047	0.054	0.027	0.006	0.038	0.067	0.008	0.000	0.019
	0.083	0.060	0.017	0.029	0.045	0.022	0.019	0.019	0.000
$\sum_{k=1}^{m}(1 - r_{jk})$	0.519	0.625	0.527	0.344	0.440	0.690	0.284	0.267	0.391
σ_j	0.363	0.334	0.349	0.355	0.396	0.408	0.365	0.358	0.368
C_j	0.188	0.209	0.184	0.122	0.174	0.282	0.104	0.096	0.144
w_j	0.125	0.139	0.122	0.081	0.116	0.188	0.069	0.064	0.096

Source: Authors

After the criteria weights are calculated, the MARCOS method is used to determine the ranking based on the potential for digital transformation. Once the decision matrix is formed, normalization is performed, where expression (6) is used for criterion C5, and expression (5) is applied for the other criteria. After that, the decision matrix is expanded, and weighting is performed. Then, the degree of utility and the utility function are calculated, and finally, the final ranking is formed (Table 3). The results obtained using the MARCOS method show that the countries that are EU members have better digital transformation than countries that are potential and candidate EU member states in SEE. Romania has the best indicators, followed by Croatia, while among non-EU countries, Serbia has the best indicators, followed by Montenegro. Bosnia and Herzegovina has the worst indicators.

Table 3: Results of the MARCOS method

Country	K_i^-	K_i^+	$f(K_i^-)$	$f(K_i^+)$	$f(K_i)$	Rank
Albania	1.1093	0.6131	0.3559	0.6441	0.5123	7
Bosnia and Herzegovina	1.0000	0.5527	0.3559	0.6441	0.4618	9
Bulgaria	1.4591	0.8064	0.3559	0.6441	0.6738	4
Croatia	1.6678	0.9217	0.3559	0.6441	0.7702	2
Greece	1.5475	0.8552	0.3559	0.6441	0.7146	3
Montenegro	1.1327	0.6260	0.3559	0.6441	0.5231	6
North Macedonia	1.0699	0.5913	0.3559	0.6441	0.4941	8
Romania	1.7877	0.9880	0.3559	0.6441	0.8256	1
Serbia	1.2510	0.6914	0.3559	0.6441	0.5778	5

Source: Authors

After ranking the SEE countries in terms of digital transformation and implementation of a digital payment system, a sensitivity analysis will be conducted. The aim of this analysis is to change the weights of the criteria and then observe how these changes affect the ranking of the countries (Tešić and Khalilzadeh, 2024; Asif, Ishtiaq & Argyros, 2025). The sensitivity analysis can be performed in various ways, and in this research, the obtained weights will not be used; instead, new weights will be formed (Kannan, Jayakumar & Pethaperumal, 2025). The formation of weights for the sensitivity analysis will be done in the following way. The first scenario will assume that all the criteria used have the same importance, and will be assigned equal weights. The subsequent scenarios will be created by giving priority to one criterion over the others. This priority will be established by assigning the weight of individual criteria to be six times greater than the weight of the other criteria. Thus, the second scenario will be formed by assigning a weight value of 0.42 to criterion C1, while the remaining criteria will receive a weight of 0.07. The following scenarios will be created in a similar manner, with the next criterion receiving a higher weight and the others receiving a lower weight. Since there are a total of 9 criteria, 9 scenarios will be formed in this way. In total, ten scenarios will be formed for the sensitivity analysis. The results of the sensitivity analysis (Figure 2) show that

Figure 2: Sensitivity analysis/Please provide editable figure
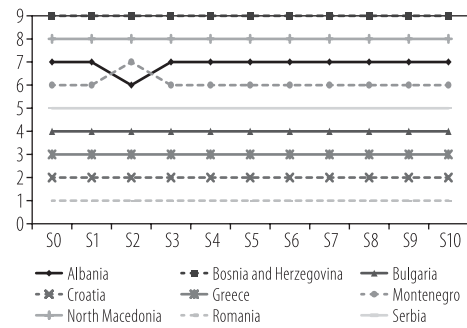
Source: Authors

only in Scenario 2 there is a different ranking between Montenegro and Albania. These results indicate that Montenegro must increase its average internet speeds in order to achieve better digital transformation.

5. Discussion

Digital transformation represents a significant factor in the economic development and modernization of SEE countries. Digital technologies are changing the way modern society functions (Levin & Mamlok, 2021). The financial sector is influenced by comprehensive digitalization (Niemand, Rigtering, Kallmünzer, Kraus & Maalaoui, 2021). These technologies facilitate the management of payment systems, reduce transaction costs between users, and enable more efficient resource management. SEE countries have recognized the digital transformation of the payment system as a key factor in improving competitiveness in the global market. This research was based on the assumption that the level of digital transformation in countries impacts the implementation of a fully digital payment system. Therefore, it is necessary for SEE countries to recognize and take advantages of the digital payment system. There is a connection between digital transformation and a digital payment system (De Portu, 2022), and they complement each other. Digital payments serve as a catalyst for regional integration among these countries (Blanc, Fare & Lafuente-Sampietro, 2022). However, in order for a complete digital payment system to come to life, several conditions need to be met. These conditions were translated into criteria used in this approach. SEE countries were observed using these criteria to determine their current levels of digitalization. For this reason, this research focused on analyzing the potential of digital transformation in SEE countries for the purpose of adopting a complete digital payment system. The criteria used can be characterized as key indicators of the countries' digital readiness. The importance of this research lies in the fact that SEE countries lack a coordinated approach to the digitalization of the payment system, which would enable the transition to a fully digital payment system. The adoption of a fully digital payment system would strengthen regional connectivity (Ozili & Alonso, 2024), while simultaneously facilitating business transactions between the EU member states and potential EU members.

In order to determine the level of digital transformation in SEE countries, an MCDM approach was used with the CRITIC and MARCOS methods. This approach is applied when there are multiple alternatives considered with criteria (Hussain, Chen & Hussain, 2024). The model used allowed for an objective analysis of digital transformation, and the data for measuring this transformation were taken from reports created by world institutions to obtain the most objec-

tive data for analysis. The CRITIC method was used to determine the weights of the criteria in an objective manner, taking into account the dispersion between the values of individual criteria expressed through standard deviation and the mutual correlation of these criteria. The results obtained using this method show that the criterion referring to alignment with EU legislation holds the greatest importance in assessing the potential for implementing a complete digital payment system in SEE countries. Similar results were obtained by Mökander, Axente, Casolari & Floridi (2022) in their research. These results indicate that alignment with the EU legislation plays a crucial role in the implementation of a digital payment system. Potential/Candidate? EU member countries, Serbia and Montenegro, show relatively good progress, but there is still room for further alignment of their legislation.

The second most important criterion was the number of digital transactions per person annually. Thus, this criterion was recognized as a key factor for the implementation of a digital payment system. The research conducted by Frączek and Urbanek (2021) showed that this criterion plays a significant role in the digitalization of payment systems. This criterion reflects the level of acceptance of digital payments, so if people do not accept a particular system, it will not be implemented. The population must be willing to use the digital payment system for it to develop further. According to the results obtained, it was shown that Romania has the highest number of digital transactions compared to all other countries. This indicates that they have made progress in popularizing digital payments. Other countries still have room to increase this criterion, but it is necessary to promote digital payment platforms through education of the population.

On the other hand, the results of the CRITIC method showed that the criteria of user trust and financial inclusion have the least importance. Naturally, these criteria are important for the implementation of a digital payment system, as also indicated by the research of Sleiman et al. (2021). The lower significance in this research can be explained by the fact that the values within these criteria were the least dispersed. For this reason, the standard deviation value, which is a key factor for determining the weights in the CRITIC method, was lower. Based on these results, it can be said that none of the observed countries significantly deviates, so these criteria should be gradually enhanced together with other criteria.

The MARCOS method was used to rank countries based on their digital transformation and readiness to implement a fully digital payment system. This method was chosen because it has demonstrated great flexibility in previous studies, and its results did not deviate from the results of similar methods. The results of this method show that EU member states perform better compared to other coun-

tries. Among these countries, Romania and Croatia stand out as having the best indicators. However, these countries have a lower level of digitalization compared to other EU countries not included in this research, as demonstrated by the study of Crisan, Popescu, Militaru & Cristescu (2022). Among the non-EU countries, Serbia and Montenegro stand out, showing good results in terms of digital transformation. However, Serbia has better indicators than Montenegro in several key areas, which is why it is ranked higher.

On the other hand, the results show that Bosnia and Herzegovina has the worst indicators among all SEE countries. This is due to low levels of regulatory harmonization, a low penetration of digital transactions, and slow progress in the digitalization of public services. These results indicate the need for a comprehensive reform to create a more favorable environment, first for digital transformation and then for the implementation of digital payments. The focus of this reform must be on improving internet speeds, increasing digital transactions, and better aligning legislation with EU standards. In this way, the position of Bosnia and Herzegovina could be significantly improved relative to other countries in the region and the EU countries. Sensitivity analysis revealed that individual criteria do not have a significant impact on the ranking of SEE countries, so it is necessary to change several of these criteria in order to achieve better digital transformation and implement digital payments, even in countries that are not EU members.

The results obtained showed that EU membership and a high level of digital integration play a key role in the implementation of a fully digital payment system. EU member states hold a significant advantage due to harmonized legislation and well-developed digital platforms, while non-EU countries need to intensify their efforts to bridge the gap between these countries. This research provides insights into the current state of digital transformation in SEE countries and offers guidelines for the strategic development of digital payment systems.

6. Conclusion

Digital transformation and the implementation of digital payments are key factors for improving the competitiveness of the economic system and the connectivity of SEE countries. This research aimed to examine the current potential of SEE countries through the application of MCDM methods. In this study, the CRITIC and MARCOS methods were used to provide an objective evaluation of the criteria and ranking of SEE countries. The results revealed the importance of alignment with the EU legislation and the number of digital transactions as the

key criteria for the implementation of a fully digital payment system. In addition, the findings indicate that user trust and financial inclusion are not of great importance in this implementation.

Romania and Croatia have an advantage over other SEE countries, as they have the best indicators in digital transformation. The results show that Bosnia and Herzegovina has the worst indicators in terms of digital transformation in the SEE region, with the least adoption of digital payments. The demonstrated inequality in digital transformation represents an obstacle to regional harmonization. Therefore, joint initiatives must be launched to foster cooperation between these countries in order to reduce the differences in the implementation of digital technologies. This is particularly important for the development of digital payment systems between these countries, which would contribute to their progress. The results also show that Serbia and Montenegro are leading non-EU countries. Other countries need to follow suit to achieve the necessary level of digital transformation to implement fully digital payment systems. Therefore, further progress in digitalization is required, along with the development of strategies that will enable further investment in digitalization.

The results obtained from this research should serve as an indicator for the strategic planning of digital transformations in SEE countries and influence the improvement of regional cooperation and the harmonization of payment systems in order to successfully implement a fully digital payment system. Furthermore, countries must continue to focus on the digitalization of public services, which will open up the possibility for the digitalization of private services for users by strengthening trust in these services. The implementation of comprehensive policies will foster stronger economic ties between SEE countries. The contribution of this research lies in the practical discussion on digital transformation and its impact on the payment system. It is crucial for governments to set guidelines for the development of digital technologies through standards that will enhance the observed factors, as well as other elements influencing digitalization.

References

1. Akybayeva, G., Kazbekov, T., Mambetova, S., & Aikenova, R. (2024). Toward a New Economy: Digital Currency and International Development. *Collection of papers new economy*, 2, 47-62. https://doi.org/10.61432/CPNE0201047a

2. Al-Okaily, M., Alqudah, H., Al-Qudah, A. A., Al-Qadi, N. S., Elrehail, H., & Al-Okaily, A. (2023). Does financial awareness increase the acceptance rate for financial inclusion? An empirical examination in the era of digital transformation. *Kybernetes*, 52(11), 4876-4896. https://doi.org/10.1108/k-08-2021-0710

3. Al-Qudah, A. A., Al-Okaily, M., Alqudah, G., & Ghazlat, A. (2024). Mobile payment adoption in the time of the COVID-19 pandemic. *Electronic Commerce Research*, 24(1), 427–451. https://doi.org/10.1007/s10660-022-09577-1

4. Asif, M., Ishtiaq, U., & Argyros, I. K. (2025). Hamacher Aggregation Operators for Pythagorean Fuzzy Set and its Application in Multi-Attribute Decision-Making Problem. *Spectrum of Operational Research*, 2(1), 27-40. https://doi.org/10.31181/sor2120258

5. Azis, M., Hidayati, T., Abidin, Z., & Sukor Jaafar, M. (2024). Currency Exchange Rate Volatility as a Moderating Effect of the Gold and Coal Price Against Fund Age and Mutual Fund in Indonesia. *Economics - innovative and economics research journal*, 12(3), 257–278. https://doi.org/10.2478/eoik-2024-0041

6. Baham, C., Kalgotra, P., Nasirpouri Shadbad, F., & Sharda, R. (2023). Generational differences in handling technology interruptions: a qualitative study. *European Journal of Information Systems*, 32(5), 858-878. https://doi.org/10.1080/0960085x.2022.2070557

7. Barroso, M., & Laborda, J. (2022). Digital transformation and the emergence of the Fintech sector: Systematic literature review. *Digital Business*, 2(2), 100028. https://doi.org/10.1016/j.digbus.2022.100028

8. Batta, K., Arora, S., & Pandey, A. (2022). Financial Inclusion in India Through Micro Units Schemes-Sustainable Development for the Five Year (2015-20) Study. *Opportunities and Challenges in Sustainability*, 1(2), 116-127. https://doi.org/10.56578/ocs010204

9. Biswas, A., Gazi, K. H., Bhaduri, P., & Mondal, S. P. (2024). Neutrosophic fuzzy decision-making framework for site selection. *Journal of Decision Analytics and Intelligent Computing*, 4(1), 187–215. https://doi.org/10.31181/jdaic10004122024b

10. Biswas, S., & Pamucar, D. (2023). A modified EDAS model for comparison of mobile wallet service providers in India. *Financial Innovation*, 9(1), 41. https://doi.org/10.1186/s40854-022-00443-5

11. Blanc, J., Fare, M., & Lafuente-Sampietro, O. (2022). Local currencies for territorial development: lessons from a national survey in France. Regional Studies, Online first. https://doi.org/10.1080/00343404.2022.2120974

12. Bruggink, D. (2022). The internal cards market in Europe from 2002 to 2020: A success or a failure? *Journal of Payments Strategy & Systems*, 16(3), 265. https://doi.org/10.69554/mzrt9773

13. Cho, M. H., & Yi, C. G. (2022). Adaptive Social Innovation Derived from Digital Economy and Its Impact on Society and Policy. *Sustainability*, 14(6). https://doi.org/10.3390/su14063408

14. Cotugno, M., Manta, F., Perdichizzi, S., & Stefanelli, V. (2024). Ready for a digital Euro? Insights from a research agenda. *Research in International Business and Finance*, 67, 102117. https://doi.org/10.1016/j.ribaf.2023.102117

15. Crisan, G. A., Popescu, M. E., Militaru, E., & Cristescu, A. (2023). EU Diversity in Terms of Digitalization on the Labor Market in the Post-COVID-19 Context. *Economies*, 11(12), 293. https://doi.org/10.3390/economies11120293

16. Cristea, M., Noja, G. G., Găinaru, T. A., & Tălăban, C. D. (2023). Digital Transformation and Its Implications on Educational Quality: An Empirical Analysis Within the European Union Context. *Opportunities and Challenges in Sustainability*, 2(3), 130-140. https://doi.org/10.56578/ocs020302

17. Darko, A. P., Liang, D., Xu, Z., Agbodah, K., & Obiora, S. (2023). A novel multi-attribute decision-making for ranking mobile payment services using online consumer reviews. *Expert Systems with Applications*, 213, 119262. https://doi.org/10.1016/j.eswa.2022.119262

18. De Portu, T. (2022). New trends in retail payments: How technological changes are reshaping the payments system. Introducing a proposal for a new pan-European instant payment system. *Latin American Journal of Central Banking*, 3(4), 100075. https://doi.org/10.1016/j.latcb.2022.100075

19. Diakoulaki, D., Mavrotas, G., & Papayannakis, L. (1995). Determining objective weights in multiple criteria problems: The critic method. *Computers & Operations Research*, 22(7), 763-770. https://doi.org/10.1016/0305-0548(94)00059-h

20. Domingos, M. M., António, N. S., & Pinheiro, C. M. (2023). Promoting the integration of payment markets: A stakeholder's vision. *European Business Organization Law Review*, 24, 69-92 https://doi.org/10.1007/s40804-022-00245-3

21. Essien, N. A., Umah, C. A., Amarachi, I. A. U., & Samson, T. K. (2024). Modeling Retail Price Volatility of Selected Food Items in Cross River State, Nigeria Using GARCH Models. *Acadlore Transactions on Applied Mathematics and Statistics*, 2(2), 94-103. https://doi.org/10.56578/atams020204

22. Eunice Ratombo, N., & Pleasure Mongale, I. (2024). Examining the Relationship Between Mobile Cellular Subscriptions and Inclusive Growth: SADC Members. *Economics - innovative and economics research journal*, 12(3), 337–362. https://doi.org/10.2478/eoik-2024-0019

23. Frączek, B., & Urbanek, A. (2021). Financial inclusion as an important factor influencing digital payments in passenger transport: A case study of EU countries. *Research in Transportation Business & Management*, 41, 100691. https://doi.org/10.1016/j.rtbm.2021.100691

24. Fu, W., Sun, J., & Lee, X. (2023). Research on the Openness of Digital Platforms Based on Entropy-Weighted TOPSIS: Evidence from China. *Sustainability*, 15(4), 3322. https://doi.org/10.3390/su15043322

25. Gajović, A. (2024). Digitalization of the European Green Deal (EGD) and Sustainable Development Goals (SDG) - a Factor in Empowering Sustainable Local Projects: A Review of Literature and Potential Achievements. *Collection of papers new economy*, 2, 129-146. https://doi.org/10.61432/CPNE0201129g

26. Hristozov, Y., & Nozharov, S. (2024). Prerequisites for Business Development in South- Eastern Europe in the Conditions of Polycrisis and Digital *Transformation. Economics - innovative and economics research journal*, 12(2), 163-175. https://doi.org/10.2478/eoik-2024-0023

27. Huang, G., Ma, L., Xietian, Z., & Huang, X. (2024). Servitization of manufacturing and China's power status upgrading of global value network. *Structural Change and Economic Dynamics*, 68, 313-328. https://doi.org/10.1016/j.strueco.2023.11.005

28. Hussain, S., Chen, J.-H., & Hussain, T. (2024). Decision-making framework for improving bank performance in emerging markets: The analysis of AHP-TOPSIS and AHP-GRA models. *Journal of Central Banking Theory and Practice*, 13(3), 191–218. https://doi.org/10.2478/jcbtp-2024-0027

29. Jantoń-Drozdowska, E., & Mikołajewicz-Woźniak, A. (2017). The impact of the distributed ledger technology on the single euro payments area development. Equilibrium. *Quarterly Journal of Economics and Economic Policy*, 12(3), 519-535. https://doi.org/10.24136/eq.v12i3.28

30. Jegerson, D., & Hussain, M. (2023). A framework for measuring the adoption factors in digital mobile payments in the COVID-19 era. *International Journal of Pervasive Computing and Communications*, 19(4), 596–623. https://doi.org/10.1108/IJPCC-12-2021-0307

31. Kajtazi, K., & Fetai, B. (2022). Does the Remittance Generate Economic Growth in the South East European Countries? *Scientific Annals of Economics and Business*, 69(1), 57–67. https://doi.org/10.47743/saeb-2022-0004

32. Kannan, J., Jayakumar, V., & Pethaperumal, M. (2025). Advanced Fuzzy-Based Decision-Making: The Linear Diophantine Fuzzy CODAS Method for Logistic Specialist Selection. *Spectrum of Operational Research*, 2(1), 41-60. https://doi.org/10.31181/sor2120259

33. Khan, M. A. (2023). Does monetary policy solely correct disequilibrium in the balance of payment? Evidence from the developing world. *Journal of Central Banking Theory and Practice*, 12(1), 57–85. https://doi.org/10.2478/jcbtp-2023-0004

34. Kim, E., Kim, M., & Kyung, Y. (2022). A case study of digital transformation: Focusing on the financial sector in South Korea and overseas. *Asia Pacific Journal of Information Systems*, 32(3), 537-563. https://doi.org/10.14329/apjis.2022.32.3.537

35. Kulk, E. (2021). Request to pay: Monetising the instant payments investment. *Journal of Digital Banking*, 5(3), 194. https://doi.org/10.69554/wvpg8224

36. Kumar, V., Kumar, R., Goel, R., Singh, T., & Kaur, M. J. (2024). The evolution of digital marketing technologies: a fuzzy TOPSIS approach to selected technology in E-commerce platform. *International Journal of System Assurance Engineering and Management*, Online first. https://doi.org/10.1007/s13198-024-02576-5

37. Kwilinski, A., Lyulyov, O., & Pimonenko, T. (2023). The Coupling and Coordination Degree of Digital Business and Digital Governance in the Context of Sustainable Development. *Information*, 14(12), 651. https://doi.org/10.3390/info14120651

38. Levin, I., & Mamlok, D. (2021). Culture and Society in the Digital Age. *Information*, 12(2), 68. https://doi.org/10.3390/info12020068

39. Louzek, M. (2023). Is the eurozone an optimum currency area? *International Journal of Economic Sciences*, 12(2), 63-82. https://doi.org/10.52950/es.2023.12.2.004

40. Lytvyn, O., Kudin, V., Onyshchenko, A., Nikolaiev, M., & Chaplynska, N. (2024). Integration of Digital Means in the Financial Sphere: The Potential of Cloud Computing, Blockchain, Big Data and AI. *Financial and Credit Activity: Problems of Theory and Practice*, 1(54), 127–145. https://doi.org/10.55643/fcaptp.1.54.2024.4257

41. Mansour, H. (2022). How successful countries are in promoting digital transactions during COVID-19. *Journal of Economic Studies*, 49(3), 435–452. https://doi.org/10.1108/jes-10-2020-0489

42. Mavlutova, I., Spilbergs, A., Verdenhofs, A., Natrins, A., Arefjevs, I., & Volkova, T. (2023). Digital Transformation as a Driver of the Financial Sector Sustainable Development: An Impact on Financial Inclusion and Operational Efficiency. *Sustainability*, 15(1). https://doi.org/10.3390/su15010207

43. Milošević, I. M., Plotnic, O., Tick, A., Stanković, Z., & Buzdugan, A. (2024). Digital Transformation in Manufacturing: Enhancing Competitiveness Through Industry 4.0 Technologies. *Precision Mechanics & Digital Fabrication*, 1(1), 31-40. https://doi.org/10.56578/pmdf010104

44. Mökander, J., Axente, M., Casolari, F., & Floridi, L. (2022). Conformity assessments and post-market monitoring: A guide to the role of auditing in the proposed European AI regulation. *Minds and Machines,* 32(2), 241–268. https://doi.org/10.1007/s11023-021-09577-4

45. Niemand, T., Rigtering, J. P. C., Kallmünzer, A., Kraus, S., & Maalaoui, A. (2021). Digitalization in the financial industry: A contingency approach of entrepreneurial orientation and strategic vision on digitalization. *European Management Journal*, 39(3), 317–326. https://doi.org/10.1016/j.emj.2020.04.008

46. Oliinyk, A. (2024). Comparative Study of Digitalization Impact on Global Goods and Services Markets in Advanced and Developing Economies. *Economics - innovative and economics research journal*, 12(2), 195–218. https://doi.org/10.2478/eoik-2024-0026

47. Ozili, P. K., & Alonso, S. L. N. (2024). Central bank digital currency adoption challenges, solutions, and a sentiment analysis. *Journal of Central Banking Theory and Practice*, 13(1), 133-165. https://doi.org/10.2478/jcbtp-2024-0007

48. Popescu, A. I. (2024). The evolution of on-demand platforms: Conceptual framework, regulatory challenges, and policy implications in the digital economy. *International Journal of Economic Sciences*, 13(2), 55-86. https://doi.org/10.52950/es.2024.13.2.004

49. Putrevu, J., & Mertzanis, C. (2024). The adoption of digital payments in emerging economies: challenges and policy responses. *Digital Policy Regulation and Governance*, 26(5), 476–500. https://doi.org/10.1108/dprg-06-2023-0077

50. Radosavljević, K. (2023). Digital Transformation and Risk Mitigation in Emerging Insurance Markets: A Comparative Analysis Between China and Serbia. *Opportunities and Challenges in Sustainability*, 2(2), 104-115. https://doi.org/10.56578/ocs020205

51. Radovanović, M., Jovčić, S., Petrovski, A., & Cirkin, E. (2025). Evaluation of University Professors Using the Spherical Fuzzy AHP and Grey MARCOS Multi-Criteria Decision-Making Model: A Case Study. *Spectrum of*

Decision Making and Applications, 2(1), 198-218. https://doi.org/10.31181/sdmap21202518

52. Santamaría, J. (2021). Developments in fast payments in the Single Euro Payments Area. *Journal of Payments Strategy and Systems*, 15(4), 355-359. https://doi.org/10.69554/iwmv1538

53. Saunavaara, J., Laine, A., & Salo, M. (2022). The Nordic societies and the development of the data centre industry: Digital transformation meets infrastructural and industrial inheritance. *Technology in Society*, 69. https://doi.org/10.1016/j.techsoc.2022.101931

54. Shostak, L., Lipych, L., Anatolii, F., Volynets, I., Andrew, U., & Morokhova, V. (2024). Business Models of Enterprises in the Conditions of Digital Transformation: Global and Domestic Experience. *Economics - innovative and economics research journal*, 12(2), 243-261. https://doi.org/10.2478/eoik-2024-0027

55. Sleiman, K. A. A., Juanli, L., Lei, H., Liu, R., Ouyang, Y., & Rong, W. (2021). User trust levels and adoption of mobile payment systems in China: An empirical analysis. *SAGE Open*, 11(4). https://doi.org/10.1177/21582440211056599

56. Sretenovic, M., & Kovacic, B. (2020). Model payment order in the SEPA system. *International Journal of Business Information Systems*, 33(4), 531-548. https://doi.org/10.1504/IJBIS.2020.105839

57. Stević, Ž., Pamučar, D., Puška, A., & Chatterjee, P. (2020). Sustainable supplier selection in healthcare industries using a new MCDM method: Measurement of alternatives and ranking according to COmpromise solution (MARCOS). *Computers & Industrial Engineering*, 140, 106231. https://doi.org/10.1016/j.cie.2019.106231

58. Szumski, O. (2020). Technological trust from the perspective of digital payment. *Procedia Computer Science*, 176, 3545–3554. https://doi.org/10.1016/j.procs.2020.09.032

59. Tay, L.-Y., Tai, H.-T., & Tan, G.-S. (2022). Digital financial inclusion: A gateway to sustainable development. *Heliyon*, 8(6), e09766. https://doi.org/10.1016/j.heliyon.2022.e09766

60. Tešić, D., & Khalilzadeh, M. (2024). Development of the rough Defining Interrelationships Between Ranked criteria II method and its application in the MCDM model. *Journal of Decision Analytics and Intelligent Computing*, 4(1), 153–164. https://doi.org/10.31181/jdaic10009102024t

61. Thow, A. M., Apprey, C., Winters, J., Stellmach, D., Alders, R., Aduku, L. N. E., Mulcahy, G., & Annan, R. (2021). Understanding the impact of historical policy legacies on nutrition policy space: Economic policy agendas and current food policy paradigms in Ghana. *International Journal of*

Health Policy and Management, 10(12), 909–922 https://doi.org/10.34172/ijhpm.2020.203

62. Tsindeliani, I. A., Proshunin, M. M., Sadovskaya, T. D., Popkova, Z. G., Davydova, M. A., & Babayan, O. A. (2022). Digital transformation of the banking system in the context of sustainable development. *Journal of Money Laundering Control*, 25(1), 165–180. https://doi.org/10.1108/jmlc-02-2021-0011

63. Xu, G. W., Ali, D. A., Bhaumik, A., Yang, M. S., & Wang, N. (2023). The Influence of Digital Transformation in Enterprises on the Dynamics of Supply Chain Concentration: An Empirical Analysis of Chinese A-Share Listed Companies. *Journal of Organizations, Technology and Entrepreneurship*, 1(2), 88-97. https://doi.org/10.56578/jote010202

64. Yadav, S., Kaur, G., Kapur, P. K., & Aggarwal, A. G. (2024). Intuitionistic fuzzy and multi-criteria based ranking of mobile payment apps using sentiment score of online reviews. *International Journal of System Assurance Engineering and Management*. Online first. https://doi.org/10.1007/s13198-024-02649-5

65. Yang, L. (2023). Standards-based hierarchical governance of a digital trade network. *Transnational Corporations Review*, 15(4), 42–49. https://doi.org/10.1016/j.tncr.2023.08.004

66. Zatonatskiy, D., & Lavrentiev, M. (2023). Institutional Support for Investing in Critical Infrastructure Objects in Ukraine. *Collection of papers new economy*, 1, 149-163. https://doi.org/10.61432/CPNE0101149z

67. Zhelyazkova, A. (2022). Justifying enforcement or avoiding blame? The transparency of compliance assessments in the European Union. *West European Politics*, 45(2), 403–429. https://doi.org/10.1080/01402382.2020.1845943