

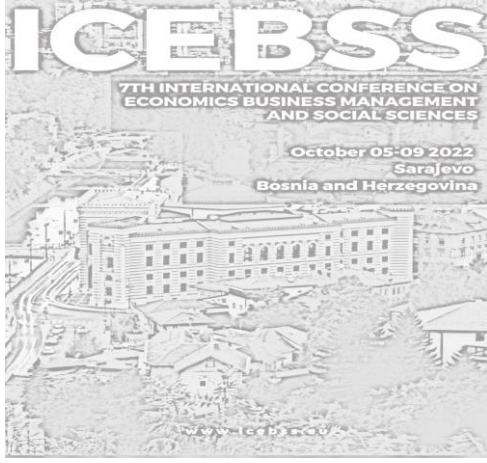
ICEBSS



**8th INTERNATIONAL CONFERENCE
ON
ECONOMICS
BUSINESS MANAGEMENT AND
SOCIAL SCIENCES**

October 25 - 29 2023

Sarajevo - Bosnia and Herzegovina



8th INTERNATIONAL CONFERENCE ON
ECONOMICS BUSINESS MANAGEMENT AND
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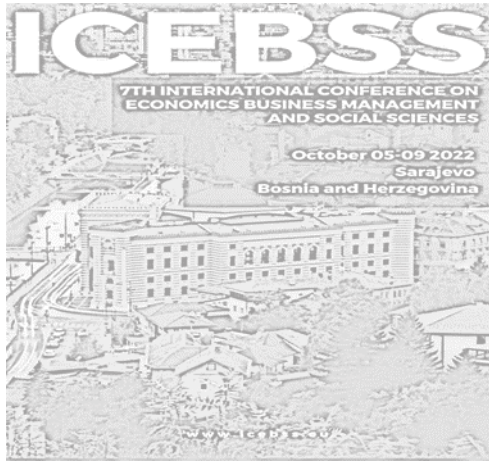
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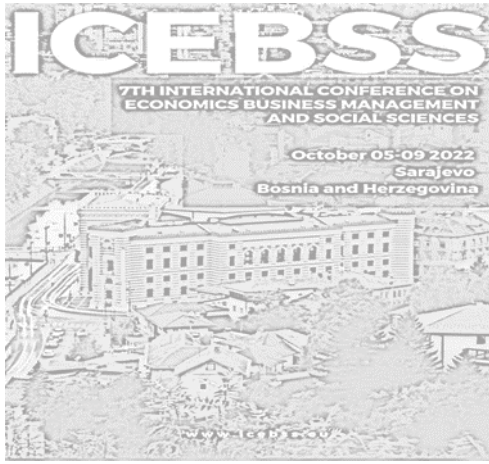
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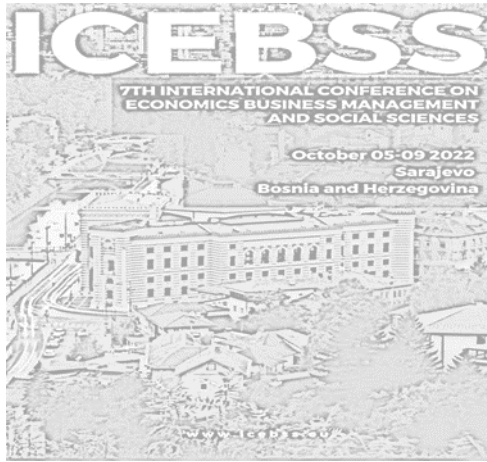
PREFACE

We sincerely hope that the contributors and attendees of ICEBSS'2023 will find presented studies enlightening, useful and of interest. The aim of ICEBSS is to bring researchers from different disciplines together and inspire them to collaborate.

On behalf of the organization committee, I thank all the authors who have shared their precious works, all reviewers for their valuable contributions and members of the committee for their never ending supports and advices.

We hope that ICEBSS will reinforce interdisciplinary and international collaboration and hearten information exchange between various fields.

October 2023
Prof. Dr. Mahmut ZORTUK
Coordinator of ICEBSS



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**THE IMPACT OF MIGRANT REMITTANCES ON ECONOMIC GROWTH IN
MENA COUNTRIES**

Hamed Jamal El Sayed (Lebanon)¹
Prof. Dr. Mahmut Zortuk²

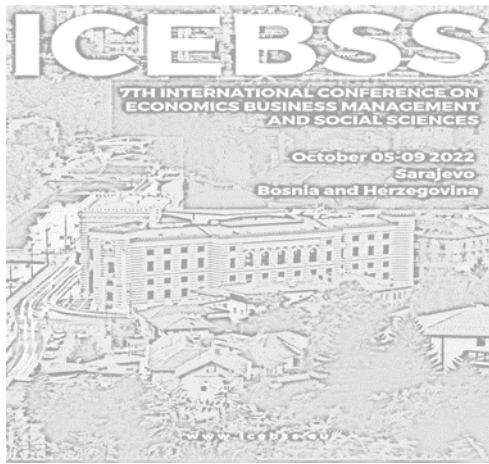
Abstract

This study examined the empirically relationship between migration remittances on economic growth in eight MENA countries punctiliously: Algeria, Egypt, Jordan, Lebanon, Morocco, Iran, Tunisia, and Oman, using panel data from 2002 to 2020 (21 years). Working overseas provides people with a greater chance to make a living wage. Because of this, the phenomenon of working overseas has grown significantly. The worker remittances inflows to NEMA have increased especially from \$15.9 billion in 2002 to \$59.6 billion in 2020. However, this did not have a positive impact between REM and economic growth in this study and the same results obtain by Kadir (2009), Chami et al. (2003). The analysis is carried using a panel data technique: Cointegration tests, pooled mean group / autoregressive distribution lag (PMG/ARDL) and causality test. The outcome of cointegration show a long-run relation, in addition PMG/ARDL model shows a negative and long run relation among remittances and economic growth in selected MENA nations, when we applied PMG/ARDL cross-section short run coefficients test all countries have a long-run and negative relation among remittances and economic growth except Algeria, Morocco, and Tunisia have a positive relation between remittances and economic growth in long-term .Though, no causality was among remittances and economic growth in the MENA countries.

Keywords: Remittances, economic growth, PMG/ARDL, Granger causality test, MENA countries, panel data.

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THE IMPACT OF EXCHANGE RATE ON THE TURKISH ECONOMIC GROWTH

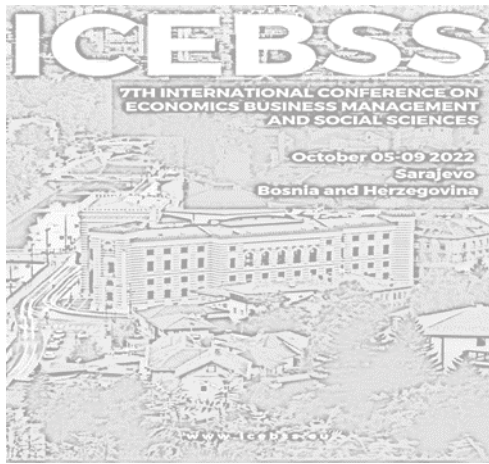
Abdul razzak El Berjawi (Palestine)¹

Abstract

The issue of the exchange rate emerged as one of the energies that countries face in shaping the parameters of their exchanges foreign exchange, as dealing with the foreign exchange market has developed into d one of the most dangerous trans-President Nixon's decisions (to stop converting the dollar into gold) in the seventies of the century Back to frequent New Year's currencies fluctuate against each other, which makes it difficult to assess the parity of exchange rates getting trapped inside the ring appropriate growth rates and a general level of values, leading to acceptable rates and balance in the balance guard. This study studies the effectiveness of the exchange of Turkey's economic growth between 1978 and 2021. The independent variables in this thesis were the Official exchange rate, Deposit interest rate, Inflation, and Gross fixed capital formation with Autoregressive distributed lag (ARDL) and Vector error correction Model (VECM). According to the cointegration test, the result shows that We have a long-run connection between economic growth and exchange rate. The outcomes of the cointegration test and the negative between the exchange rate and economic growth are consistent throughout the ARDL-bound, long-run, and short-run relation. Economic growth and independent variables have long-term causal linkages, according to VECM. The causality test only indicated a single causal association between exchange rate and economic development.

Keywords: exchange rate, economic growth, Autoregressive distributed lag (ARDL), Vector error correction Model (VECM), Causality test

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**THE IMPACT OF INTERNATIONAL TRADE ON ECONOMIC GROWTH: CASE
OF LEBANON**

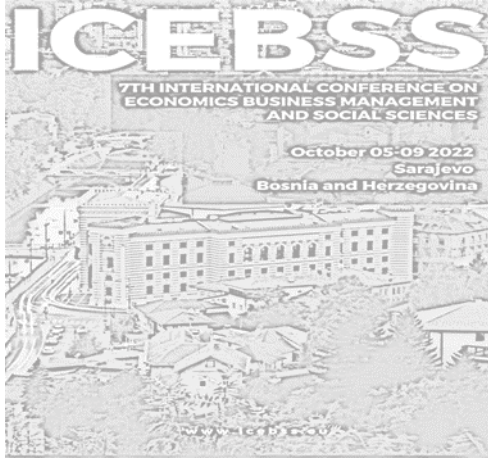
Walid Ghannoum (Lebanon)¹

Abstract

Foreign direct investment (FDI) also has a positive impact on economic growth, indicating that the influx of foreign capital can stimulate economic activity. Gross capital formation, which refers to the investment in physical assets such as machinery and infrastructure, is also found to have a significant effect on economic growth. Finally, the labor force is an essential factor in driving economic growth as it contributes to the production of goods and services. Overall, these findings suggest that policies aimed at promoting trade, attracting foreign investment, increasing investment in physical assets, and improving the labor force can lead to sustained economic growth. The global economy has recently gone through many developments, starting with trade agreements and partnerships that brought with them great opportunities and challenges, leading to the application of protectionist measures for foreign trade. This thesis examines the effects of global trade on Lebanese economic growth between the years 1990 and 2020 in light of the circumstances that Lebanon has been going through since the beginning of 2020 until the present day. By using autoregressive distributed lag (ARDL) after the cointegration test and DOLS mode, this model captures the short- and long-run dynamics of a time series. The model consists of a set of equations in which the dependent variable (openness to trade, FDI, gross capital formation, labor force) is regressed on a set of independent variables, including gross domestic product and lagged versions of the dependent variable. The results showed that trade has an optimistic and important effect on economic growth, in addition to the long-term association between trade and economic growth.

Keywords: International trade, open trade, economic growth, ARDL model, unit root, DOLS model.

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**METHODS FOR SELECTING THE BEST POWER PRODUCTION
TECHNOLOGIES USING MCDM**

Yousef Melhem (Palestine)
Prof. Dr. Mahmut Zortuk¹

Abstract

With rapid industrial, demographic, and lifestyle expansion, electric power consumption is rising. Thus, European engineers and experts considered sustainable energy generation. Energy security, economical energy, material efficiency, and climate protection were all issues. Thus, sustainable energy generation is essential given technical, economic, political, and social changes.

This study aims to identify the best sustainable technologies for the production of electric power based on many electrical, economic, societal, and environmental variables. Since the selection of sustainable electricity production sources involves many conflicting criteria, multi-criteria decision-making methods (MCDM) were implemented, MULTIMOORA, VIKOR, and TOPSIS methods were used for the analysis. The analysis proved that future energy policy should be directed towards sustainable energy technologies, as the results of the MULTIMOORA method were the best biomass CHP power plants, and through VIKOR the best technology in producing electric power was condensing turbine Coal, while for TOPSIS the best technology was Solar PV.

Keywords: Electricity, Best Performance, Electrical Engineering, Sustainability, MCDM, Multi-MOORA, CRITIC, VIKOR, TOPSIS.

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INTRODUCTION

The scarcity of local resources, pollution, the emission of harmful gases, technological innovation, cost, energy quality, storage and other factors contribute to the search for the best ways and technologies through which to produce electric energy. Recent economic, technological, social and political changes have highlighted the need to improve sustainability and diversify energy sources to increase contemporary vitality and economic growth. Industrial development, job creation, improving the quality of life and national security. People also switch energy sources if better options are available. Despite its many benefits, electric energy has disadvantages, the most important of which is the permeability of some sources such as coal and fossil fuels that pollute the environment. Thus, it is necessary to go for some renewable energy sources such as wind energy and solar energy. And electric stations are named for their engines or turbines, All methods of generating electricity transform energy from one form to another, depending on the source.

The energy shift sped up in 2022, with renewable energy capacity and electric car sales both hitting all-time highs. The future of the shift to low-carbon energy sources remains promising. By 2023, the amount of renewable energy capacity is projected to expand by at least 18%, according to Bloomberg New Energy Finance, and surpass 450 GW. Despite price increases in 2022, Clean energy is more cost-effective than fossil fuels, and it is expected that the price of renewables will continue to drop in the future. Emissions must be reduced by half by 2030 and to zero by 2050 if we are to escape the worst impacts of climate change. To achieve this goal, we must transition away from fossil fuels and instead rely on renewable energy sources that are free from harmful emissions and can power our society indefinitely.

One of the best ways to solve these problems is the multi criteria decision making (MCDM) using in this study



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LITERATURE REVIEW

(Markovska et al, 2009)¹ Lack of local resources, a high level of inefficiency in energy production and usage, and a dearth of institutional and human resources in Macedonia is analyzed, and potential paths toward sustainable energy growth are drawn. According to subsequent SWOT analyses, therefore, it is recommended that the country's energy sector implement "enabling sustainability" measures, change the energy distribution gradually (by using more natural gas and renewable sources of energy).

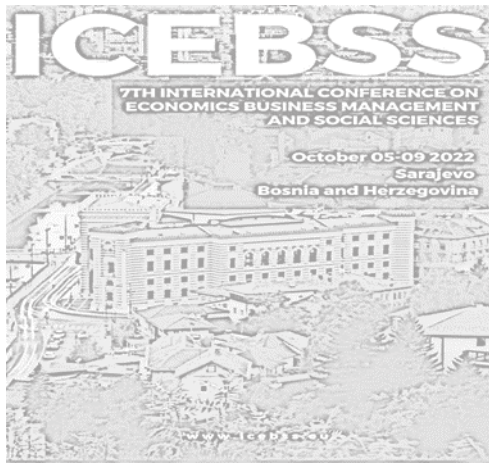
(Desideri et al, 2012)² This research looks at a solar power plant constructed by TerniEnergia in Marciano (Perugia, Italy), with the goal of determining the facility's effect on the environment and, by extension, the technology's true sustainability. For the LCA modeling, we used Semipro software and the Eco Indicator 99 approach. As a result of solar power generation generates no emissions once it's up and running, its production and installation processes, like those of any other energy generation technology, are not emission-free.

(Alizadeh et al, 2019)³ For state among large fossil-fuel funds plus economies dependent on its exports, the changeover to renewable energy sources is a pressing concern. The (BOCR & ANP) models are combined to create it. and we discover that solar power is the majority excellent renewable option used in Iran.

¹ Markovska, N., Taseska, V., & Pop-Jordanov, J. (2009). SWOT analyses of the national energy sector for sustainable energy development. *Energy*, 34(6), 752-756, <https://doi.org/10.1016/j.energy.2009.02.006>

² Desideri, U., Proietti, S., Zepparelli, F., Sdringola, P., & Bini, S. (2012). Life Cycle Assessment of a ground-mounted 1778 kWp photovoltaic plant and comparison with traditional energy production systems. *Applied Energy*, 97, 930-943, <https://doi.org/10.1016/j.apenergy.2012.01.055>

³ Parajuli, R., Dalgaard, T., Jørgensen, U., Adamsen, A. P. S., Knudsen, M. T., Birkved, M., ... & Schjørring, J. K. (2015). Biorefining in the prevailing energy and materials crisis: a review of sustainable pathways for biorefinery value chains and sustainability assessment methodologies. *Renewable and Sustainable Energy Reviews*, 43, 244-263.



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(Kumar et al, 2017)¹ in energy planning has made it more complicated in the modern era of sustainable development. The topic of operational research known as "multiple criterion decision making" (MCDM) focuses on finding the best course of action in situations involving many indications, conflicting goals, and criteria. This article summarizes the many MCDM methods, the progress achieved by prioritizing renewable energy applications over MCDM methodology, and the potential of this subject.

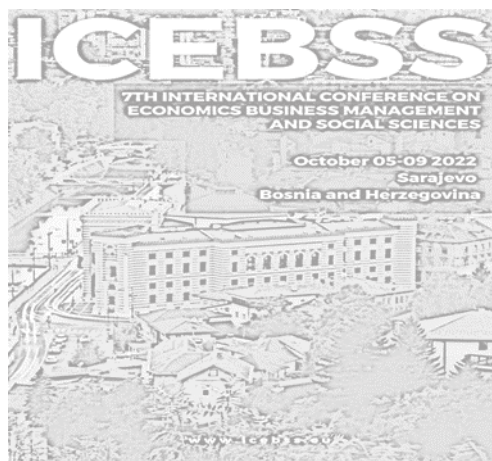
(Lee & Chang, 2018)² (MCDM) techniques rising in popularity due to complexity of energy selection issues, which include several, often conflicting factors. evaluates some different MCDM strategies WSM, VIKOR, TOPSIS, and ELECTRE for ranking RES for electricity production in stat of Taiwan. Results from Hydro is rated highest, accompanied by solar, wind, biomass, and geothermal as the top alternatives in Taiwan.

(Nigim el at,2004)³ Improve energy security by decreasing dependency on imported energy via RES integration with conventional fuel sources. will utilize MCDM methods. One such instrument (AHP), while another (SIMUS). In this study, we emphasize the employ of MCDM methods to help communities estimate the sustainability of potential local RES options. Both MCDM methods were shown to be effective in easing the strain of decision-making in large groups.

¹ Kumar, A., Sah, B., Singh, A. R., Deng, Y., He, X., Kumar, P., & Bansal, R. C. (2017). A review of multi criteria decision ³⁹ making (MCDM) towards sustainable renewable energy development. *Renewable and Sustainable Energy Reviews*, 69, 596-609, <https://doi.org/10.1016/j.rser.2016.11.191>

² Lee, H. C., & Chang, C. T. (2018). Comparative analysis of MCDM methods for ranking renewable energy sources in Taiwan. *Renewable and sustainable energy reviews*, 92, 883-896, <https://doi.org/10.1016/j.rser.2018.05.007>

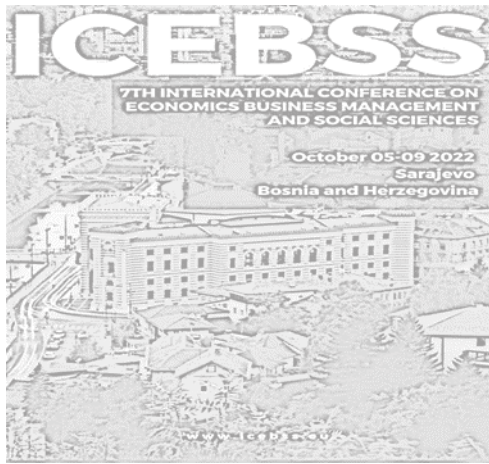
³ Nigim, K., Munier, N., & Green, J. (2004). Pre-feasibility MCDM tools to aid communities in prioritizing local viable renewable energy sources. *Renewable energy*, 29(11), 1775-1791, <https://doi.org/10.1016/j.renene.2004.02.012>



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Table 1: Table of data expected in Europe 2030

	HEALTH	CO2eq	PR COST	ENV	RADIO	ACC PAST	ACC FUT	FOOD	GRID COST	AVAILAB	SECURE	PEAK LOAD	EMPL
	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MIN	MAX	MAX	MAX	MAX
NUC	0.19	0.013	2.653	0.015	0.1452	0.001	4	1	3	0.9	4	0.5	0.16
OIL CL	2.39	0.208	7.194	0.213	0.0017	0.132	4	1	3	0.85	1	5	0.47
OIL GT	1.853	0.435	9.681	0.174	0.0019	0.132	4	1	3	0.85	3	5	0.74
COA CL	1.548	0.751	3.203	0.186	0.0012	0.157	4	1	3	0.85	3	2.5	0.86
COA IGCC	0.93	0.694	3.495	0.105	0.0013	0.157	4	1	3	0.85	3	2.5	0.86
COA IGCC CCS	1.042	0.154	4.15	0.118	0.0005	0.157	4	1	3	0.85	3	2.5	0.86
LIG CL	1.134	0.817	2.135	0.13	0.0005	0.157	4	1	3	0.85	3	1	0.21
LIG IGCC	0.934	0.786	2.778	0.094	0.0005	0.157	4	1	3	0.85	3	1	0.21
LIG IGCC CCS	1.051	0.106	3.351	0.106	0.0002	0.157	4	1	3	0.85	0	1	0.21
GAS STAG	0.563	0.395	4.519	0.077	0.0002	0.085	2	1	3	0.85	0	5	0.65
GAS STAG CCS	0.62	0.11	5.875	0.86	0.0002	0.085	2	1	3	0.85	0	5	1.8
GAS GT	0.864	0.62	6.563	0.124	0.0002	0.085	2	1	3	0.85	0	5	0.65
HYD S	0.198	0.013	7.229	0.016	0.0001	0.001	1	1	3	0.8	5	1.5	1.2
HYD M	0.142	0.009	4.519	0.011	0.0001	0.001	1	1	3	0.8	5	1.5	1.2
HYD L	0.127	0.008	4.519	0.01	0.0002	0.001	1	1	3	0.8	5	1.5	1.2
HYD DAM	0.245	0.015	7.35	0.02	0.0002	0.001	2	1	3	0.91	5	1.5	1.2
HYD PMP	0.251	0.014	7.35	0.02	0.0005	0.001	2	1	3	0.91	5	1.5	1.2
WIND ON	0.142	0.01	6.019	0.007	0.0004	0.001	1	1	4	0.29	5	0	0.36
WIND OFF	0.173	0.007	6.143	0.006	0.0022	0.001	1	1	5	0.5	5	0	0.36
PV ROOF	0.479	0.056	25.14	0.032	0.0028	0.001	1	1	3	0.15	5	0	6.6
PV OPEN	1.082	0.108	20.829	0.064	0.0002	0.001	1	1	3	0.15	5	0	6.6
SOL TH	0.105	0.008	11.969	0.007	0.0002	0.001	1	1	3	0.15	5	0	6.6
CHP GAS	0.527	0.366	4.225	0.072	0.0002	0.085	2	1	4	0.85	0	5	0.65
CHP GAS CCS	0.574	0.101	5.45	0.079	0.0011	0.085	2	1	4	0.85	0	5	1.8
CHP COAL	1.406	0.674	0.945	0.167	0.001	0.157	4	1	4	0.85	3	2.5	2.01
CHP COAL CCS	0.805	0.119	1.468	0.092	0.0002	0.157	4	1	4	0.85	3	2.5	2.01
CHP GAS STAG	0.612	0.424	4.134	0.083	0.0012	0.085	2	1	4	0.85	0	5	0.86
CHP COAL BP	1.555	0.741	0.503	0.183	0.0004	0.157	4	1	4	0.85	3	2.5	0.86
CHP STRAW	1.691	0.069	4.751	0.36	0.0029	0.085	2	2	4	0.95	5	5	4.4
CHP WOOD	0.639	0.057	3.791	0.078	0.0028	0.085	2	2	4	0.95	5	5	4.4
MCFC	1.958	0.184	7.3	0.167	0.0018	0.085	2	1	3	0.95	3	0.5	1.8
SOFC	0.664	0.127	7.08	0.069	0.0005	0.085	2	1	3	0.95	3	0.5	1.8
MCFC BG	3.196	0.326	7.824	0.241	0.0027	0.085	2	1	3	0.95	3	0.5	1.8



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DATA AND METHODOLOGY

Data for this research was obtained from the article titled "Prioritizing sustainable electricity production technologies: MCDM approach" which is data expected in Europe 2030 . The first two rows describe criteria, MIN: stands for non-beneficial criteria, whereas MAX: stands for beneficial criterion. Each of the 33 electricity generation technologies under consideration is described in its own row.

Measurement indicators: It was divided into three parts:

- a- Economic dimension.
- b- Environmental dimension.
- c- Social dimension.

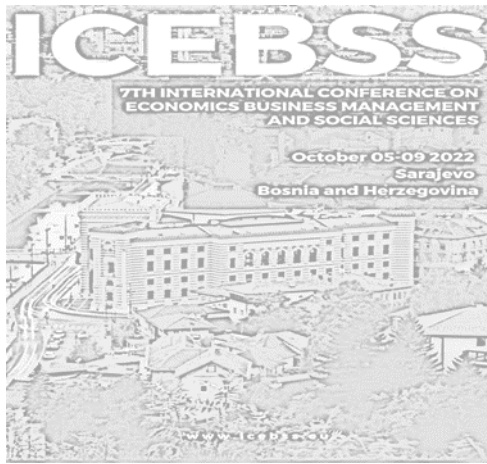
METHODOLOGY

Multi Criteria Decision Making (MCDM) It aims to support and guide the decision maker to discover the best option in the case of multiple and difficult conditions that contain many criteria and variables. The best alternative is chosen from a set of options, each of which is evaluated according to frequently contrasting criteria.

MCDM contains multiple tools and methods, common MCDM process algorithms (Multi-Mora, Critic, Topsis and Vikor) are explained and their applications in selecting the best electricity production mechanisms are discussed.

RESULTS AND DISCUSSION

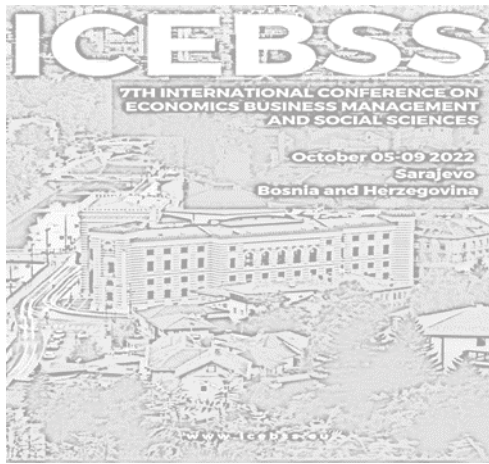
The analysis was performed in VIKOR, and the objective weights of the criteria were determined accordingly. The results indicated that the most important criterion is ACC FUT and therefore it has the heaviest weight at 0.126155299. The lowest ENV weight was 0.040519609. The table above shows all variable goal weights. And the final ranking show in the table 2.



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Table 2: Comprehensive results

	Multi-MOORARanking	VIKOR Ranking	TOPSIS Ranking
NUC	16	14	28
OIL CL	6	7	7
OIL GT	4	4	4
COA CL	8	5	21
COA IGCC	10	6	19
COA IGCC CCS	12	10	18
LIG CL	19	8	32
LIG IGCC	22	9	31
LIG IGCC CCS	25	13	33
GAS STAG	24	21	16
GAS STAG CCS	3	20	11
GAS GT	18	19	8
HYD S	29	29	13
HYD M	30	30	26
HYD L	31	31	27
HYD DAM	28	25	10
HYD PMP	26	24	9
WIND ON	33	33	23
WIND OFF	32	26	17
PV ROOF	21	28	1
PV OPEN	19	27	2
SOL TH	27	32	3
CHP GAS	23	16	14
CHP GAS CCS	13	18	12
CHP COAL	5	1	22
CHP COAL CCS	14	3	24
CHP GAS STAG	15	15	15
CHP COAL BP	9	2	25
CHP STRAW	1	11	5
CHP WOOD	2	12	6
MCFC	10	22	29
SOFC	16	23	30
MCFC BG	6	17	20



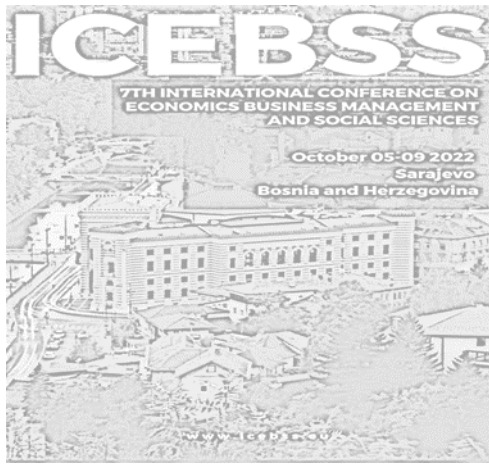
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Final ranking of the Multi-Moora method, CHP STRAW was the absolute best, ranked first in all parts of the Multi-MOORA method, CHP Wood ranked second, GAS STAG CCS ranked third, OIL GT ranked fourth, and fifth was CHP COAL As for the In last order, it is WIND ON. These results were logical because they are technologies for producing energy based on renewable sources such as grass and waste, and they are sustainable technologies, although they are rarely used at present, they seem to be among the technologies that we can resort to in the future, as in this study according to the expected variables in 2030.

The results of the VIKOR method also showed that CHP COAL was the best performer with a score of 0.00510309, CHP COAL BP ranked second with a score of 0.00771721. CHP COAL CCS ranked third with a score of 0.0397669, OIL GT ranked fourth, and COA CL ranked fifth. As for the last place, it was WIND ON with a score of 0.58136917. As for the results of the analysis of the TOPSIS method, the ranks were as shown in the table, and in the first rank was PV ROOF with a score of 0.062871, and in the second rank was PV OPEN with a score of 0.053996, and in the third rank was SOL TH with a score of 0.036972 and in the fourth rank was OIL GT with a score of 0.03603. The raw score was 0.032886, while the last place was for LIG IGCC CCS with a score of 0.017305.

CONCLUSIONS

Increasing emphasis is being paid in government policies and the scientific literature to the examination and assessment of green energy technologies. Because Research into assessing electric energy producing systems is essential since residential usage accounts for about a third of overall energy use. Due to the inherent inconsistency between economic, social, environmental, and technical assessment goals, the value of this study is in determining the best power generation technologies expected in European countries in the next period of time.



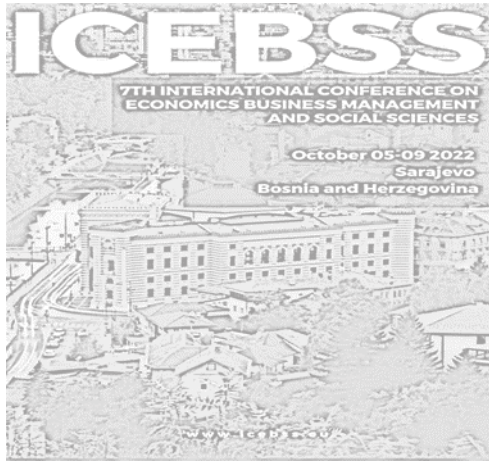
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One of the most effective ways to contrast technology is via a multi-criteria decision-making (MCDM) evaluation. According to the variables shown in the spreadsheet on which the study was conducted using MCDM (Multi-Moora, Vikor, and Topsis). There is a great trend toward the use of renewable, environmentally friendly, and more green energy production technologies and the search for the best sources in the production of electricity in the future, and this is what we are looking for in this study.

For the results of (The multi-MOORA) analysis, CHP biomass using (straw and wood) was the best technique according to the available data analysis. It is also a renewable alternative to fossil fuels. As for the results of (VIKOR), the first three places were associated with the condensation of turbine coal, and since coal is a non-renewable element, the result of VIKOR can be considered an irrational result because we are looking for sustainability and the best sources of environmentally, economically and socially. As for the analysis of the Topsis, the results were more logical than the other methods, because the best technologies were resulting from solar energy (Solar PV Roof, Solar PV Open space, Solar thermal), which is one of the sources of renewable, environmentally friendly and sustainable energy.

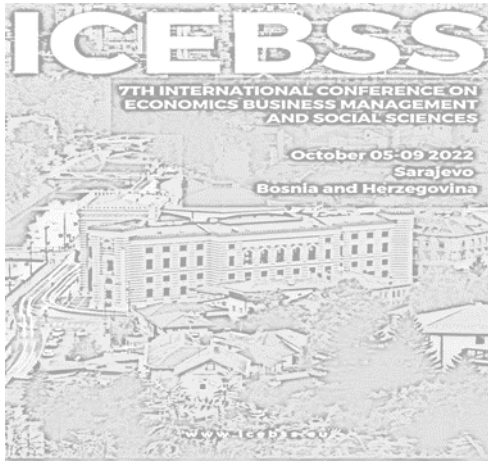
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THE OPTIMAL SUSTAINABLE INSULATION MATERIAL BY USING MCDM ANALYSIS

Hadeel Ismail Ali Dweib (Palestine)¹

Prof. Dr. Mahmut Zortuk²

Abstract

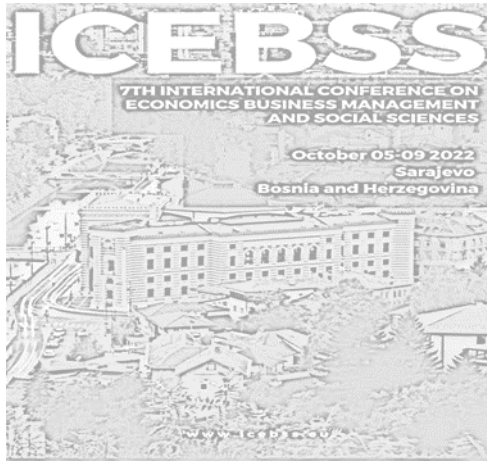
Rising cost of fuel is the new norm, and an increase in energy consumption leads to many trouble, such as a growth in harmful environmental emissions and a growth in energy consumption bills. Hence, its desirable and recommended to estimate the value of energy consumed for buildings in the first design state in order to reduce the impact of these issues, and obtain a sustainable building using thermal insulation for its walls. The purpose of this experimental analysis is to determine the best insulating material among 12 selected materials, as the properties of these materials were analyzed based on several criteria.

The study focuses on using multiple analysis methods in order to achieve the best results, and to eliminate potential inconsistencies of data with available scientific methods. The evaluation is conducted via implementing three multiple criteria decision-making methods (MCDM) the full Multi-Objective Optimization on the basis of Ratio Analysis (MOORA) multiplication, rating the choices and selection the solution nearest to ideal, Vlekraterijumsko KOMPromisno Rangiranje (VIKOR) and the method of ordering options by analogy with the optimal method (TOPSIS). In addition to the significance of the criteria, determine the weights of the criterion in the analysis by using the correlation between criteria (CRITIC). Results based on pre-established methods showed consistent results, with the highest and worst performing materials identified in buildings. Extruded polystyrene foam (XPS) is ranked the best among other materials.

Keywords: Insulation materials, sustainable, Energy Efficiency, MCDM Analysis, Multi-MOORA, CRITIC, VIKOR, TOPSIS

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**THE IMPACT OF FOREIGN DIRECT INVESTMENT AND TRADE ON
ECONOMIC GROWTH IN GULF COOPERATION COUNCIL COUNTRIES**

Nesrin Othman (Qatar)¹

Mahmut Zortuk²

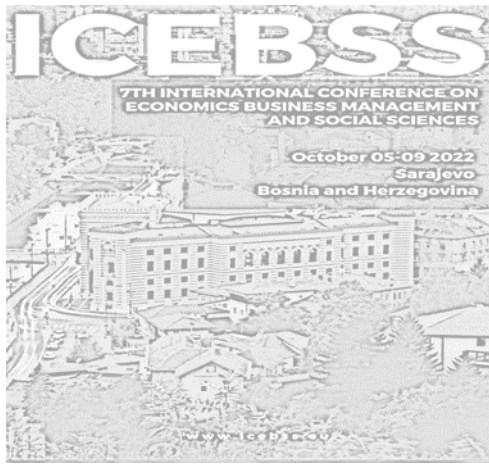
Abstract

Recently, the economic growth has experienced several changes, beginning with trade agreements and partnerships that provide both possibilities and problems, as well as access to the installation of protective policies for international commerce. Governments are interested in the topic of imposing restrictions trade restrictions, and the themes of trade openness are discussed because otherwise investments won't give that all of these facts led to the conception of the idea for this study. The studies diagnose the reality of foreign trade, sheds light on the foreign investment in the GCC and the role assigned to it in realizing the vision of the future, as well as seeking to know the influence of foreign trade and FDI in the economic GCC. This research examines the possessions of FDI and trade between 1998 and 2020 on the GCC of Bahrain, Kuwait, Qatar, Oman, S.A., and U.A.E. by the using of the PMG/ARDL. The outcome demonstrates that, in the long term, FDI is beneficial and important but that only at a 1% level, trade is bad and significant. However, according to short-terme estimates, FDI has a big and negative result on economic growth while trade has no impact on GDP. And the study's test of causation demonstrates that there is no causality among FDI, trade and economic growth.

Keywords: Foreign direct investment, Trade, Economic growth, Cointegration test, PMG/ARDL, Causality test, Gulf Cooperation Countries.

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**THE IMPACT OF TURKEY'S TOTAL ENERGY CONSUMPTION ON ECONOMIC
GROWTH**

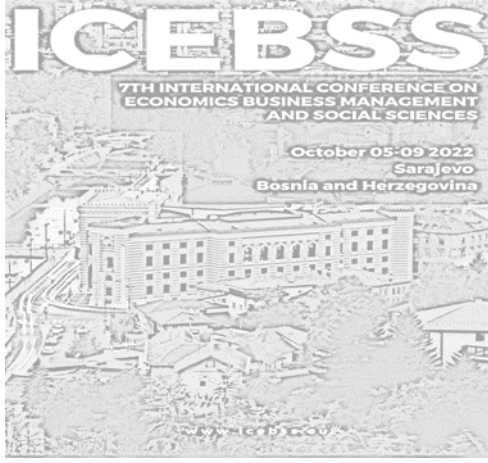
Gunduz Musayev (Azerbaijan)¹

Abstract

In this thesis study, taking into account the accessibility of Turkey's data, the relationship between total energy consumption and economic growth has been investigated for the period 1971-2019. Unlike other studies in the literature, this study employs traditional unit root tests for the stationarity of variables, such as ADF, PP, and KPSS tests, as well as new generation unit root tests that consider structural breaks and are frequently used recently, such as Fourier KPSS, Fourier ADF, Flexible Fourier ADF, and Fractional Flexible Fourier ADF. In terms of the long-term equilibrium relationship among the variables, both traditional methods, such as Johansen and ARDL cointegration tests, and a new method, namely Fourier ADL cointegration test, have been utilized. Additionally, the Toda-Yamamoto causality test and Fourier Toda-Yamamoto causality test, which take structural breaks into account, have been employed to examine the causal relationship between the variables. According to the findings of the study, the stationarity of the variables is initially examined. As a common result of these stationarity tests, the economic growth and energy consumption variables are found to be first differenced stationary. Although long-term equilibrium relationship is found among the variables according to the ARDL and Johansen tests, it is not found according to the Fourier ADL test. The impact of energy consumption on economic growth is interpreted using various long-term forecasting methods. According to the ARDL long-term forecasting result, a 1% increase in energy consumption leads to an average increase of 1.64% in economic growth. Furthermore, according to the Toda-Yamamoto and Fourier Toda-Yamamoto causality tests, there is no significant causal relationship between the variables.

Keywords: Economic growth, Fourier ADF, Fourier ADL cointegration test, Fourier Toda Yamamoto, Energy consumption.

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**TÜRKİYEDE ÇEVRESEL KUZNETS EĞRİSİ HİPOTEZİ: ARDL MODELİ İLE
TAHMİN VE GRANGER NEDENSELLİK ANALİZİ**

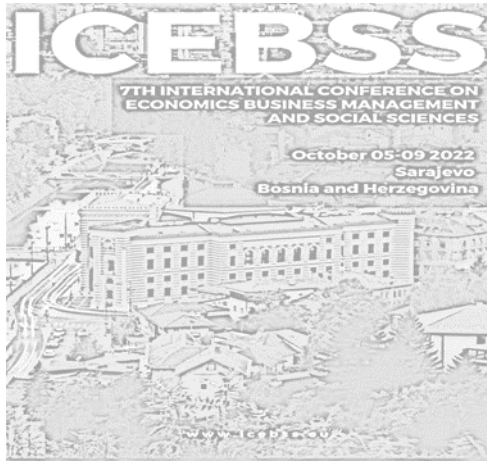
Ali Guliyev (AZARBAIJAN)¹

Abstract

This study is aimed to test the validity of the Environmental Kuznets curve hypothesis for Türkiye. The environmental Kuznets curve hypothesis argues that environmental pollution increases with economic growth but decreases after a certain point. The unit root test results were used to determine whether the examined variables have stationarity or unit root properties. As a result of this test used, it was concluded that the GDP, Energy Consumption and Carbon emissions were not primarily stationary, and they were brought to a stationary state by taking their first-order differences. ARDL cointegration test results were used to determine the long-term relationship between the variables and a statistically significant long-term relationship was found. On this axis, Diagnostic test results were used to evaluate the suitability and validity of the ARDL model. Lastly, in this study, long-term forecasts and long-term interactions of variables are considered. Short-term forecasts made on this axis, short-term interactions between variables and dynamic results are analyzed. Granger causality results were used to evaluate the causality relationship between the variables and it was concluded that the relationships between environmental factors and economic growth were examined and carbon emissions were related to economic growth and energy consumption.

Keywords: ARDL method, Environmental Kuznets Curve, Granger Causality Analysis

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**THE ECONOMIC EFFECT OF REFUGEES ON HOST COUNTRIES: TURKIYE
CASE**

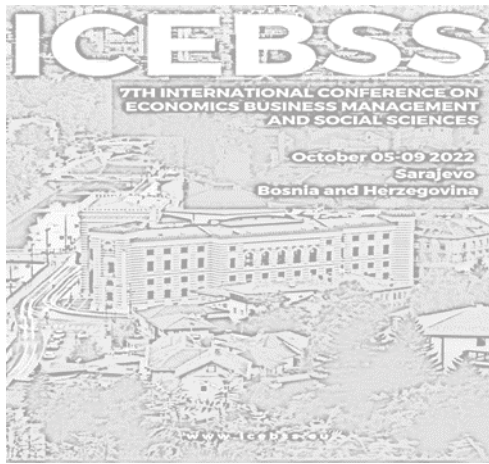
Necim Ahmed El Şeyh (Syria)¹
Mahmut Zortuk

Abstract

This study examines the economic impact of refugees on host countries by focusing on the example of Turkey. The Syrian crisis has led to a significant influx of refugees into Turkey, creating various challenges and opportunities for the host country's economy. Sectoral analysis data for the years 2008/2020 were analyzed to examine the impact of refugees on certain sectors. In this analysis, Refugee Budget evaluated the effects of unemployment on employment, unemployment, Inflation, Immigration Investments, income generation, consumption and other sector-related variables in terms of their economic effects. The findings reveal that refugees have both positive consequences for the economy of the host country Turkey. On the positive side, refugees have an impact on economic growth by establishing businesses, investing capital, and creating employment opportunities. As a result, the research suggests that effective policies and interventions are important for Turkey as the host country of refugees to maximize the positive impact on its economy. These include measures such as the provision of vocational education and training programs, promoting entrepreneurship and innovation, improving labor market integration, and addressing informal sector problems. Cooperation and coordination between relevant governmental institutions, international organizations, and civil society is important to provide comprehensive support to refugees and to assess their economic development potential.

Keywords: Economic impact, Refugees, Turkey, Syrian Crisis, Challenges, Economic indicators

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**THE ROLE OF DIGITAL ENTREPRENEURSHIP IN FOSTERING ECONOMIC
GROWTH IN THE WESTERN BALKANS**

Abil Baush (North Macedonia)¹

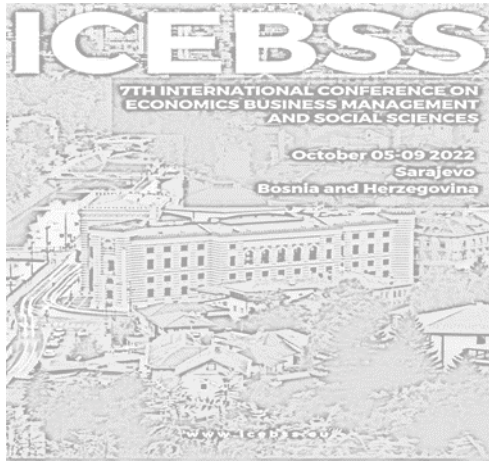
Abstract

This research study explores the crucial role of digital entrepreneurship in fostering economic growth in the Western Balkans. The region has encountered significant economic challenges, and there is a growing recognition that digital innovation and entrepreneurship can contribute to its economic development. A comprehensive analysis is needed to understand the specific impact and opportunities that digital entrepreneurship can bring to the region. The study takes a multidimensional approach to examine various aspects of digital entrepreneurship and its implications for economic growth. It investigates the influence of digital innovation on job creation and employment opportunities in the Western Balkans, focusing on how digital startups can generate new jobs and drive employment.

The research explores the role of digital entrepreneurship in attracting foreign direct investment (FDI) and promoting regional economic integration. It analyzes how digital startups can attract investments and foster collaboration with international partners, leading to increased FDI inflows and expanded business networks within the Western Balkans. The study assesses the enabling factors and barriers for digital startups in the region, including access to capital, infrastructure, and skilled labor. It also examines the regulatory and policy environment that impacts the growth and sustainability of digital entrepreneurial ventures. The research analyzes the potential of digital platforms and e-commerce to enhance trade and cross-border business activities within the Western Balkans. It investigates how digital entrepreneurship can facilitate market access, foster innovation, and enable small and medium-sized enterprises (SMEs) to participate in global value chains. Based on a comprehensive analysis of these dimensions, the study provides insights into the opportunities and challenges faced by digital entrepreneurs in the Western Balkans. It offers recommendations for policymakers, investors, and stakeholders to create an ecosystem that supports digital innovation and entrepreneurship. These recommendations include the development of supportive regulatory frameworks, access to funding mechanisms, and capacity-building initiatives.

Keywords: Entrepreneurship, Digitalization, GDP, Western Balkan

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E-COMMERCE ADVANTAGES AND DISADVANTAGES IN AFRICA

Prince Ngaikosset (South Africa)¹

Kady Mane (South Africa)²

Alpha Djalo (South Africa)³

Abstract

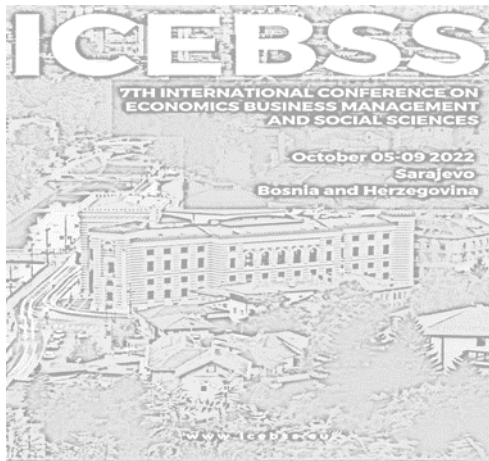
Trade in Africa could be transformed by the information and communication technologies that have driven the development of e-commerce. These technologies have the capacity to boost intra- and inter-country trade and thus the economic development of African countries. Many markets have become increasingly international, and competitive e-commerce can support local economies. In addition, almost any business can buy, sell and communicate on a global scale thanks to improvements in the Internet, advances in information technology and advances in logistics and delivery. Necessity of maximising benefits of universal connectedness while protecting network resources the demand for global connectivity is growing. The paper concludes that e-commerce has not expanded in the continent to the extent experienced in Western countries, due to the lack of information communication technology, cybercrime, information security. These concerns have been exacerbated by recent experience with email-based viruses and its infrastructure in the continent. To ensure that e-commerce is as secure as traditional forms of transaction, a number of measures are already being taken to traditional business and there are numerous advantages of e-commerce in business management that lead to successful management in other African countries and technology is developing tremendously there so it's possible to witness the greatness of technological innovation in particular in the near future in African soil.

Keywords: Africa, E-commerce, Technology and Communication Technologies, Economics, Management

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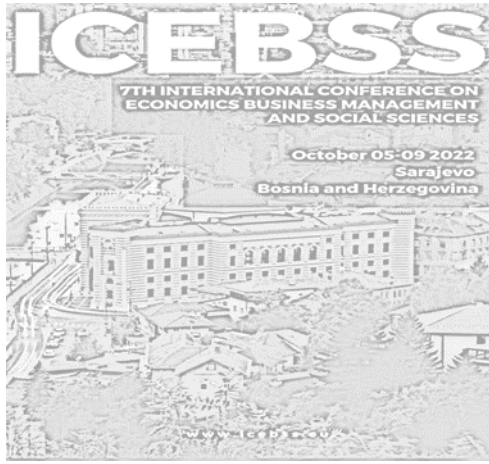
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PROGRAM OVERVIEW	
25.October.23	
	Airport transfers
	City Tour Program
26.October.22	
08:00-09:30	Registration
09:30-10:20	Opening Speeches & Speeches by Invited Speakers
10:20-10:40	Coffee Break
10:40-12:20	Session 1
12:30-13:30	Lunch Break
13:30-15:10	Session 2
15:10-15:30	Coffee Break
15:30-17:10	Session 3
17:10-17:30	Coffee Break
17:30-19:10	Session 4
19:30-20:30	Dinner
27.October.22	
09:00-10:40	Session 5
10:40-11:00	Coffee Break
11:00-12:30	Session 6
12:30-13:30	Lunch Break
13:30-15:10	Session 7
15:10-15:30	Coffee Break
15:30-17:10	Session 8
17:10-17:30	Coffee Break
17:30-19:00	Session 9
20:00-22:00	Gala Dinner
28.October.22	
Social/Cultural Tour Program	
29.October.22	
	Airport Transfers



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