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THE ROLE OF ECONOMIC AND FINANCIAL INTEGRATION IN SUSTAINABLE DEVELOPMENT



November 27–28, 2026

Skopje, Republic of North Macedonia

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International Symposium · 2026

The Role of Economic and Financial Integration in Sustainable Development

Programme Booklet

Turkish Academy of Sciences Publications, 2026

General Coordinators

Prof. Dr. Muzaffer Şeker - President of TÜBA
Prof. Dr. Mehmet Bulut - Rector of International Balkan University & Chair, TÜBA Sustainable Development and Finance Working Group
Prof. Dr. Cem Korkut – Advisor to the President of TÜBA
Assoc. Prof. Dr. Mehmet Tuğrul – Advisor to the President of TÜBA
Assoc. Prof. Dr. Musab Talha Akpınar - Advisor to the President of TÜBA
Dr. Funda Karaman – TÜBA Expert
Dr. Esra Zengin Gengörü - TÜBA Expert

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Date & Venue

27–28 November 2026 · International Balkan University, Skopje, North Macedonia

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INTERNATIONAL SYMPOSIUM · 2026

The Role of Economic and Financial Integration in Sustainable Development

Programme Booklet

Organised by the Turkish Academy of Sciences (TÜBA)
and International Balkan University (IBU),
in cooperation with the Macedonian Academy of Sciences and Arts (MANU)

SKOPJE · 27–28 NOVEMBER 2026

FOREWORD

Development is more than economic growth. It concerns health, education, the environment, institutions and culture as much as income, and a gain in one that is paid for by a loss in another rarely lasts. The United Nations' 2030 Agenda makes a similar point when it calls its goals "integrated and indivisible" and says that they balance the economic, social and environmental dimensions of sustainable development.

Such a broad view of development raises questions that no single discipline can answer. How to manage a green transition, and how to pay for it, is a question for economists. It is equally one for engineers, who know what the technology can do; for physicians, who see what pollution costs in human health; and for historians, who know what has been tried before. Bringing such fields to the same table is what an academy is for. The Turkish Academy of Sciences (TÜBA) covers all fields of science, and we consider it our duty to apply that range of knowledge to questions of this kind.

Our Sustainable Development and Finance Working Group is one of the ways in which we do so. Its members come from economics, business, international trade, public administration and management information systems, and since 2021 it has held a series of meetings on sustainability. The International Symposium on "The Role of Economic and Financial Integration in Sustainable Development" is the fifth in that series and the first to be held outside Türkiye.

The subject shows why the wider view is needed. No country can achieve sustainable development, or pay for it, entirely on its own. Trade, investment and financial ties with other economies bring the capital and the markets that development needs, but where institutions are weak the same ties can increase dependence and risk. Whether such ties help or harm depends on law, governance, technology and trust as much as on prices. The programme reflects this. Alongside papers on trade, capital markets and carbon pricing, it includes work on the governance of river basins, on recyclable packaging, on the ethics of biometric payments and on the economic history of the Balkans.

Skopje is a fitting place for this first meeting abroad. The symposium is organised by TÜBA and International Balkan University, our host, in cooperation with the Macedonian Academy of Sciences and Arts, our partner under a bilateral

agreement since 2007. Türkiye and the Western Balkans share a long history and face many of the same policy questions today, and both stand to gain from studying those questions together.

I thank the Macedonian Academy of Sciences and Arts and its President, Academician Živko Popov; International Balkan University and its Rector, Prof. Dr. Mehmet Bulut, who also chairs our Working Group; the members of the Working Group; and all the speakers, moderators and colleagues who helped to organise the symposium.

I hope that the symposium will lead to closer and more regular cooperation between the academies and universities of Türkiye and North Macedonia, and that the acquaintances made in Skopje will grow into joint projects. I wish every participant a productive symposium.

Prof. Dr. Muzaffer ŞEKER
President of TÜBA

PREFACE

The last six years have shown how fragile the world economy is. A pandemic, wars, a surge in energy and food prices and a sharp rise in global interest rates followed one another, and each time the economies with the least room to respond were among the hardest hit.

That is more than bad luck. The United Nations Secretary-General has called the global financial architecture "outdated, dysfunctional and unjust", and the figures show why. According to UN Trade and Development (UNCTAD), developing countries pay an average interest rate of 5.2 per cent on their public debt, against 2.2 per cent in developed countries. Some 3.7 billion people live in countries that spend more on interest than on either education or health. The countries that most need capital pay the most for it.

Turning away from the world economy is not the answer. The International Monetary Fund puts the long-run cost of severe trade fragmentation at up to 7 per cent of world output and finds that low-income countries would lose the most. The better answer, in my view, is integration on fairer terms: closer ties among neighbours and partners, built on trade, investment and shared risk more than on debt. A larger common market attracts investment that a small one cannot, and common rules and payment systems cut costs. After Albania, Montenegro and North Macedonia began making payments through the Single Euro Payments Area in October 2025, the average cost of their cross-border business payments fell tenfold within months, according to the World Bank.

This region also has a long history of finance rooted in the local economy. For centuries the cash waqfs of the Ottoman Balkans lent endowment capital to traders, farmers and artisans and spent the returns on schools and other charitable purposes. Several papers in this programme take up that tradition, its present-day counterparts in Islamic finance, and integration among the countries of the Organisation of Islamic Cooperation.

The terms of integration matter because integration alone guarantees neither development nor sustainability. This symposium asks under what conditions it can deliver both. Türkiye and the Western Balkans offer a good setting for that question. The European Union is their largest trading partner, and its Carbon Border Adjustment Mechanism now covers their exports of steel, aluminium and certain other carbon-intensive goods. They must also fund a green transition while foreign capital is scarce and costly.

The TÜBA Sustainable Development and Finance Working Group has examined sustainability since 2021. Its four earlier meetings dealt with the circular economy, with commercial organisations and philanthropic institutions, with the sustainable economy and finance, and with family businesses. The Skopje symposium moves the discussion from firms and institutions to economies and the relations between them, in thirty-four papers by researchers from Türkiye, North Macedonia, Kazakhstan, Pakistan, India, Iran and Canada.

I am grateful to the President of TÜBA, Prof. Dr. Muzaffer Şeker, for his continued support for the Working Group, and to the Macedonian Academy of Sciences and Arts for its cooperation. My thanks also go to my colleagues at International Balkan University, who handled the local arrangements; to the members of the Working Group and the symposium secretariat at TÜBA; and to all the moderators and speakers.

Prof. Dr. Mehmet BULUT
Chair, TÜBA Sustainable Development and Finance Working Group

Symposium Program

All times are given in North Macedonia local time (CET, UTC+1). Türkiye time is 2 hours ahead.

27 November 2026 – Friday

Venue: International Balkan University, Skopje · Opening: Conference Hall · Sessions: Hall B-303 (Blue Amphi).
Each presentation: 15 minutes, followed by 5 minutes of questions and answers.

09:00 – 09:30 **Registration**

09:30 – 09:50 **Opening Speeches**
Prof. Dr. Mehmet Bulut, *Rector, International Balkan University*
Prof. Dr. Muzaffer Şeker, *President, Turkish Academy of Sciences (TÜBA)*
Prof. Dr. Zivko Popov, *President, Macedonian Academy of Sciences and Arts (MANU)*

09:50 – 11:30 **Session I**
Moderator: Prof. Dr. Cem Korkut, *Ankara Yıldırım Beyazıt University*

Economic and Financial Integration of the OIC World: Opportunities, Challenges and Future Prospects
Prof. Dr. Mehmet Bulut, *Rector, International Balkan University – North Macedonia*

Towards Economic Cooperation, Trade Connectivity, Financial and Digital Transformation in the OIC World: An Institutional Approach
Dr. Tarık Akın, *Presidency of the Republic of Türkiye Investment and Finance Office – Türkiye*

Mobilizing Cross-Border Green Capital in the Western Balkans: The Role of Green Bond Standards and Securitization Frameworks in the Region
Prof. Dr. Vladimir Filipovski, *Ss. Cyril and Methodius University in Skopje – North Macedonia*

Mapping Municipal Budgets to the SDGs and the National Development Strategy in North Macedonia, with Lessons for Türkiye
Prof. Dr. Borce Trenovski, *Ss. Cyril and Methodius University in Skopje – North Macedonia*

Beyond Sustainable Finance: An Islamic Financial Integration Model for OIC Countries – A Trilateral Framework Based on Malaysia, Saudi Arabia and Türkiye
Assoc. Prof. Dr. Erhan Akkaş, *Social Sciences University of Ankara – Türkiye*

11:30 – 13:30 Lunch

13:30 – 15:10 **Session II**

Moderator: Assoc. Prof. Dr. Erhan Akkaş, *Social Sciences University of Ankara*

Trade Integration and Export Diversification in the Western Balkans: Institutional Constraints in North Macedonia
Dr. Marica Antovska-Mitev, *Macedonian Academy of Sciences and Arts – North Macedonia*
Co-authors: Dr. Tatjana Dzambazovska, Prof. Dr. Biljana Tashevska

Can Foreign Aid Accelerate the Green Transition? The Moderating Role of Institutional Quality in Environmental Sustainability
Prof. Dr. Burhan Uluyol, *Istanbul Sabahattin Zaim University – Türkiye*

The Western Balkans at the Crossroads of European Energy Security: Türkiye's Strategic Transit Position, Regional Cooperation, and Sustainable Development
Prof. Dr. Mevludin Ibish, *International Balkan University – North Macedonia*

Green Bond Issuance and Carbon Intensity: Evidence on the Moderating Role of Institutional Quality
Prof. Dr. Erdal Tanas Karagöl, *Ankara Yıldırım Beyazıt University – Türkiye*
Co-author: Asst. Prof. Dr. Ayşe Nur Şahinler

Fiscal Policies for Green Growth: Evidence from European Union Countries
Dr. Arbra Sulejmani, *South East European University – North Macedonia*
Co-author: Prof. Dr. Abdylmenaf Bexheti

15:10 – 15:30 Coffee-break

15:30 – 17:10 **Session III**

Moderator: Prof. Dr. Erdal Tanas Karagöl, *Ankara Yıldırım Beyazıt University*

When Does Financial Integration Deliver Sustainable Development? Institutional Quality Thresholds in the Western Balkans, Türkiye and Emerging Europe
Prof. Dr. Cem Korkut, *Ankara Yıldırım Beyazıt University – Türkiye*
Prof. Dr. Mehmet Bulut, *International Balkan University – North Macedonia*

The Spatial Footprint of CBAM: Mapping Regional Exposure and Reporting Capacity in Türkiye and the Western Balkans
Assoc. Prof. Dr. Musab Talha Akpınar, *Ankara Yıldırım Beyazıt University – Türkiye*
Co-author: Dr. Esra Zengin Gengörü

From Trade Integration to Innovation Integration: The Role of Technology Development Zones in Türkiye–Western Balkans Cooperation
Asst. Prof. Dr. Mazlum Özçağdavul, *Ankara Yıldırım Beyazıt University – Türkiye*

An Inclusive Model in Ottoman Financial Integration: The Role of Rumelian Cash Waqfs in Micro-Credit and Regional Development
Assoc. Prof. Dr. Mehmet Tuğrul, *Ankara Yıldırım Beyazıt University – Türkiye*

The Implicit Carbon Burden Under the Carbon Border Adjustment Mechanism: Does Türkiye's ETS Free Allocation Offset Turkish Exporters' CBAM Exposure?
Assoc. Prof. Dr. Fatih Kaplanhan, *Istanbul Sabahattin Zaim University – Türkiye*

18:00 **Dinner**

28 November **Social Program**
A social program for in-person participants will be held on Saturday, 28 November 2026.

28 November 2026 – Saturday

The link for online presentations will be sent to presenters by e-mail one day before their session. All online presentations will also be streamed live on the YouTube channel of the Turkish Academy of Sciences (TÜBA) (https://www.youtube.com/turkiyebilimlerakademisi), where the recordings will remain available for later viewing. Each presentation: 15 minutes, followed by 5 minutes of questions and answers.

08:30 – 10:10 **Session IV** · *Hall A · Online*
Moderator: Dr. Esra Zengin Gengörü, *TÜBA*
Online link sent by e-mail one day before the session · Live on TÜBA YouTube

Regenerative Trade Taxonomy: A Dynamic Prescriptive Framework with a Western Balkan Pilot Design
Prof. Dr. Tariqullah Khan, *Ventureethica – Canada*

Exposure to the EU Carbon Border Adjustment Mechanism in the Western Balkans and Türkiye: Can Regional Integration Reduce the Burden?
Amina Irshad, *Aligarh Muslim University – India*

External Finance and Debt Sustainability in the Western Balkans: A Comparative Analysis of BRI Commitments and the EU Growth Plan
Asst. Prof. Dr. Ahmet Lokce, *International Balkan University – North Macedonia*

The Real Exchange Rate and Industrial Production in Türkiye–U.S. Capital Goods Trade: An ARDL and NARDL Analysis of Exports and Imports
Prof. Dr. Hüseyin Karamelikli, *Karabük University – Türkiye*
Co-author: Asst. Prof. Dr. Hüseyin Utku Demir

Evaluation of Sustainable Finance, Green Transition and Recyclable Printing Criteria in Flexible Plastic Packaging
Prof. Dr. Erdoğan Köse, *Istanbul University-Cerrahpaşa – Türkiye*
Co-authors: Asst. Prof. Dr. Orhan Sevindik, Hatice Gizem Kolak

08:30 – 10:10 **Session V** · *Hall B · Online*

Moderator: Dr. Funda Karaman, *TÜBA*
Online link sent by e-mail one day before the session · Live on TÜBA YouTube

Paying with the Body: Setting Ethical Boundaries for Biometric Payments, Financial Inclusion and Sustainable Development
Assoc. Prof. Dr. Ozat Shamshiyev, *Maqsut Narikbayev University – Kazakhstan*

Institutions, Integration and the Innovation–Growth Paradox: Regional Evidence from Kazakhstan with Lessons for Türkiye and the Western Balkans
Botagoz Shakerbayeva, *Turan University – Kazakhstan*
Co-author: Assoc. Prof. Dr. Gulzhanat Tayauova

Regional Economic Integration and Export Diversification: Iran's Non-Oil Exports to Neighbouring Countries and the Requirements for Sustainable Development
Mohammad Hossein Ardalani, *Imam Sadiq University – Iran*

Green Transition, Foreign Direct Investment and the Business Cycle: Panel Evidence from Balkan Economies
Prof. Dr. İbrahim Demir, *Istanbul Ticaret University – Türkiye*
Co-author: Prof. Dr. Elçin Aykaç Alp

Sustainable Basin Governance in Transboundary Rivers: Hydro-Ecological and Financial-Diplomatic Analysis of the Tunca and Meriç Rivers, Edirne, Türkiye
Prof. Dr. Cem Tokatlı, *Trakya University – Türkiye*
Co-authors: Dr. Özdemir Akbal, Asst. Prof. Dr. Esra Gürbüz

10:20 – 11:40 **Session VI** · *Hall A · Online*

Moderator: Dr. Esra Zengin Gengörü, *TÜBA*
Online link sent by e-mail one day before the session · Live on TÜBA YouTube

Are Participation and Sustainability Indices Safer? Tail Risk, Volatility and Sector Composition in Borsa Istanbul
Prof. Dr. Elçin Aykaç Alp, *Istanbul Ticaret University – Türkiye*
Co-author: Dr. Ahmet Cihat Erdoğan

Türkiye's Post-World War II Global Economic and Financial Integration Process and Its Impact on Sustainable Development
Prof. Dr. Zafer Kanberoğlu, *Van Yüzüncü Yıl University – Türkiye*
Co-author: Ambassador Emre Zeki Karagöl

Economic and Financial Cooperation Between the Republic of Türkiye and Countries of Central Asia: Islamic Finance and Sustainable Economic Development
Hojamurod Hojaev, *Istanbul Sabahattin Zaim University – Türkiye*
Prof. Dr. Mehmet Bulut, *International Balkan University – North Macedonia*

Legitimacy, Institutional Trust and Cryptocurrency Investment Intention among Young Adults in Türkiye: A System Justification Perspective
Dr. Fikret Yetkin, *Bursa Uludağ University – Türkiye*
Co-authors: Asst. Prof. Dr. Merve Çavuşoğlu, Prof. Dr. Muharrem Ersin Kuşdil

10:20 – 12:00 **Session VII** · *Hall B · Online*

Moderator: Dr. Funda Karaman, *TÜBA*
Online link sent by e-mail one day before the session · Live on TÜBA YouTube

Income Trajectories before and after the Disintegration of Yugoslavia: Synthetic Control Evidence from the Six Former Republics
Prof. Dr. Aleksandar Stojkov, Prof. Dr. Thierry Warin, Hadi Zarea, *Ss. Cyril and Methodius University in Skopje – North Macedonia*

Competition and Complementarity Potential in Türkiye's Economic Cooperation with the Western Balkans: A Cross-Country Comparative Analysis
Assoc. Prof. Dr. Umut Aydın, Asst. Prof. Dr. Mefule Fındıkçı Erdoğan, Prof. Dr. Nazım Ekren, *Istanbul Ticaret University – Türkiye*

Regional Economic and Financial Integration: A Pathway to Sustainable Development amid a Changing Global Financial Order
Suhail Afzal Qureshi, *Istanbul Sabahattin Zaim University – Türkiye*
Prof. Dr. Mehmet Bulut, *International Balkan University – North Macedonia*

Digital Financial Inclusion and the Age-Related Digital Divide: Integrating Older Adults into the Digital Economy in the Western Balkans and Türkiye
Dr. Nisa Şansel Tandoğan, *Türkiye*

Determinants of Sustainable Entrepreneurship in Emerging Economies: Bridging Intention and Action in the Case of Pakistan and Türkiye
Asst. Prof. Dr. Muhammad Hassan Abbas, *Minhaj University Lahore – Pakistan*

ABSTRACTS
&
BIOGRAPHIES

In order of presentation. Each abstract is followed by the biography of the speaker.

Economic and Financial Integration of the OIC World: Opportunities, Challenges and Future Prospects

Prof. Dr. Mehmet Bulut

Rector, International Balkan University – North Macedonia

Abstract

The 57 member states of the Organization of Islamic Cooperation (OIC) are home to nearly a quarter of the world's population. Together they hold a large share of global energy resources, a young labor force and strategic trade routes. Their combined weight in global output, trade and finance is still well below this potential, and economic ties among them remain weak. Intra-OIC trade has grown but has not reached the 25 percent target set in the OIC's programs of action. Cross-border investment is concentrated in a handful of economies.

Integration faces structural obstacles: wide gaps in income and development, commodity-dependent exports, poor transport and logistics links, non-tariff barriers, shallow capital markets and recurring geopolitical tensions. The Trade Preferential System among OIC member states (TPS-OIC), the Islamic Development Bank Group and COMCEC have built political commitment. Ratification and implementation, however, have been slow.

The opportunities are equally significant. Islamic finance and sukuk markets offer new ways to fund infrastructure and green investment. The global halal economy, digital payment systems and settlement in local currencies can lower transaction costs and reduce reliance on third-country currencies. Members with surplus capital and members with abundant labor complement each other. Regional value chains can turn this complementarity into growth and jobs that support the Sustainable Development Goals.

The future of OIC integration depends on practical steps taken in order, not on new declarations. These steps are bringing the TPS-OIC fully into force, harmonizing standards and customs procedures, linking payment and financial-market infrastructure, and building sub-regional hubs. With historical and economic ties to both the Islamic world and Europe, the Balkans are well placed to serve as such a bridge.

Keywords

OIC; Economic Integration, Financial Integration, Intra-OIC Trade, TPS-OIC, Islamic Finance, Sukuk, Sustainable Development

BIOGRAPHY

Prof. Dr. Mehmet Bulut

Rector, International Balkan University – North Macedonia
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Prof. Dr. Mehmet Bulut is the Rector of International Balkan University (IBU) in Skopje, North Macedonia, and a Faculty Member of Economics at Istanbul Sabahattin Zaim University. He received his PhD from Utrecht University in 2000. He became assistant professor in 2001, associate professor in 2003 and professor in 2008. He served as the Head of the Department of Economics at Başkent University, the Founding Dean of the Faculty of Political Sciences and Vice Rector at Ankara Yıldırım Beyazıt University, the Rector of Istanbul Sabahattin Zaim University, and a Member of the Council of Higher Education (YÖK). He also served as a member of the Board of Directors at companies such as Erdemir, İsdemir, Sollac, Erenco, TT Net, Gübretaş and Servet GYO.

Dr. Bulut has studies on long-term (longue durée) economic development, the causes of economic differences between countries, performance comparisons, international political economy, Ottoman economy and civilization, Ottoman–European–Atlantic economic relations, economic history, economic thought, the history of finance, institutions, and Islamic economics and finance. He was elected as a member of TÜBA in 2012 and appointed as a member of the TÜBİTAK Board of Directors in 2022. Dr. Bulut has conducted research and academic studies at Dalarna (Sweden), Cambridge (United Kingdom), and Harvard and Princeton (United States) universities.

Towards Economic Cooperation, Trade Connectivity, Financial and Digital Transformation in the OIC World: An Institutional Approach

Dr. Tarık Akın

Presidency of the Republic of Türkiye Investment and Finance Office – Türkiye

Abstract

The presentation focuses on the financial and institutional aspect of the "Operationalizing an Integrated Digital Islamic Trade Facilitation Framework (IDITFF) to Supercharge Intra-OIC Trade & Investment" Project which has been carried out under the coordination of the Investment and Finance Office of the Presidency of the Republic of Türkiye.

Intra-OIC trade continues to face structural constraints that elevate transaction costs and limit the participation of small and medium sized enterprises (SMEs) in cross border markets. The persistence of the integration gap among the OIC Member countries reflects friction in three interrelated areas. First, high transaction and compliance costs continue to burden cross border payments and documentary processing. Second, elevated counterparty and settlement risk raises risk premiums embedded in trade finance instruments. Third, access to affordable trade finance remains limited and unevenly distributed, disproportionately affecting SMEs.

The IDITFF project aims to design and pilot an integrated, Sharia-compliant digital trade facilitation framework that operationalizes coordination among central banks, digital Islamic banks, and Takaful operators to reduce trade frictions and expand inclusive access to trade finance across OIC member states.

The implementation of the IDITFF framework combines four key institutional actors:

- Central Banks of participating OIC countries — to oversee regulatory compliance and provide liquidity;
- Digital Islamic Banks — to act as intermediaries offering trade finance, real-time payments, and digital platforms;
- Takaful Providers — to guarantee payments and mitigate risks in Sharia-compliant ways;
- Traders and Companies in selected countries — as key beneficiaries of the model.

Given this, the presentation identifies and delineates the roles of these institutional actors.

Keywords

Intra-OIC trade, Islamic Trade Finance, Digital Trade Facilitation, Sharia-Compliant Finance, Takaful, Smes, İnstitutional Coordination

BIOGRAPHY

Dr. Tarık Akın

Presidency of the Republic of Türkiye Investment and Finance Office – Türkiye

Tarık Akın (PhD) currently serves as the Head of Finance Department at the Investment and Finance Office of the Presidency of the Republic of Türkiye. The Department has four main units, namely, participation finance, fintech, financial investments, and financial markets. Dr. Akın was the Head of the Department of Participation Finance at the Finance Office of the Presidency of the Republic of Türkiye between 2021 and 2025.

Dr. Akın also worked at the Undersecretariat of Treasury, the Islamic Financial Services Board (IFSB), the World Bank, UNDP, Silatech-Qatar, and the Center for International Development (CID) at Harvard University. He was SC–OCIS Visiting Fellow in Islamic Finance at the University of Oxford for the academic year 2019–2020. He earned his bachelor's degree from Bilkent University, his master's degree from Harvard University and his PhD degree from INCEIF University. His main areas of expertise include Islamic finance, capital markets, macro-financial linkages, and redistribution policies.

Mobilizing Cross-Border Green Capital in the Western Balkans: The Role of Green Bond Standards and Securitization Frameworks in the Region

Prof. Dr. Vladimir Filipovski

Ss. Cyril and Methodius University in Skopje – North Macedonia

Abstract

The transition of the Western Balkans (WB6) to a low-carbon economy under the Green Agenda for the Western Balkans requires capital inflows that exceed domestic fiscal capacity and the balance-sheet limits of the region's bank-dominated financial sectors. At the same time, the EU's move from the Capital Markets Union to the Savings and Investments Union, the European Green Bond Standard (EuGBS) and reforms to the EU Securitization Regulation are reshaping European sustainable finance. This paper asks how critical domestic legal and regulatory frameworks for standardised green bonds and sustainable securitization are for attracting private international capital into North Macedonia and the wider Western Balkans. Using a mixed-methods approach, it combines a legal and regulatory gap analysis of North Macedonian legislation against the EU Taxonomy, the EuGBS and STS securitization criteria; a descriptive analysis of financial-market data from the NBRNM, the Macedonian Stock Exchange, the ECB, the EBRD and the World Bank; and regional benchmarking. Three findings are expected: the absence of a legal framework for securitization, particularly for special purpose vehicles, is a major bottleneck; voluntary alignment with ICMA Green Bond Principles is no longer sufficient to attract EU institutional investors, so harmonisation with the EuGBS lowers due-diligence costs and greenwashing risk; and small national markets gain little from standalone reforms unless these are paired with cross-border recognition and regional issuance pooling. The paper recommends enabling securitization legislation, phased alignment with the EuGBS and the EU Taxonomy, blending EU Growth Plan and WBIF guarantees with green bond tranches, and deeper regional market interoperability.

Keywords

Green Finance, European Green Bond Standard, Securitization, Savings and Investment Union, Republic of North Macedonia, Western Balkans

BIOGRAPHY

Prof. Dr. Vladimir Filipovski

Ss. Cyril and Methodius University in Skopje – North Macedonia

Vladimir Filipovski, PhD, is a Full Professor of Economics and Finance at the Faculty of Economics – Skopje, Ss. Cyril and Methodius University in Skopje, North Macedonia, where he also received his PhD in Economics. He is a Member of the Centre for Strategic Research of the Macedonian Academy of Sciences and Arts (MANU).

He teaches Principles of Economics, Economic Growth and Development, and Securities Analysis and Portfolio Management. His research interests include macroeconomics, monetary economics, public finance, economic growth, international finance, and financial markets and institutions. He has served as a member of the Managing Board of the Macedonian Stock Exchange and as a Commissioner of the Macedonian Securities and Exchange Commission.

Mapping Municipal Budgets to the SDGs and the National Development Strategy in North Macedonia, with Lessons for Türkiye

Prof. Dr. Borce Trenovski

Ss. Cyril and Methodius University in Skopje – North Macedonia

Abstract

Long-term development strategies matter only when their priorities reach annual budgets and the money is actually spent, and municipalities are where this link is tested. This paper asks how municipal expenditure in North Macedonia can be mapped and monitored against the National Development Strategy (NDS) 2024–2044 and the Sustainable Development Goals (SDGs) in a transparent and reproducible way, how much local spending is oriented to sustainability, where implementation gaps concentrate, and what North Macedonia and Türkiye can learn from each other. The data cover planned and executed 2025 expenditure of all 81 local self-government units in 68 programme categories (a plan of MKD 64.3 billion and execution of MKD 55.1 billion), with each programme tagged to an NDS area, goal and priority and to primary, secondary and tertiary SDGs. The results show that alignment on paper is strong, but the sustainability gap lies in money and implementation. Municipalities executed 85.6% of their plans, but capital programmes only 60.5%. SDG 11 is linked to 54 of 68 programmes yet receives 9.0% of executed spending, and only 5.3–13.0% of local spending serves environmental SDGs. Capital intensity, not size, wealth or region, explains execution. The paper contributes an integrated NDS–SDG mapping and annual municipal reporting process, piloted in eight municipalities. Policy implications include common classification guidance, multi-year capital budgeting, green and climate budget tagging, and targeted support for weaker municipalities; North Macedonia and Türkiye can learn from each other's planning and budget-tagging practices.

Keywords

municipal expenditure, Sustainable Development Goals, SDG budget tagging, National Development Strategy, budget execution, fiscal decentralisation

BIOGRAPHY

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Borce Trenovski is Full Professor at the Faculty of Economics – Skopje, Ss. Cyril and Methodius University in Skopje, and President of the Union of Economists of Macedonia. He is a non-executive member of the Council of the National Bank of the Republic of North Macedonia (2021–2028) and a member of the Council of the Centre for Strategic Research at the Macedonian Academy of Sciences and Arts. His research covers public finance, fiscal decentralisation, municipal finance, public spending efficiency and macroeconomic policy. He has authored four books and more than 160 publications and has taken part in over 140 research and applied projects for UNDP, the World Bank, EBRD, the EU, USAID and SDC. He contributed to the National Development Strategy 2024–2044 and its first annual monitoring report. His awards include UKIM's Best Scientist Award (2020), a World Bank research prize (2017) and the National Bank's macroeconomic research prize (2014).

Beyond Sustainable Finance: An Islamic Financial Integration Model for OIC Countries – A Trilateral Framework Based on Malaysia, Saudi Arabia and Türkiye

Assoc. Prof. Dr. Erhan Akkaş

Social Sciences University of Ankara – Türkiye

Abstract

Islamic finance is increasingly recognised as a framework that can support sustainable development through risk-sharing, asset-backed financing, ethical investment and social finance. Yet the growth of Islamic banking and sukuk markets has not necessarily translated into structural economic transformation, productive investment or distributive justice. This study proposes an Islamic financial integration model for the member countries of the Organisation of Islamic Cooperation (OIC), focusing on Malaysia, Saudi Arabia and Türkiye. It argues that sustainable development is not an external agenda to which Islamic finance should contribute, but an intrinsic outcome of the genuine implementation of Islamic economics, whose foundations (Tawhid, Adl, Amanah, Khilafah and Maqasid al-Shariah) already encompass the objectives of sustainable human development; the SDGs can therefore serve as an external reference framework for measuring these outcomes. Moving beyond studies of individual instruments, the paper focuses on the institutional and regional integration needed to turn these objectives into an interconnected financial system. The three countries represent complementary dimensions of integration: institutional and market architecture (Malaysia), capital mobilisation (Saudi Arabia), and productive investment and connectivity (Türkiye). The proposed model has four dimensions: integration of Islamic capital markets through cross-border sukuk and regulatory coordination; Islamic banking and financial infrastructure, including payment systems and fintech; Islamic social and development finance linking zakat, waqf, qard hasan and microfinance; and directing financial resources to the real economy. The study argues that Islamic finance should be judged by its contribution to justice, equitable distribution, human welfare and stewardship, not merely by asset growth.

Keywords

Islamic Economics, Islamic Financial Integration, OIC Countries, Sustainable Development, Malaysia, Saudi Arabia, Türkiye

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He is the Editor-in-Chief of the Turkish Journal of Islamic Economics and has served in editorial capacities for several academic journals. He edited Islamic Economics and Financial Crisis, published by Routledge, and has translated several influential academic works into Turkish, including Finance and the Good Society and Social Capital and Risk Sharing. He has also contributed to various edited volumes and international academic publications.

His research focuses on international economics, political economy, economic development, the political economy of the Middle East, Islamic economics and finance, and the economies of the Gulf Cooperation Council (GCC) countries. He has published extensively in these areas and participates in international academic conferences and research initiatives.

Trade Integration and Export Diversification in the Western Balkans: Institutional Constraints in North Macedonia

Dr. Marica Antovska-Mitev

Macedonian Academy of Sciences and Arts – North Macedonia
Co-authors: Dr. Tatjana Dzambazovska, Prof. Dr. Biljana Tashevska

Abstract

Regional trade integration can widen firms' access to customers, but a rising share of exports to neighbouring economies may reflect either broader diversification across products and destinations or stronger sales of a few products in one or two markets. This distinction matters for economic resilience and sustainable development. Using North Macedonia as a case study, the paper examines how regulatory predictability and the implementation of formal rules shape firms' ability to plan for new markets, with a comparative analysis of export patterns across the Western Balkans as regional context. It asks how the share of exports to other Western Balkan economies has changed, whether a larger regional share is accompanied by diversification, how North Macedonia's export profiles differ across Western Balkan, EU and Turkish markets, and which domestic institutional constraints affect firms' expansion into new markets. The regional analysis uses UN Comtrade data for 2015–2024, measuring regional export shares and destination and product concentration indices. The national case study draws on a survey of 151 enterprises and two focus groups held in December 2025. Survey respondents reported relatively high growth expectations (4.00 on a five-point scale) but lower assessments of institutional efficiency (2.70) and the rule of law (2.87), while focus-group participants pointed to short notice for legislative changes and delays in reforms. The study aims to identify cases where regional export shares and export concentration move in different directions, and considers whether integration monitoring should track the distribution of exports and how more predictable regulatory timelines could support business planning.

Keywords

regional trade integration, export diversification, export concentration, institutional quality, Western Balkans, North Macedonia

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Can Foreign Aid Accelerate the Green Transition? The Moderating Role of Institutional Quality in Environmental Sustainability

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Abstract

This study examines whether foreign development assistance accelerates the green transition and investigates the moderating role of institutional quality in shaping environmental outcomes. Using an unbalanced panel dataset covering 84 countries over the period 2000–2025, the analysis considers renewable energy consumption and carbon dioxide (CO_2) emissions as complementary indicators of environmental sustainability. The empirical framework employs two-way fixed-effects regressions, institutional interaction models, conditional marginal effects, exploratory panel-threshold tests, and additional robustness specifications. Institutional quality is measured using control of corruption and government effectiveness. The findings reveal no statistically significant relationship between aggregate foreign aid and either renewable energy consumption or CO_2 emissions in the baseline specifications. Furthermore, institutional quality does not consistently strengthen the environmental effectiveness of foreign assistance. Notably, the interaction between foreign aid and government effectiveness is negative and marginally significant in the renewable energy model, contrary to theoretical expectations. Exploratory threshold tests also provide no statistically significant evidence of distinct institutional regimes. Additional lagged, dynamic, and income-group analyses generally reinforce the absence of robust and consistent relationships. These findings challenge the assumption that increasing aggregate development assistance necessarily promotes environmental sustainability or that stronger institutions automatically enhance its effectiveness. The study contributes to the literature on development finance and environmental sustainability by highlighting the importance of distinguishing general development assistance from environmentally targeted financing. The findings suggest that the composition, allocation, and implementation of foreign aid may be more relevant to the green transition than aggregate financial transfers alone.

Keywords

Foreign aid; Green transition; Renewable energy consumption; CO_2 emissions; Institutional quality; Development assistance; Environmental sustainability.

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Prof. Uluyol has established an extensive academic record, having authored 4 books, 20 book chapters, and more than 85 journal articles indexed in Scopus and Web of Science, including publications in SSCI-, AHCI-, and ESCI-indexed journals. He has participated in more than 65 national and international academic conferences as a presenter or invited speaker. As of September 2026, his scholarly publications had attracted more than 374,000 ResearchGate reads and 4,800 Google Scholar citations. He has also supervised 26 postgraduate students, contributing significantly to postgraduate education and research development.

His scholarly contributions to Islamic finance have been ranked among the top three globally in bibliometric analyses based on Web of Science and Scopus data. In recognition of his research productivity, he received an award from the International Islamic University Malaysia in 2017 for publishing the highest number of articles in citation-indexed journals in the Social Sciences category. Additionally, he was recognized among the Top 1% of peer reviewers worldwide by Publons (Web of Science) in both 2018 and 2019.

His research primarily focuses on empirical Islamic banking and finance, with particular emphasis on the application of advanced quantitative and econometric methodologies to contemporary financial and economic issues. Through his research, teaching, postgraduate supervision, and academic engagement, Prof. Uluyol continues to contribute to the advancement of Islamic finance scholarship at both national and international levels.

The Western Balkans at the Crossroads of European Energy Security: Türkiye's Strategic Transit Position, Regional Cooperation, and Sustainable Development

Prof. Dr. Mevludin Ibish
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Abstract

Growing geopolitical competition, disruptions in the energy market, and transition to sustainable economies make regional connectivity and energy interdependence more critical. The Western Balkans, Türkiye, South Caucasus, and Central Asia constitute a strategically important region connecting European markets to energy resources and economic opportunities of Eurasia.

This article is dedicated to the examination of the role of Western Balkan countries in the light of the emerging energy architectures in Europe and Eurasia in regard to the role of Türkiye as a transit country between the Caspian area, the Middle East, and European energy market. The geographical position of Türkiye and the role of Azerbaijan through Southern Gas Corridor and Trans Adriatic Pipeline will be studied in terms of their influence on the improvement of energy security and regional cooperation for Europe. Special attention is paid to the potential role of Kazakhstan, Turkmenistan, and Uzbekistan in Trans-Caspian energy links.

It is also addressed in the paper the strategic importance of the existing network of pipelines for transport of natural gas and oil, and the changing position of Europe in the international energy landscape. The paper suggests that considering the geopolitical weaknesses of the EU and its susceptibility to disruptions caused by the sources of energy supplies through limited energy corridors, the necessity to create a diversified and integrated energy structure appears. In this respect, collaboration of the EU, Turkiye, the Western Balkans and the economies of the Caspian region can solve the issue of strategic vulnerabilities, diversity in energy supply and transit routes, and balanced economic and energy interdependence. Western Balkans should be regarded not only from the perspective of their integration into Europe but as an important part of Europe's connectivity.

Sustainability will become crucial to this strategy via energy interconnection, efficiency and sustainability of transportation of energy, and while stimulating complex economic interdependence the regional architecture will elevate through FDIs, investment projects, educational capacities, technological capacities and other.

With regard to the theories about regional economic integration, complex interdependence, and geoeconomics, the current paper attempts to introduce the concept of Eurasian Economic and Energy Interdependence. In this context, such an interdependent system as that of energy and economy could serve as a remedy for overcoming flaws and ensuring strategic autonomy so that the region could make use of connectivity to achieve sustainable development.

Keywords
Western Balkans; European Union; Turkey; Russian Federation; Azerbaijan; Central Asia; Energy Security; Eurasian Connectivity; Sustainable Development

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He is a Full Professor at International Balkan University, Skopje, North Macedonia, where he served as Vice Rector for Education, Academic Affairs and Institutions for more than three years, in 2015–2016 and 2022–2024. He was a Professor at Istanbul Sabahattin Zaim University, Türkiye, Department of Political Science and International Relations (2015–2020). He is also the founder of the Balkan Research Center within International Balkan University (2023).

His research and analyses focus on the Balkans, Türkiye, the Caucasus and the Middle East, with special attention to new political and regional concepts, political history, political parties, society, religion and political systems. He has written articles, reports and op-eds, and has given interviews to several media on the Balkans, Türkiye, the Middle East and EU politics with regard to their political developments, integration, democratization, civil-military relations and political culture.

He has participated in many regional and international conferences and panels on the Balkans and their relationship with Türkiye, Balkan politics and its development, international relations and the Middle East, and EU policies towards the Balkans. He is also involved in discussions and analyses on international relations, with a special focus on the decline of liberalism and the reinforcement of realism and defensive realism, as well as the role of international organizations in world political dynamics.

Professor Ibish is also engaged in the private sector as CEO Advisor at the regional company Dauti (since 2011). He is a Board Member of the ALBIZ Foundation (since 2013) and a co-founder of Solicy, a consultancy agency (2022). He speaks eight languages, lives in Skopje, North Macedonia, and is married with three children.

Green Bond Issuance and Carbon Intensity: Evidence on the Moderating Role of Institutional Quality

Prof. Dr. Erdal Tanas Karagöl

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Co-author: Asst. Prof. Dr. Ayşe Nur Şahinler

Abstract

This study examines the relationship between green bond issuance and carbon intensity, with particular emphasis on the moderating role of institutional quality.

The relationship between green bond issuance and carbon intensity is critical as it directly measures the actual success of eco-friendly financial funds in reducing greenhouse gas emissions. Examining this relationship exposes the risk of "greenwashing," where institutions mislead investors, while revealing the tangible environmental impacts and risk management of ESG-focused investments and guiding sustainable development policies.

Using annual data from 23 developed and developing countries over the period 2017–2023, the study employs panel regression analysis to investigate whether institutional quality influences the environmental effectiveness of green bond financing. The empirical findings indicate a negative and statistically significant relationship between green bond issuance and carbon intensity at the reference level of institutional quality.

Furthermore, the interaction between green bond issuance and institutional quality is negative and statistically significant, suggesting that stronger institutional quality reinforces the negative relationship between green bond issuance and carbon intensity.

The results also reveal a positive and significant association between economic growth and carbon intensity. Overall, the findings highlight the importance of institutional quality in strengthening the environmental outcomes associated with green financing.

The study contributes to the sustainable finance literature by emphasizing that the relationship between green bond issuance and environmental performance depends on the institutional environment

Keywords

Green Bonds, Institutional Quality, Carbon Intensity, Sustainable Finance

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Fiscal Policies for Green Growth: Evidence from European Union Countries

Dr. Arbra Sulejmani

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Abstract

This paper examines the association of environmental tax revenue and general government environmental protection subsidies with GDP growth and renewable energy shares across the EU-27 over 2010–2024. The balanced panel contains 405 country-year observations from Eurostat and World Bank sources. The study evaluates how these fiscal instruments relate to economic and environmental transition outcomes.

Separate Random Effects and country Fixed Effects models are estimated for GDP growth and the renewable energy share, respectively, with standard errors clustered by country. GDP per capita and inflation are included as controls. Sensitivity checks for the renewable energy model exclude 2020 and introduce year effects to account for common annual shocks.

Environmental tax revenue is not significantly associated with GDP growth. In the baseline renewable energy model, tax revenue and environmental protection subsidies are negatively associated with the renewable share, while GDP per capita is positively associated. Sensitivity checks qualify these findings. Excluding 2020 preserves the significant negative tax association but renders the subsidies coefficient insignificant. With year effects, neither fiscal coefficient is significant at 10%, and the income coefficient becomes negative.

These conditional associations do not identify causal effects and show that substantive conclusions depend on accounting for common time shocks and the scope of the fiscal measures. The subsidies variable captures environmental protection subsidies rather than support specifically targeted at renewable energy. The findings motivate closer evaluation of the composition and timing of environmental fiscal instruments. Further research should distinguish tax revenue from tax rates, identify renewable energy support more precisely, and address potential reverse causality and delayed policy responses.

Keywords

Green fiscal policy; Environmental taxation; Renewable energy; Subsidies; Panel data; EU-27

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Her teaching experience includes fundamentals of economics, financial accounting, managerial accounting, corporate finance, and operations management. She prepares teaching materials, practical exercises, and assessments to help students understand theoretical concepts through applied examples. Alongside her academic and administrative responsibilities, she has contributed to the organization of university events and moderated academic activities.

Her research interests focus on public finance, environmental taxation, the green transition, banking stability, institutional quality, and sustainable economic development. Her work particularly concerns the European Union and Western Balkan economies, examining relationships between fiscal policies, environmental objectives, and economic performance.

Through her doctoral studies, she works with quantitative research methods, panel data analysis, and time series methods. She uses Stata for empirical research and draws on international data sources. Her research experience covers bank profitability, climate-related financial risks, renewable energy, and environmental sustainability.

Her co-authored paper submitted to this symposium examines the association of environmental tax revenue and environmental protection subsidies with economic growth and renewable energy shares across European Union countries. Through her academic work, she aims to contribute comparative empirical evidence to discussions of economic and environmental policy.

When Does Financial Integration Deliver Sustainable Development? Institutional Quality Thresholds in the Western Balkans, Türkiye and Emerging Europe

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Prof. Dr. Mehmet Bulut
International Balkan University – North Macedonia

Abstract

Under what conditions does financial integration produce sustainable development? This paper asks whether there is a level of institutional quality below which financial integration fails to improve growth and sustainable development outcomes, and above which it does, and where the six Western Balkan economies and Türkiye stand relative to that level. Existing threshold studies use GDP growth as the only outcome, and none places the Western Balkans and Türkiye against the estimated threshold. The paper builds an annual panel for 2000–2023 covering 18 economies: the Western Balkans, Türkiye and eleven Central and Eastern European EU members. De facto financial integration is measured from the External Wealth of Nations database and separated into equity-type and debt-type positions; institutional quality is taken from the Worldwide Governance Indicators. Three outcomes are examined: real GDP per capita growth, the SDG Index score and adjusted net savings. The baseline is Hansen's (1999) fixed-effects panel threshold regression, checked against dynamic panel threshold estimators. Three hypotheses are tested: a significant institutional threshold exists; it is lower for equity-type than for debt-type integration; and it is higher for the SDG Index than for GDP growth. Results will be presented at the symposium, together with each economy's distance from the threshold over time. If the hypotheses hold, governance reform should precede or accompany integration, regulators near the threshold should favour FDI and equity over cross-border debt, and closing the SDG investment gap requires institutional capacity to absorb capital, not only its mobilisation.

Keywords
financial integration; institutional quality; threshold regression; sustainable development; Western Balkans; Türkiye

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The Spatial Footprint of CBAM: Mapping Regional Exposure and Reporting Capacity in Türkiye and the Western Balkans

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Abstract

The EU's Carbon Border Adjustment Mechanism (CBAM) entered its definitive period on 1 January 2026. CBAM is mostly discussed at national and sectoral level, yet covered production is concentrated in specific places, and reporting capacity is unevenly distributed across firms. This study treats CBAM as a regional development issue for Türkiye and the Western Balkans. It builds an open, facility-level database of 112 CBAM-covered industrial facilities and 49 coal power plants, assigns them to NUTS 3 regions and measures regional exposure and reporting capacity, using spatial statistics to test for clustering. In Türkiye, five provinces (Hatay, Kocaeli, Zonguldak, Karabük and İzmir) account for 38% of industrial CO_2 but only 11% of the population, and 67% of CO_2 lies in provinces combining above-average exposure with below-average reporting capacity. In the Western Balkans, concentration is sharper still: 94% of CO_2 with regional data lies in six regions producing only 14% of GDP, and the capacity score is half that of Türkiye. Karabük, Podunavlje and Zenica-Doboj, each dependent on a single steel plant, are the most carbon-intensive regional economies, while electricity is the main CBAM channel in the Western Balkans. The study shows that the carbon burden falls on single-plant, low-capacity, below-average-income regions. It proposes targeting transition finance at these regions and reporting support at weakly connected firms, a cross-border programme for steel regions, EU electricity market coupling and basic reporting infrastructure in the Western Balkans, and an open public monitoring tool.

Keywords

Carbon Border Adjustment Mechanism (CBAM); spatial analysis; regional inequality; emissions reporting capacity; transition finance; Western Balkans

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His research interests include artificial intelligence, smart cities, data analytics, digital transformation, decision support systems, technology acceptance, and information systems governance. In particular, he investigates the impact of data-driven decision-making processes and technological innovations on public administration, urban services, and businesses. He has authored academic publications and participated in national and international research and applied projects in these fields. He teaches courses at undergraduate and graduate levels on information law, data management, smart cities, and decision models. His work examines the relationship between technological systems and human, institutional, and urban life from an interdisciplinary perspective.

In his capacity as an Advisor to the President of the Turkish Academy of Sciences (TÜBA), Akpınar contributes to initiatives aimed at fostering international scientific collaborations, science diplomacy, and the development of academic networks. In his academic work, he places particular emphasis on interdisciplinary approaches, applied research, and translating research outcomes into societal and institutional benefits.

From Trade Integration to Innovation Integration: The Role of Technology Development Zones in Türkiye–Western Balkans Cooperation

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Abstract

Türkiye maintains free trade agreements with all six Western Balkan economies, establishing a solid trade integration foundation. However, trade liberalisation does not automatically yield innovation integration encompassing research, technology transfer, and entrepreneurial finance. Limited private R&D shares, uneven innovation infrastructure, and early-stage financing constraints accentuate this gap across the Western Balkans. Drawing on innovation intermediation literature (Howells, 2006; Feser, 2023), this study examines how Türkiye's technoparks can perform cross-border intermediation between both ecosystems.

The study conducts a qualitative comparative policy analysis examining the six Western Balkan economies regionally and North Macedonia as an analytical case. It analyses Law No. 4691, Presidential Decision No. 5447 and its successor Decision No. 10962 on IT internationalisation, the EU's Western Balkans Innovation Agenda (2021), OECD (2024) and RCC–EIT–EEN (2025) reports, North Macedonia's Smart Specialisation Strategy (2024–2027), and selected technopark partnerships across institutional connectivity, entrepreneurial finance, and technology transfer.

Findings reveal three structural issues. First, while Turkish regulations support technology service exports, they lack an integrated cross-border co-investment mechanism, and Law No. 4691 (Additional Article 3) restricts mandatory venture capital to Türkiye-based entrepreneurs. Second, regional capacity and finance remain asymmetric: 2021–2024 Horizon Europe net contributions reached EUR 86.69 million in Serbia versus EUR 8.68 million in North Macedonia, while roughly 70% of 2024 regional startup funding (EUR 29.5 million) concentrated in Serbia. Third, Yıldız Teknopark's Skopje office and Dijitalpark's 13-startup Bridge to Balkans programme initiate institutional connectivity, yet their investment, joint R&D, and technology transfer outcomes remain publicly unverified.

The study proposes a cross-border innovation intermediation model aligned with North Macedonia's smart specialisation priorities and complementing EU instruments. Combining investor matching, joint acceleration, university–industry collaboration, and technology transfer, it tracks performance via joint R&D projects, investment deals, technology licences, and internationalised startups.

Keywords
Innovation Intermediation, Technology Development Zones, Western Balkans, North Macedonia, Smart Specialisation.

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He studied Industrial Computing and Computer Networks in France under a French Government Scholarship for Academic Excellence before obtaining his bachelor's degree in Management Information Systems from Boğaziçi University. Supported by a scholarship from the Turkish Ministry of National Education, he completed his MSc in Management of Information Technology at the University of Nottingham, United Kingdom. He subsequently earned his PhD in Digital Forensics from Gazi University, Türkiye.

His research interests include digital forensics, information security, data protection, smart cities, digital transformation, and technology acceptance. He has authored national and international academic publications and teaches undergraduate and postgraduate courses in computer networks, operating systems, programming, human-computer interaction, and information security. He also supervises graduate research.

Before his academic career, he gained industry experience in software development at EDF in France, SAP CRM development at BSH Home Appliances, business intelligence consulting at QlikView Türkiye, and IT management at BUKOMBİN A.Ş. His professional experience encompasses enterprise information systems, software engineering, data analytics, and digital business processes.

At AYBÜ Technopark, he is involved in R&D project evaluation, digital infrastructure management, entrepreneurship support, university-industry collaboration, and technology commercialisation. His combined academic, managerial, and entrepreneurial experience supports the translation of research into practical applications and the development of innovation ecosystems.

An Inclusive Model in Ottoman Financial Integration: The Role of Rumelian Cash Waqfs in Micro-Credit and Regional Development

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Abstract

In the socio-economic and institutional history of the Ottoman Empire, cash waqfs (nukud vakıfları) were not merely religious charitable institutions but inclusive financial institutions that supported local economies, spread capital accumulation to the broader public and financed regional development. Drawing on court (sicil) records from the Rumelia region, this study examines their role in regional integration. Unlike real-estate waqfs, cash waqfs supplied endowed capital directly to the market, creating a micro-credit and liquidity pool for merchants, tradesmen and artisans. Loans were secured by strong collateral (rehn-i kavî) and reliable guarantors (kefîl-i melî), minimising default risk and building trust-based financial networks. Moderate profit rates, typically 10–15% in line with market custom, prevented usury while ensuring a regular income. These revenues financed not only mosques, lodges and schools, but also roads, fountains, wells and waterways, strengthening Rumelia's commercial capacity and its integration with Anatolia. Waqf income was also used to pay extraordinary taxes such as avarız on behalf of neighbourhood residents, protecting households from indebtedness and dispossession and helping to maintain demographic and economic stability. Debates over the permissibility of endowing cash were resolved through the rulings of Hanafi jurists, principally Imam Züfer, and binding qadi decisions supported by imperial decrees. The study concludes that Rumelian cash waqfs formed a sustainable and holistic model that combined micro-credit, market liquidity, social solidarity, infrastructure and spatial development.

Keywords
Cash Waqfs, Micro-Credit, Regional Development, Ottoman Financial Integration, Rumelia, Credit Mechanism, Inclusive Economy, Avariz Tax

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Born in Samsun in 1986, Mehmet Tuğrul completed his undergraduate education in 2011 at Gazi University, Gazi Faculty of Education, Department of History Education. He completed his master's degree in 2017 at Ankara Yıldırım Beyazıt University, Department of History, with his thesis titled "Plovdiv Waqfs in the Ottoman Era (18th and 19th Centuries)." In this research, he comprehensively examined the multidimensional effects of waqf institutions in the Ottoman Balkans on socio-economic structures, urbanization processes, local economies, and social life in the light of historical archival sources and court records (sicil).

Receiving his doctoral degree in 2020 from Istanbul Sabahattin Zaim University, Graduate Education Institute, Department of History and Civilization Studies, Tuğrul defended his dissertation titled "A Comparative Example of the Relationship Between City and Waqf in the Balkans: Thessaloniki and Sofia." Prepared with a comparative methodology, this doctoral study presented the waqf-city interaction, spatial development, social fabric, and institutional infrastructure through the examples of Thessaloniki and Sofia in Ottoman urban historiography from an analytical perspective. His academic interests and research areas primarily focus on Ottoman history, waqf institutions, Balkan history, and urban history.

Stepping into his academic career as a Research Assistant in 2013, Mehmet Tuğrul continues to serve as a faculty member and teach at Ankara Yıldırım Beyazıt University, Faculty of Humanities and Social Sciences, Department of History, where he conducts his academic research. In addition to his activities at the university, he serves as an Advisor to the President of the Turkish Academy of Sciences.

In addition to academic books edited by Tuğrul, he has published numerous articles in national and international peer-reviewed journals, contributed book chapters, and presented papers at national and international scientific congresses, symposia, and conferences.

The Implicit Carbon Burden Under the Carbon Border Adjustment Mechanism: Does Türkiye's ETS Free Allocation Offset Turkish Exporters' CBAM Exposure?

Assoc. Prof. Dr. Fatih Kaplanhan

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Abstract

The Carbon Border Adjustment Mechanism (CBAM) entered its definitive phase on 1 January 2026, directly affecting Turkish producers that export iron and steel, cement, aluminium, fertilisers and electricity to the European Union. Because the mechanism imposes obligations based on the embedded emissions of imported goods, it creates an implicit carbon cost for exporters with high emissions intensity. This study examines the extent to which the free allocation mechanism of Türkiye's Emissions Trading System (TR ETS) offsets this burden. Türkiye's customs union relationship with the EU provides the context in which this burden has direct consequences for trade and climate policy. Using Eurostat Comext data, we construct a monthly panel for 2023–2026 at the CN 4-digit product level. CBAM-covered products are compared with non-covered products of similar characteristics and with imports from China and India as an additional comparison group. An event-study and difference-in-differences design is applied, and the 2023–2025 transitional period is used to test pre-trends. The expected contribution is to combine Türkiye-specific sectoral emissions-intensity benchmarks with CBAM default values, allowing the carbon cost borne by exporters to be estimated at installation level. Because the pilot phase of the TR ETS is short, the findings will be interpreted as early-stage evidence, and the sensitivity of results to the choice of comparison group will be examined. The study aims to provide empirical evidence at the intersection of climate, trade and fiscal policy on whether free allocation can prevent carbon leakage. The findings are intended to provide a data-based input to policy debates on the design of free allocation.

Keywords

Carbon border adjustment mechanism; emissions trading system; free allocation; carbon leakage; Turkish exports

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Regenerative Trade Taxonomy: A Dynamic Prescriptive Framework with a Western Balkan Pilot Design

Prof. Dr. Tariqullah Khan
Ventureethica – Canada

Abstract

International trade develops productive capability while transferring ecological pressures across borders, and the policy measures intended to correct it – EU Extended Producer Responsibility (EPR) and the EU Carbon Border Adjustment Mechanism (CBAM) - can induce upgrading, exclusion or further displacement. This paper proposes a Regenerative Trade Taxonomy (RTT) grounded in Dynamic Prescriptive Economics (DPE). Economies are classified on two nonsubstitutable levels: regenerative sustainability, measured with consumption-based footprints and ecosystem-integrity indicators under a continuous ecological veto, and trade capability, measured against a fixed base period. The taxonomy separates ecological eligibility, quadrant position, operational target attainment, transition velocity and causal policy effect, and it discloses evidence quality and uncertainty for each. A Chebyshev gap, an adaptive transition-friction model and substitution–transformation– offset (STO) intervention logic connect diagnosis with prescription. EPR and CBAM are evaluated through prepolicy exposure measures, explicit counterfactuals and displacement tests, and firm- and sector-level effects are aggregated into national positions through the input–output system rather than averaged. A Western Balkan pilot design specifies differentiated exposure, a data route for economies not resolved in the major multiregional input–output databases, and staged implementation, without reporting national RTT scores. The paper also proposes an RTT-based eligibility rule for transition finance: development banks, green bond and sukuk frameworks and EU pre-accession instruments would label as transition finance only interventions that pass the transformation and non-displacement tests, not offsets or relocated burdens. Eight hypotheses and an identification strategy are proposed, and a reproducible component-level example demonstrates classification under uncertainty and its sensitivity to ecological thresholds. No empirical RTT estimates or certification claims are made.

Keywords
regenerative trade taxonomy; dynamic prescriptive economics; trade classification; ecological veto; extended producer responsibility; carbon border adjustment mechanism; Western Balkans; transition finance; noncompensatory indicators.

BIOGRAPHY

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Prof. Dr. Tariqullah Khan is the Chief Executive Officer of Ventureethica in Toronto, Canada, where he leads work on sustainability and strategic management supported by artificial intelligence applications. Born in Chitral, Pakistan, he received his BA (1973) and MA (1976) in Economics from the University of Karachi and his PhD in Economics from Loughborough University, United Kingdom, in 1996. He began his academic career at Gomal University (1976–1981) and the International Islamic University Islamabad (1981–1983) in Pakistan. From 1983 to 2009 he served at the Islamic Development Bank Institute in Jeddah, progressing from Researcher to Principal Researcher, and was Division Chief for Islamic Banking and Finance from 2005 to 2009. Between 2009 and 2020 he was Professor and Program Director of the MSc and PhD programmes in Islamic Finance and Economy at Hamad Bin Khalifa University, Qatar Foundation, and held visiting scholar positions at Harvard University (2011) and Stanford University (2017). He later served as Professor of Islamic Economics and Finance at Istanbul Sabahattin Zaim University, Türkiye (2020–2022), and as Professor at INCEIF University, Malaysia (2022–2024). His research focuses on Dynamic Prescriptive Economics, sustainability management, the circular economy, Islamic and sustainable finance, the green transformation of economies, climate and sustainability entrepreneurship, AI ethics and regenerative development. He developed the Dynamic Prescriptive Economics approach and the Circular-ESG framework for sustainability management, monitoring and evaluation, and has authored numerous papers, book chapters and books. He was twice elected President of the International Association for Islamic Economics (2011–2019). He received the 2022 Islamic Development Bank Prize in Islamic Economics and Finance in recognition of his work integrating Islamic economics and finance with sustainable development, as well as a Literati Award in 2020.

Exposure to the EU Carbon Border Adjustment Mechanism in the Western Balkans and Türkiye: Can Regional Integration Reduce the Burden?

Amina Irshad
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Abstract

The EU's Carbon Border Adjustment Mechanism (CBAM) entered its definitive phase on 1 January 2026, placing a carbon-related cost on imports of iron and steel, aluminium, cement, fertilisers, electricity and hydrogen. Because the EU is a major export market for both the Western Balkans and Türkiye, CBAM may affect their trade, competitiveness and green transition, yet comparative evidence on their exposure remains limited. This paper asks how exposed these economies are to CBAM, how this exposure has evolved and through which channels regional integration could reduce adjustment costs. Using UN Comtrade bilateral export data for Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, Serbia and Türkiye over 2015–2024, it identifies CBAM-covered products at product level and calculates their share in exports to the EU and to the world and the concentration of exposure across sectors and products. Where credible emissions-intensity data are available, an illustrative scenario estimates potential CBAM costs under a range of carbon price assumptions. Exposure is expected to be concentrated in a small number of product groups and to differ across countries; these expectations will be tested in the full paper. The paper also discusses three channels through which regional cooperation could reduce the burden: shared monitoring, reporting and verification infrastructure; coordinated carbon pricing or aligned standards that keep carbon revenue in the region; and regional value chains that may transmit CBAM costs across borders. The results can help policymakers prioritise support and assess the case for joint regional action.

Keywords
CBAM; carbon pricing; Western Balkans; Turkey; regional trade integration; green transition

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Her research interests are international trade, agricultural economics, development economics and environmental economics. Her recent articles include work on India–ASEAN agricultural trade and on the drivers of India's agricultural productivity, and she has presented her research at several international conferences, including the 108th Annual Conference of the Indian Economic Association (Chennai, 2025). Her methods include panel data econometrics, structural gravity models and ARDL.

External Finance and Debt Sustainability in the Western Balkans: A Comparative Analysis of BRI Commitments and the EU Growth Plan

Asst. Prof. Dr. Ahmet Lokce

International Balkan University – North Macedonia

Abstract

Over the past decade, the Western Balkan economies (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia) have increasingly relied on external finance to meet their infrastructure and development needs. Two distinct financing models have emerged in this process: Chinese lending under the Belt and Road Initiative and the European Union's Growth Plan for the Western Balkans. This study compares the two models in terms of committed versus disbursed amounts, borrowing terms and their effects on public debt. Data on public debt, the composition of external debt and loan-level commitments for the period 2014–2025 are compiled from the World Bank, the European Commission, national finance ministries and AidData, and analysed through descriptive and comparative methods. Preliminary findings show that average public debt in the region remains relatively moderate at around 44 percent of GDP, yet with marked divergence across countries: the ratio exceeds 63 percent in Montenegro while staying below 17 percent in Kosovo. Chinese loans are concentrated in a small number of large motorway and energy projects, carry exchange-rate risk because they are denominated in US dollars, and account for a significant share of external debt, particularly in Montenegro. The six-billion-euro Reform and Growth Facility, by contrast, offers a reform-conditional, euro-denominated and more transparent framework. However, since two-thirds of the Facility consists of loans, it also adds to the debt stock, and disbursements have so far reached only a small fraction of commitments. The study argues that the contribution of external finance to sustainable development depends not only on its volume but also on borrowing terms, currency denomination, implementation capacity and project efficiency, and it offers policy recommendations on debt management and the diversification of financing sources for the Western Balkan countries.

Keywords

Western Balkans, debt sustainability, Belt and Road Initiative, EU Growth Plan, external finance

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Dr. Ahmet Lokce is an Assistant Professor at the Faculty of Economics and Administrative Sciences of International Balkan University (IBU), Skopje, North Macedonia, where he has served as Vice-Rector for Institutional Relations since May 2025. He received his PhD in Türkiye with a dissertation on artificial intelligence-based technologies in the interest-free finance sector. His research focuses on interest-free finance and financial technologies, the political economy of the Balkans, external finance and development in the Western Balkans, regional technology and innovation ecosystems, and behavioral economics. He is the editor of a Turkish-language book series that analyzes Balkan economies on a country-by-country, data-driven basis, and he is currently developing his doctoral research into a scholarly monograph that includes an assessment of interest-free finance practices and their potential in the Balkans. Since joining IBU in December 2023, he has taught Human Resource Management, Organizational Behavior and Management of Non-Governmental Organizations at the undergraduate level, and Behavioral Economics at the graduate level. As Vice-Rector, he is responsible for eight university units, including the Technology and Innovation Center, the Economy and Finance Laboratory, the Career Center, the International Relations Office and the International Student Office; since 2024, he has also coordinated the university's Lifelong Learning Center. In these roles, he has worked on institutional partnerships, international academic cooperation and university–industry collaboration. Alongside his academic career, he has professional experience in research and consulting on investment and energy projects across the Balkan region. His academic and institutional work centers on strengthening scholarly, institutional and economic cooperation between Türkiye and the Western Balkans.

The Real Exchange Rate and Industrial Production in Türkiye–U.S. Capital Goods Trade: An ARDL and NARDL Analysis of Exports and Imports

Prof. Dr. Hüseyin Karamelikli
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Co-author: Asst. Prof. Dr. Hüseyin Utku Demir

Abstract

This study examines how Türkiye's capital goods exports to the United States and imports from the United States relate to the bilateral real exchange rate and industrial production in the short and long run. The export equation includes U.S. industrial production, while the import equation includes Türkiye's industrial production. Both equations include the bilateral real exchange rate. U.S. dollar trade flows are deflated using Türkiye's national trade unit value indices (2015 base year). Linear ARDL and nonlinear ARDL (NARDL) models that distinguish between increases and decreases in the real exchange rate are estimated using 187 common monthly observations from March 2010 to September 2025. The Bayesian information criterion (BIC) is used for model selection and the Akaike information criterion (AIC) for sensitivity analysis.

In the BIC-selected models, U.S. industrial production is positively and significantly associated with Türkiye's capital goods exports in the short run, while Türkiye's industrial production is positively and significantly associated with its imports. The short-run industrial production coefficients in the ARDL and NARDL models are 3.428 and 3.333 for exports and 0.881 and 0.951 for imports, respectively (all $p<0.05$). In the linear export model, the normalized long-run coefficients are 1.472 for the real exchange rate ($p<0.001$) and 4.673 for U.S. industrial production ($p=0.0048$). Both remain statistically significant when Newey–West standard errors are used. The long-run import coefficients are statistically insignificant at the 5% level. Wald tests fail to reject short- or long-run exchange rate symmetry for either trade flow at the 5% level. The bounds-test evidence for a long-run export relationship is sensitive to lag selection, and residual autocorrelation in the linear export model further limits the interpretation of the long-run estimates.

The short-run findings suggest that U.S. industrial production can inform export planning, while Türkiye's industrial production can help track import demand and foreign currency payment needs. Assessing export receipts and import payments separately under alternative exchange rate scenarios could help firms manage cash flow and currency exposure. More detailed product-level data on prices, quantities, orders, and deliveries would help identify which capital goods are most responsive to changes in industrial production and how much of the change in trade values reflects price movements.

Keywords
Capital goods trade, real exchange rate, industrial production, ARDL, NARDL, Türkiye-U.S. trade

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Professor Huseyin Karamelikli is a faculty member in the Department of Economics at Karabük University, Türkiye. He served as an assistant professor from 2011 to 2017 and as an associate professor from 2018 to 2022. He attained the rank of full professor in 2023.

His research focuses on international economics and applied econometrics, particularly the relationship between real exchange rates and international trade. He studies how exchange rate movements affect exports, imports, and trade balances over the short and long run. A central question in his work is whether trade responds differently to increases and decreases in the real exchange rate and how those responses vary across countries, sectors, and product groups. His empirical work uses autoregressive distributed lag (ARDL) and nonlinear autoregressive distributed lag (NARDL) models, cointegration tests, and dynamic multiplier analysis.

Professor Karamelikli also develops open-source tools for applied econometric research. He is a co-developer of kardl, an R package available on CRAN. The package supports ARDL and NARDL estimation, cointegration and symmetry testing, and the calculation of dynamic multipliers. He previously developed and publicly released an open-source EViews add-in for estimating NARDL models.

He has taught International Economics Theory, International Economic Policy, Introduction to Economics, Mathematics for Economists, and Mathematical Economics. He serves as an Article Editor for SAGE Open and has reviewed manuscripts for journals including Applied Economics and the Journal of Economic Asymmetries.

Evaluation of Sustainable Finance, Green Transition and Recyclable Printing Criteria in Flexible Plastic Packaging

Prof. Dr. Erdoğan Köse

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Co-authors: Asst. Prof. Dr. Orhan Sevindik, Hatice Gizem Kolak

Abstract

Flexible plastic packaging is widely used because it is light and economical. Growing plastic waste makes end-of-life evaluation essential and recyclable design a key element of the circular economy. The European Green Deal, the EU Packaging and Packaging Waste Regulation and Türkiye's Green Deal Action Plan drive the sector's green transition. Meanwhile, sustainable finance mechanisms such as green bonds, sustainability-linked loans, extended producer responsibility and ESG reporting link companies' access to finance to packaging recyclability. Besides polymer type, recyclability is affected by printing inks, pigments, print area, lacquers, varnishes, lamination and adhesives. However, the role of print design and its financial significance remain underexplored.

This study aims to identify print design criteria that support the recycling of flexible plastic packaging, compare the RecyClass and CEFLEX guidelines, and discuss the economic and financial importance of these criteria in the green transition. It also addresses the balance between commercial aesthetics and environmental sustainability.

The research is based on qualitative document analysis and comparative evaluation. Focusing on flexographic and rotogravure printing, it will examine the criteria for PE and PP flexible packaging on inks, pigments, print coverage, lacquers, varnishes, lamination and adhesives in the RecyClass "Design for Recycling" and CEFLEX "D4ACE" guidelines. The criteria will be grouped into comparison tables, evaluated against current literature and linked conceptually to the expectations of sustainable finance and green transition regulations.

The study is expected to present a holistic framework of recyclable print design criteria, reveal where the two guidelines agree and diverge, and propose alternatives to practices that hinder recycling. The findings should help the printing and packaging sector make informed design decisions on regulatory compliance, ESG reporting and green finance access. The study thus aims to make the role of economic and financial integration in sustainable development concrete at the level of packaging design.

Keywords

Flexible plastic packaging, recyclable print design, sustainable finance, green transition, circular economy (JEL Codes: Q01, Q53, Q56, L65)

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Prof. Dr. Erdoğan Köse was born in Süleymaniye in 1968. He completed his undergraduate studies in the Department of Printing Education at Marmara University's Faculty of Technical Education in 1989. He received his master's degree in Industrial Technology Education from the Graduate School of Natural and Applied Sciences at Gazi University in 1997 and his doctoral degree from the Department of Electronics and Computer Education at Gazi University's Informatics Institute in 2006.

After working as a vocational teacher under the Ministry of National Education between 1991 and 1995, he began his academic career as a lecturer at Gazi University in 1996. He became an associate professor in 2007 and a professor in 2015. At Gazi University, he held several administrative positions, including department chair, vice dean and Farabi Programme coordinator.

He served as director of the Vocational School of Technical Sciences at Istanbul University and subsequently at Istanbul University-Cerrahpaşa. Between 2018 and 2023, he served as Secretary-General and advisor to the Rector at Istanbul University-Cerrahpaşa. In 2024, he assumed the position of Director of the university's Institute of Forensic Medicine and Forensic Sciences.

His academic interests include printing and packaging technologies, graphic design, digital publishing, augmented reality, printing inks and colour perception. He has published articles in international peer-reviewed journals on print quality, colour management and the modelling of colour perception using artificial neural networks. His book, Ofset Baskı Teknolojileri (Offset Printing Technologies), co-authored with N. Kansu, was published in 2008. He has also been involved in activities related to the International Printing Technologies Symposium and BELTEK.

Paying with the Body: Setting Ethical Boundaries for Biometric Payments, Financial Inclusion and Sustainable Development

Assoc. Prof. Dr. Ozat Shamshiyev
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Abstract

Payment technologies are moving beyond conventional instruments such as cards, passwords and personal identification numbers towards biometric authentication based on fingerprints, facial features, palm-vein patterns, irises, voices and behavioural characteristics. These technologies may accelerate transactions and facilitate access to financial services for people who experience difficulties using conventional authentication methods. However, transforming the human body into a payment credential raises significant concerns regarding privacy, equality, bodily integrity and human dignity.This study examines the conditions under which biometric payment systems can support financial inclusion and sustainable development in a necessary, proportionate and human-dignity-compatible manner. It focuses on Türkiye, Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia. Indicators from the World Bank's Global Findex 2025, publications by the World Bank and the Bank for International Settlements, peer-reviewed empirical studies and relevant European regulatory frameworks are evaluated through a structured comparative analysis. Biometric methods are assessed in terms of accessibility, accuracy, revocability, vulnerability to spoofing, data-storage architecture, covert data collection, performance across demographic groups and the risk of secondary use. The assessment applies four elements of the proportionality principle: legitimate purpose, suitability, necessity and balancing. The preliminary findings suggest that biometric authentication may improve inclusion for certain users while excluding older persons, manual workers, persons with disabilities and individuals whose biometric characteristics cannot be captured reliably. The study therefore proposes a "biometric proportionality threshold." Biometric authentication should remain optional, and equivalent non-biometric alternatives should be available. One-to-one and on-device verification should be preferred, while centralised data storage should be restricted. The use of payment-related biometric data for surveillance, health inference, behavioural profiling or unrelated commercial purposes should be prohibited. Regional integration should connect payment infrastructures and revocable credentials rather than establish interconnected biometric databases.

Keywords
biometric payments; payment-system integration; financial inclusion; human dignity; sustainable development; proportionality JEL Codes: G21, G28, O33, O52, K24

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Between 2022 and 2026, Dr Shamshiyev taught at the Department of Islamic Economics and Finance at the Social Sciences University of Ankara. From 2023 to 2026, he also served as Deputy Director of the university's International Center for Islamic Economics and Finance. He has held visiting teaching positions at Saint Petersburg State University and the Northern Cyprus Campus of the Social Sciences University of Ankara.

His research interests include Islamic commercial law, Islamic economics and finance, Shariah governance, sustainable development, green economics, financial technologies, digital currencies and blockchain applications in Islamic finance. He has published peer-reviewed research on the legal and ethical foundations of the green economy, Islamic banking, hedging instruments, digital currencies, natural-resource management and blockchain technology. He has also managed a research project examining the application of zakat and qard al-hasan-based social finance instruments in post-disaster economic and social development.

Dr Shamshiyev is Co-Editor of the Journal of Islamic Economics, Associate Editor of the Scopus-indexed Legal Transformation in Muslim Societies, and Section Editor of the Web of Science ESCI-indexed Turkish Journal of Islamic Economics. He has also served as a guest editor and editorial board member for several international academic journals. He works academically in Kazakh, Russian, Turkish, Arabic and English.

Institutions, Integration and the Innovation–Growth Paradox: Regional Evidence from Kazakhstan with Lessons for Türkiye and the Western Balkans

Botagoz Shakerbayeva

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Co-author: Assoc. Prof. Dr. Gulzhanat Tayauova

Abstract

Endogenous growth theory predicts that investment in knowledge and innovation leads to faster growth, yet Kazakhstan's regions show a persistent paradox. The richest regions, such as Atyrau and Mangystau, grow mainly on natural-resource rents, regions with higher innovation activity do not grow faster, and regional disparities are not narrowing. This paper asks why innovation does not automatically translate into regional growth, and whether institutional quality and integration through foreign direct investment, trade openness and access to credit are the conditions that unlock its growth effect. The study uses a balanced panel of 20 regions of Kazakhstan for 2010–2024, drawing on national statistics, WIPO, the World Bank and the OECD. It estimates two-way fixed-effects growth regressions, interaction models of innovation with institutions, integration and resource dependence, and spatial econometric models of interregional spillovers, followed by a cluster analysis of regional types. Innovation is expected to have a positive but weak and conditional effect on growth, smaller in resource-dependent regions and stronger where institutions are better and FDI brings technology. Spillovers are expected to concentrate around Almaty and Astana, reinforcing cumulative causation rather than convergence. The results argue for differentiated regional innovation policy: diversification and rent governance in resource regions, absorptive capacity in lagging regions and value-chain integration in agglomerations. For Türkiye and the Western Balkans, the Kazakh case suggests that integration supports sustainable development only if institutional quality and absorptive capacity grow alongside it.

Keywords

innovation–growth paradox; regional disparities; institutional quality; economic integration; resource dependence; Kazakhstan

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Botagoz Shakerbayeva is a first-year PhD student in Economics (programme 8D04101) at Turan University, Almaty, Kazakhstan. Her doctoral dissertation, "Economic Growth and Innovation Activity in Kazakhstan: Regional Disparities and Mechanisms to Overcome Them", is supervised by Dr Gulzhanat Tayauova (PhD, Associate Professor), with Prof. Natalya Ketenci of Yeditepe University, Türkiye, as foreign advisor. Her research examines why innovation activity does not automatically translate into economic growth in Kazakhstan's regions and how human capital, sectoral structure and institutions condition this link. Her main interests are regional economics, the economics of innovation, spatial econometrics, regional inequality in resource-dependent economies and evidence-based regional policy. In her work she applies panel data and spatial econometric methods to regional statistics for 2010–2024. She has published the article "The Innovation–Economic Paradox of Kazakhstan's Regions: Diagnosing Disparities" in the journal Economics, Business and Services, and she has papers under review in international peer-reviewed journals, including Post-Communist Economies and Eurasian Economic Review. She has presented her research at the 12th International EMI Entrepreneurship and Social Sciences Congress (Almaty, 2026) and at the international conference "The Caspian Sea: Issues, Prospects, and Opportunities for Sustainable Development" (Almaty, 2026). She has also completed her pedagogical practice. The expected outcomes of her dissertation include an econometric assessment of the effect of R&D, patents and innovation-active enterprises on regional growth, a typology of Kazakhstan's regions by growth and innovation profiles, and differentiated mechanisms of regional innovation policy adapted to each type of region.

Regional Economic Integration and Export Diversification: Iran's Non-Oil Exports to Neighbouring Countries and the Requirements for Sustainable Development

Mohammad Hossein Ardalani
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Abstract

This study examines Iran's non-oil export policies toward neighbouring countries and the requirements for sustainable export development up to the 1437 horizon. It asks how Iran can use its geographic position and economic links with neighbouring markets to expand exports, diversify destinations, and increase domestic value added.

The research is applied in purpose and follows a descriptive-analytical approach. Evidence is drawn from policy documents, official foreign-trade statistics, and national and international sources. The analysis reviews the trends and composition of Iran's exports to neighbouring markets, compares Iran's regional position with competitors such as Türkiye and the United Arab Emirates, identifies barriers and opportunities, and develops a SWOT assessment. The geographic scope covers fifteen neighbouring countries.

The findings indicate a substantial concentration of Iran's exports to neighbouring markets: approximately 71 per cent of these exports in the 1403 base year went to Iraq, the UAE, and Türkiye. Alongside Iran's geographic advantages, this concentration represents both an established commercial capacity and a source of structural vulnerability. Scenario calculations for 1437 illustrate different possible export paths under the continuation of existing conditions, gradual reforms, and the implementation of a more comprehensive strategic agenda. These figures should be interpreted as conditional scenarios rather than definitive forecasts.

The analysis points to several policy priorities: diversifying destination markets, expanding exports of processed and higher-value-added products, strengthening regional financial and settlement channels, reducing logistics costs, improving border infrastructure, and pursuing more effective economic diplomacy. The study contributes a policy-oriented framework linking regional trade integration with export diversification and economic resilience in an economy facing significant external constraints.

Keywords
Regional Economic Integration; Export Diversification; Non-Oil Exports; Sustainable Development; Trade Policy; Iran

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Mohammad Hossein Ardalani is completing an integrated B.A./M.A. programme in Islamic Studies and Economics at Imam Sadiq University, Iran, and is expected to complete his M.A. in Economics in February 2027. His research interests include international trade, export policy, regional economic integration, trade barriers, geoeconomics, and transport corridors.

His master's thesis examines Iran's export policies toward neighbouring countries within the framework of the Second Step of the Islamic Revolution and explores the requirements for achieving long-term export objectives. He has completed coursework in Econometrics I, Econometrics II, and Advanced Econometrics, and has practical familiarity with R, SPSS, and Microsoft Excel. He has also conducted export market research related to Iraq and Oman.

Alongside his academic work, he has professional experience in executive and administrative roles in the private sector, including tax and accounting follow-up, company and trademark registration, administrative systems, and export-related procedures. He also teaches economics at the secondary-school level.

His broader objective is to connect academic research with practical economic policy-making, particularly in the areas of regional trade cooperation, export diversification, productive capacity, and sustainable development in emerging economies. His work also considers the links between domestic productive capacity and access to regional markets, as well as the institutional, financial, and logistical conditions shaping cross-border trade.

Green Transition, Foreign Direct Investment and the Business Cycle: Panel Evidence from Balkan Economies

Prof. Dr. İbrahim Demir

Istanbul Ticaret University – Türkiye
Co-author: Prof. Dr. Elçin Aykaç Alp

Abstract

The evidence on the renewable energy–growth nexus remains inconclusive. This study shifts the focus from long-run growth to the business cycle and examines the relationship between the renewable energy transition, foreign direct investment (FDI) as an indicator of financial integration, and the output gap in Balkan economies. The analysis uses a balanced panel of nine economies over 1998–2020, comprising EU candidate countries (Türkiye, Albania, Bosnia and Herzegovina, North Macedonia) and EU members in the region (Bulgaria, Croatia, Greece, Romania, Slovenia), based on World Bank data. The output gap is computed with the Hodrick–Prescott filter, the renewable energy transition is measured by the change in the share of renewables in final energy consumption, and financial integration by net FDI inflows relative to GDP. Panel methods robust to cross-sectional dependence and heterogeneity are used, together with panel causality tests. The results show strong interdependence across countries and a highly persistent business cycle. Higher FDI inflows are associated with a widening output gap, whereas a rising renewable share is associated with a narrowing gap, with no significant difference between candidate and member countries. Once common regional shocks are controlled for, the FDI relationship weakens, suggesting a synchronised regional capital-flow cycle. Causality runs from growth to the renewable share rather than the reverse. The findings highlight the cyclical sensitivity of share-based renewable indicators and suggest that the energy transition alone should not be seen as a source of cyclical expansion, underlining the need to coordinate energy and investment policies under the European Green Deal.

Keywords

renewable energy; foreign direct investment; output gap; economic integration; panel data; Balkans

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Sustainable Basin Governance in Transboundary Rivers: Hydro-Ecological and Financial-Diplomatic Analysis of the Tunca and Meriç Rivers, Edirne, Türkiye

Prof. Dr. Cem Tokatlı

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Co-authors: Dr. Özdemir Akbal, Asst. Prof. Dr. Esra Gürbüz

Abstract

The Tunca and Meriç Rivers are vital components of the transboundary water systems of the Balkan Peninsula, crossing Bulgaria and Greece before reaching Edirne in Türkiye. Pollution measured in Edirne therefore reflects transboundary pressures and untreated municipal, agricultural and industrial discharges along the basin rather than local contamination. This study evaluates physicochemical and microbiological water quality data collected at sampling stations in Edirne during November 2026, a period of peak precipitation and surface runoff. Samples were analysed for basic physicochemical parameters, nutrient salts and fecal coliform bacteria, and classified according to the Turkish Surface Water Quality Regulation and the EU Water Framework Directive. The results show that the Tunca River carries a significantly heavier pollution load than the Meriç River, falling to Class III (polluted) status because of high ortho-phosphate phosphorus and fecal coliform levels, mainly due to untreated sewage from settlements in Bulgaria and agricultural runoff. The Meriç River shows Class I–II quality, owing to its higher discharge, greater dilution capacity and the inflow of the Arda River. Both rivers drain into a transboundary delta shared by Türkiye and Greece that hosts Ramsar-protected wetlands, including Gala Lake National Park and Evros Delta National Park, where pollution threatens biodiversity and local livelihoods. The study proposes a Joint Transboundary River Basin Committee among Türkiye, Bulgaria and Greece to apply the Polluter Pays Principle, and the mobilisation of green finance, EU pre-accession funds and transboundary green bonds for joint wastewater treatment and delta restoration.

Keywords

Transboundary Rivers, Tunca and Meriç Rivers, Hydro-Ecological Risk, Fecal Contamination, Transboundary Water Diplomacy, Green Finance

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Cem Tokatlı serves as a Full Professor and the Head of the Laboratory Technology Program within the Department of Chemistry and Chemical Processing Technologies at Trakya University İpsala Vocational School, Türkiye. He earned his Ph. D. degree in Hydrobiology and possesses extensive scientific expertise in limnology, surface water quality assessment, environmental chemistry, potentially toxic element dynamics, hydro ecological risk modeling, aquatic toxicology, and the sustainable management of freshwater ecosystems. His academic research focuses primarily on surface water resources, coastal lagoons, natural lake systems, sensitive wetland ecosystems, and river basins across the Thrace region. He has authored numerous high-impact scientific articles published in prestigious international indexed journals, regularly conducts original empirical research, and actively serves as an expert peer reviewer for leading international publications in environmental chemistry, ecotoxicology, and hydrology. Continuously recognized among the World's Top 2% Scientists by Stanford University and Elsevier based on standardized Scopus metrics since 2023, Professor Tokatlı is featured in both the Career-Long Impact and Single-Year Impact categories within the field of Environmental Sciences. He leads national and regional research projects evaluating seasonal pollution dynamics, ecotoxicological risks, and aquatic ecosystem health, contributing significantly to environmental monitoring, watershed management, sustainable water resource policies, and ecological conservation strategies.

Are Participation and Sustainability Indices Safer? Tail Risk, Volatility and Sector Composition in Borsa Istanbul

Prof. Dr. Elçin Aykaç Alp

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Co-author: Dr. Ahmet Cihat Erdoğan

Abstract

Participation (Shariah-compliant) and sustainability indices are often regarded as safer alternatives to conventional indices, but the literature is divided on whether their resilience comes from the screening label or from sectoral composition and financial strength. Borsa Istanbul, with a large banking sector and sharp monetary tightening between 2023 and 2024, offers a suitable setting to separate these explanations. This study asks whether participation, sustainability and dual-screened indices carry lower risk than conventional indices, whether this advantage persists under market stress, and through which channels it arises. Using daily data for six BIST indices from January 2022 to June 2026, it estimates Value-at-Risk and Expected Shortfall, GARCH-family models with structural breaks and out-of-sample backtests, and decomposes risk differentials into market beta, bank exclusion and firm size components under different stress definitions. At the 97.5% level, the participation index has a daily Expected Shortfall 0.32 percentage points lower than the BIST 100 and 11% lower return variance, an advantage that persists in normal and stressed conditions without a return penalty. However, most of this advantage stems from lower market beta and the exclusion of banks rather than from the label itself. Sustainability screening alone does not reduce risk, but combined with participation screening it offers additional protection during sharp domestic downturns. The study concludes that the lower tail risk of screened indices mainly reflects sectoral composition and financial soundness, and that their benefits should be communicated with attention to these underlying sources.

Keywords
participation index, sustainability index, expected loss, EGARCH, sectoral composition, Borsa Istanbul

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Prof. Dr. Elçin Aykaç Alp received her PhD in Economics in 2008, and completed her Bachelor's and Master's degrees in Econometrics. Currently a faculty member in the Department of Statistics at İstanbul Ticaret University, Prof. Aykaç Alp serves as the Director of the Center for Economy and Finance Application and Research (EFAM). Her primary research interests include applied econometrics, financial econometrics, time series analysis, and macroeconomic modeling. She has authored numerous articles published in national and international peerreviewed journals, book chapters, and papers presented at scientific conferences. She teaches undergraduate and graduate courses, supervises theses, and conducts research projects. Prof. Aykaç Alp continues her academic work as a faculty member in the Department of Statistics, Faculty of Humanities and Social Sciences at İstanbul Ticaret University. Ahmet Cihat Erdoğan completed his PhD in Financial Economics at Istanbul Commerce University in 2021. He also holds two master's degrees: one in Economics from Istanbul Commerce University and another in Islamic Economics and Finance from Ankara Social Sciences University. He graduated from Maltepe University with a bachelor's degree in Economics in 2012. His academic research focuses on financial markets, macroeconomic indicators, pension funds, Islamic finance, and participation insurance. He currently serves as the Shariah Compliance Unit Manager at Türkiye Katılım Sigorta A.Ş. and Türkiye Katılım Hayat A.Ş., having previously worked in internal audit and internal control. He has also served as a visiting lecturer at Haliç University, teaching Financial Literacy. He has published academic papers and presented at national and international conferences, with ongoing research interests in Islamic finance rating systems.

Türkiye's Post-World War II Global Economic and Financial Integration Process and Its Impact on Sustainable Development

Prof. Dr. Zafer Kanberoğlu
Van Yüzüncü Yıl University – Türkiye
Co-author: Ambassador Emre Zeki Karagöl

Abstract

Development strategies in the post-war era—shaped by the goals of expanding foreign trade volume and becoming an institutional part of the international system—deepened through Turkey's accession to the IMF and the World Bank in 1947, its founding membership in the OECD in 1961, its entry into the World Trade Organization (WTO) in 1995, and the 1996 Customs Union agreement with the European Union. However, the model adopted during this process failed to contribute positively to sustainable development; instead of fostering a production structure characterized by high value-added and a low carbon footprint, it relied on fossil fuel imports, unchecked infrastructure expansion, and the consumption of natural resources. In this assessment, which examines the interplay between sustainable development and integration through an ecological lens, three fundamental structural issues emerge. The first is a dependency on fossil fuels and external resources: industrialization and trade policies were anchored in traditional, energy- and labor-intensive sectors, which exacerbated a chronic reliance on imported energy and intermediate goods, while deepening ecological degradation and carbon emissions. The second issue concerns short-term growth and austerity policies: the growth model—driven by "hot money" inflows following financial liberalization—along with the standard IMF and World Bank stabilization programs implemented during crises, prioritized macroeconomic balances through austerity measures, thereby relegating green investments and environmental protection budgets to the background. The third factor is identified as a deficiency in R&D and green technology; the limited capacity for technology development has hindered Turkey's green transition—a transition based on clean technologies and high ecological standards—within global production networks. Although Turkey has successfully integrated into global economic and financial systems from an institutional standpoint, it has yet to fully establish a sustainable development framework aligned with ecological boundaries. To address this shortcoming and ensure that global integration supports an environmentally conscious development paradigm, it is essential to move away from policies reliant on short-term external financing. Instead, the country must adopt holistic strategies centered on the transition to renewable energy, the circular economy, green R&D investments, and high-value-added clean production. This study examines Turkey's integration into Western-led global economic and financial institutions following the Second World War from a historical and structural perspective, and analyzes the impact of this integration on sustainable development.

Keywords
Economic Integration, Financial Integration, Sustainable Development

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Prof. Dr. Zafer Kanberoğlu was born in 1977 in the city center of Van, where he also completed his primary, secondary, and high school education. He currently serves as a professor in the Department of Economics at the Faculty of Economics and Administrative Sciences of Van Yüzüncü Yıl University. Kanberoğlu completed his undergraduate studies in the Department of Economics at Istanbul University between 1997 and 2001, and subsequently pursued a master's degree in Economics at the Institute of Social Sciences of Van Yüzüncü Yıl University from 2002 to 2004. He earned his doctorate in Economics from the Institute of Social Sciences at Dokuz Eylül University, completing his studies between 2004 and 2008. Kanberoğlu began his academic career as a research assistant at Dokuz Eylül University in 2003. In 2008, he joined the faculty at Van Yüzüncü Yıl University, where he was appointed as an assistant professor in 2009, an associate professor in 2015, and a professor in 2020. His scientific research focuses primarily on development economics, economic growth, foreign direct investment, employment policies, value-added in the manufacturing industry, and sustainable development. Prof. Dr. Zafer Kanberoğlu contributes to the field of economics through numerous scientific articles published in national and international peer-reviewed journals, papers presented at international congresses, and chapters authored for edited academic books. In addition, Kanberoğlu serves as an active peer reviewer for various scientific journals; he also teaches a range of economics courses at the undergraduate, master's, and doctoral levels within the university and supervises graduate theses. Having held positions such as department chair, vice dean, and member of various committees, Kanberoğlu is married and a father of two.

Economic and Financial Cooperation Between the Republic of Türkiye and Countries of Central Asia: Islamic Finance and Sustainable Economic Development

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Istanbul Sabahattin Zaim University – Türkiye

Prof. Dr. Mehmet Bulut
International Balkan University – North Macedonia

Abstract

Recent global shocks, including the COVID-19 pandemic and regional conflicts, have exposed the limits of the post-World War II institutional order and pushed countries to seek alternative forms of economic and financial integration. In this context, economic relations between Türkiye and Central Asia have become strategically important, yet trade and investment flows remain well below their potential despite strong political will, shared heritage and the institutional momentum of the Organization of Turkic States (OTS). This paper examines the role Islamic finance can play in deepening economic and financial integration between Türkiye and the OIC member countries of Central Asia, an area that has received little research attention. It assesses how participation banking, sukuk and Islamic trade finance can facilitate cross-border trade and investment, how this integration can support sustainable development, and which regulatory, institutional and infrastructural gaps hinder it. The study adopts an exploratory sequential mixed-methods design, combining a quantitative phase with expert interviews, policy document analysis and comparative case analysis. The quantitative analysis is expected to confirm significant trade underperformance, with institutional barriers such as incomplete regulatory harmonisation, the absence of cross-border sukuk frameworks and fragmented payment infrastructure explaining a large share of the gap. The paper proposes a policy framework including a Türkiye–Central Asia cross-border sukuk programme under the OTS, a trade facilitation corridor with integrated payment systems, capacity building and regulatory convergence in Islamic finance, and tailored engagement with Tajikistan and Turkmenistan through ECO and IsDB programmes.

Keywords
Islamic finance; participation banking; Türkiye–Central Asia economic integration; Organization of Turkic States; gravity model; sukuk; regulatory harmonization; trade facilitation

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Hojamurod Hojaev is Senior Manager for Private Sector Operations in Türkiye and the Commonwealth of Independent States (CIS) at the International Islamic Trade Finance Corporation (ITFC), a member of the Islamic Development Bank Group. Based at the regional hub in Istanbul, he leads the institution's work on trade finance solutions, private sector investments, strategic partnerships with financial institutions and support for SMEs in the region.

With more than 15 years of experience in international development banking, impact investment and Islamic finance, he began his career in 2010 as a Private Sector Development Specialist at the International Finance Corporation (IFC), a member of the World Bank Group. He then served as a Project Specialist at the European Bank for Reconstruction and Development (EBRD), and in 2015 joined the Islamic Corporation for the Development of the Private Sector (ICD), where he worked on debt and equity investments in financial institutions. Since 2017 he has held various management positions at ITFC, playing an active role in high-volume transactions that facilitate access to Islamic finance instruments for agricultural, food, manufacturing and export-oriented businesses.

He completed his undergraduate studies at the School of Business of the University of Montana, United States, and is a PhD candidate in Islamic Economics and Finance at Istanbul Sabahattin Zaim University. He has spoken at numerous international conferences, including Global Trade Review (GTR) events and the Azerbaijan International Investment Forum (AIIF), on expanding trade among member countries and promoting sustainable economic development.

Legitimacy, Institutional Trust and Cryptocurrency Investment Intention among Young Adults in Türkiye: A System Justification Perspective

Dr. Fikret Yetkin

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Co-authors: Asst. Prof. Dr. Merve Çavuşoğlu, Prof. Dr. Muharrem Ersin Kuşdil

Abstract

Cryptocurrency investment intention is usually explained by attitude, subjective norm, perceived behavioural control, perceived risk and trust in cryptocurrency, while individuals' views on the legitimacy of the economic order and the trustworthiness of financial institutions have received little attention. This study extends the Theory of Planned Behaviour (TPB) with general system justification, economic system justification and trust in the economic system, and asks whether these constructs explain cryptocurrency investment intention beyond the TPB components. General system justification is expected to be negatively associated with attitude towards cryptocurrency and economic system justification positively, while lower trust in financial institutions is expected to make cryptocurrency more attractive as a substitute. Türkiye provides a distinctive context: high inflation, lira depreciation and concerns about institutional trust between 2021 and 2024, a ban on crypto payments since 2021 and the supervision of crypto-asset service providers by the Capital Markets Board since 2024. Data will be collected through an online survey of about 400–450 young adults aged 18–29 in Türkiye and analysed with structural equation modelling, first estimating a baseline TPB model and then adding the system-based constructs. As no data have yet been collected, the study sets out theoretically derived expectations, and the cross-sectional design implies associations rather than causal effects. If the expectations are supported, financial literacy programmes and regulatory communication on crypto assets may need to consider young adults' trust in financial institutions and their views of the economic order. The model could also be tested comparatively in Western Balkan economies.

Keywords

cryptocurrency investment intention; system justification theory; economic system justification; trust in the economic system; theory of planned behaviour; structural equation modelling

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Fikret Yetkin is a Postdoctoral Researcher in the Department of International Trade and Business at Bursa Uludağ University, Türkiye. She received his PhD in Economics from the same university in 2020, supported by the Council of Higher Education (YÖK) 100/2000 Doctoral Scholarship Programme in behavioral economics. Her master's research focused on sustainable development and the banking sector. Her research interests include sustainable development, the financial system and its macroeconomic context, and behavioral perspectives on economic decision-making. Her has authored articles and conference papers on sustainable development and contributed to the international Global Mental Wealth study on well-being across 92 countries (Social Indicators Research).

Income Trajectories before and after the Disintegration of Yugoslavia: Synthetic Control Evidence from the Six Former Republics

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Abstract

How do recent income levels of the six former Yugoslav republics compare with development benchmarks constructed from their earlier trajectories? We estimate separate synthetic controls using whole-country donors and annual GDP per capita over 1952-1987. The primary endpoint is 2022, although we also construct a growth-linked extension through 2025. Five donor pool specifications assess income eligibility, transition experience, proximity, and conflict screening. Withheld-period validation and donor concentration complement leave-one-out sensitivity checks. At the 2022 baseline, GDP per capita is 49.2% below the synthetic benchmark in North Macedonia, 38.9% in Bosnia and Herzegovina, and 36.2% in Serbia. Their gaps remain negative across the estimated pools, although Serbia's territorial comparability requires further refinement. Our findings support heterogeneous conditional development comparisons. Future research avenues should disentangle the effects of conflict, dissolution, transition, or a hypothetical surviving federation.

Keywords
Yugoslavia; synthetic control; GDP per capita; economic disintegration; donor selection; comparative development

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Aleksandar Stojkov is a full professor of economics at the Iustinianus Primus Faculty of Law, Ss. Cyril and Methodius University in Skopje, North Macedonia. He began his career at the Ministry of Finance, where he worked on the national budget and later headed the Macroeconomic Policy Department. In 2003, he joined the Faculty of Law, where he later served as vice dean for international cooperation and then for financial affairs.

In 2009, he earned his doctorate at Staffordshire University in the United Kingdom. His dissertation examined what drives current account deficits in Southeastern Europe and how those deficits relate to economic growth. During a postdoctoral fellowship at CIRANO in Montreal, he studied the proposed trade agreement between Canada and the European Union.

Much of his research examines how European integration affects the prospects of smaller economies. He has studied whether EU membership attracts foreign investment and whether European integration helps poorer economies catch up with wealthier ones. In 2025, he and Thierry Warin coedited a volume on the Western Balkans and the future of Europe. Alongside his academic work, he served on the board of the National Bank of the Republic of Macedonia and on the Securities and Exchange Commission.

Competition and Complementarity Potential in Türkiye's Economic Cooperation with the Western Balkans: A Cross-Country Comparative Analysis

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Abstract

Türkiye's growing economic presence in the Western Balkan Six (WB6) unfolds within a regional order anchored by the European Union. Whether this engagement deepens integration or creates rivalry is a question of political economy: export similarity may expose partners to competition in third markets, while complementarity may support interdependence. Using data for 2005–2024, this paper examines where potential structural competition and trade complementarity coexist across the WB6, how they relate to actual trade and investment ties, and which integration path appears more viable for each partner. Export-basket overlap from UN Comtrade measures structural similarity, the World Bank trade complementarity index (TCI) measures how well Türkiye's exports match partner demand, and IMF trade and direct investment data capture realised linkages; three clustering models summarise export structure, trade intensity and trade combined with investment. Türkiye and Serbia share a common export-structure cluster, while other partners show stable, distinct specialisation. Trade intensity is generally low owing to size asymmetry, and Türkiye's regional footprint is projected through investment as much as trade. Bosnia and Herzegovina shows the highest and rising overlap with Türkiye, Serbia is its largest WB6 trade partner, and Albania and North Macedonia account for about 27% of Türkiye's WB6 trade but some 55% of its regional investment stock. The results challenge the view that similarity and complementarity are mutually exclusive. The paper recommends intra-industry trade and regional value chains with Bosnia and Herzegovina and Serbia, investment-led complementarity with Albania and North Macedonia, and a WB6–Türkiye cooperation platform based on the EU's Smart Specialisation model.

Keywords

Türkiye; Western Balkans; export similarity; trade complementarity; foreign direct investment; regional economic integration

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Regional Economic and Financial Integration: A Pathway to Sustainable Development amid a Changing Global Financial Order

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Prof. Dr. Mehmet Bulut
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Abstract

The global financial order is rapidly changing as we can see some visible signs of local-currency settlement arrangements, crypto currency settlement arrangement, BRICS payment initiatives, cross-border central bank digital currency pilots such as mBridge, the regulation of stablecoins, and a gradual diversification of reserve holdings. Together these point to a more multipolar system. The reasons behind this diversification are many such as the Sanctions on Russia in 2020 and the freezing of central bank reserves and earlier sanctions of Iran and freezing of its foreign exchange reserves, have shown the countries' vulnerability when they dependent on a few reserve currencies and payment networks.

This paper argues that regional economic and financial integration is one pathway through which countries can pursue sustainable development in this setting. Integration brings social and economic benefits among member states more so for those who are geographically and ethnically close to each other. Sharing common culture and similar socio-economic factors helps in building closer ties among neighbouring countries build trust, mobility, shared institutions and cultural exchange. Trade and investment within a region also transportation and transaction costs and higher labor mobility, broaden the regional markets, augment economies of scale, and cut reliance on distant and external risky financial centres. The world has already witnesses successful integrations of European Union, ASEAN, the African Continental Free Trade Area, the Gulf Cooperation Council (GCC), and the CFA franc zones in West and Central Africa. There are many potential areas where such integration is possible. Integration is not free of risk as there are demons of asymmetric shocks and lose monetary and exchange-rate autonomy, uneven distribution of gains, a rapid across border spread of crisis though contagion effect. The paper therefore also proposes mitigation strategies for such risks those may include gradual and sequenced integration, convergence criteria, fiscal stabilisation and transfer mechanisms, regional financial safety nets, macro prudential supervision in the regions, interoperable payment systems, and strong, accountable institutions. With these conditions in place, regional integration can strengthen economic resilience and support sustainable development.

Keywords
regional integration, financial integration, sustainable development, global financial order, de-dollarisation, risk mitigation

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Suhail Afzal Qureshi is currently a PhD scholar in Islamic Economics and Finance at Istanbul Sabahattin Zaim University (2024–2028). His doctoral research examines the possibility of a common currency among OIC countries amid debates on a new international financial order. He holds an MSc (Hons) in Agricultural Economics from the University of Agriculture, Faisalabad, and the Diploma of Banking of the Institute of Bankers Pakistan, and has attended various short training courses.

He started his career as a banker and spent 16 years with The Bank of Punjab, where he managed the Agriculture Credit Department at the Head Office. He also served in the corporate sector for two years. He then turned to academia and served at COMSATS University Islamabad, Sahiwal Campus, for 16 years, retiring as Assistant Professor in 2025. He supervised MS Finance theses as well as student projects and internship reports, and also served as Campus Academic Coordinator.

His research interests include Islamic economics, Islamic finance, international finance, and economic and financial integration. He has presented papers at a number of international conferences and is the author of a forthcoming chapter on the Islamic commodity market, to be published by Taylor & Francis.

Digital Financial Inclusion and the Age-Related Digital Divide: Integrating Older Adults into the Digital Economy in the Western Balkans and Türkiye

Dr. Nisa Şansel Tandoğan
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Abstract

Demographic ageing is placing growing pressure on economies, social security systems and healthcare expenditure, and requires long-term policy responses. At the same time, as economic and financial activities shift to digital platforms, digital financial inclusion has become an important dimension of older adults' economic participation. While digital technologies can improve quality of life, limited digital skills, restricted internet use and low confidence may expose older adults to new forms of financial exclusion. This study examines the financial integration of older adults in Türkiye and the six Western Balkan economies (Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia and Serbia) through a descriptive statistical analysis of the World Bank's 2024 Global Findex data, covering 7,000 respondents. The findings show that age-related gaps are concentrated in digital channels rather than in basic account ownership. While account ownership is widespread, digital account ownership, internet use and digital merchant payments decline markedly with age, peaking in middle age and falling among the oldest groups. Differences across age groups are statistically significant for all indicators, with the strongest divergence in internet use. The gap between older and younger adults is most pronounced in Türkiye, Serbia and Montenegro; in Albania the smaller gap reflects low digital inclusion among younger adults, while Kosovo is an exception where older adults perform better on some indicators. Education is also strongly related to digital financial participation. The study argues that reducing age-related inequalities in digital financial access is essential for inclusive and sustainable development, and calls for further multivariate analysis to separate the effects of age, education and cohort.

Keywords
Digital Financial Inclusion, Age-Related Digital Divide, Older Adults, Digital Financial Services, Financial Exclusion, Western Balkans and Türkiye

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Nisa Şansel Tandoğan holds a Bachelor's degree in Economics from Bilkent University, a Master's degree in International Economics from the University of Essex, United Kingdom, where she completed her thesis titled "Effects of Political Relations on Tourism Revenue: The Case of Turkey and Russia," and a PhD in Economics from Hacettepe University, with a doctoral dissertation titled "Bridging Gaps in Food Insecurity: The Role in Sustainable Development, Structural Drivers and Agricultural Price Dynamics." She began her academic career as a research assistant at Konya Food and Agriculture University (KFAU) and currently serves as a specialist and project researcher at the Turkish Academy of Sciences (TÜBA). Her research interests lie at the intersection of international economics and development economics, encompassing sustainable development, food security, economic crises and resilience, agricultural economics, tourism economics, and demographic dynamics. Her work explores the economic and social implications of global transformations, structural differences, and demographic and environmental changes, with particular attention to their interactions and implications for sustainable development. Drawing on empirical and comparative research approaches, she seeks to generate evidence-based insights into contemporary economic and development challenges. Her research has been published in reputable international academic journals. Through her scholarly work, she aims to contribute to the international academic literature and inform evidence-based policymaking, particularly in the pursuit of sustainable and inclusive development.

Determinants of Sustainable Entrepreneurship in Emerging Economies: Bridging Intention and Action in the Case of Pakistan and Türkiye

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Abstract

This study investigates the determinants of sustainable entrepreneurial behavior among university students in Pakistan and Türkiye using an Extended Theory of Planned Behavior (TPB). The framework incorporates Entrepreneurial Attitude, Self-Efficacy, Subjective Norms, and Perceived Barriers as predictors of Sustainable Entrepreneurial Intention, which mediates the intention–behavior relationship. Moderating effects of Situational Factors (economic, institutional, and technological environment) and Entrepreneurial Education were also examined. Data from 389 business students were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). Results confirm intention as the strongest driver of behavior, with Subjective Norms exerting the greatest influence. Situational Factors positively moderated the intention–behavior link, while Entrepreneurial Education showed no significant effect. Country-level differences highlight the importance of institutional support in shaping outcomes. The findings provide new insights for policymakers and educators seeking to promote sustainable entrepreneurship in emerging economies.The study offers significant societal and policy insights by showing how young entrepreneurs in emerging economies can be empowered to turn sustainable business intentions into concrete action. For society, the results highlight the potential of entrepreneurship to address pressing issues such as unemployment, poverty, and environmental degradation. For managers and educators, the evidence underscores the importance of fostering intention through confidence-building, practical exposure, and networks rather than solely relying on classroom-based entrepreneurial education. For economic policy, the cross-country comparison emphasizes how institutional quality and supportive ecosystems are decisive in strengthening the intention–behavior link. In Pakistan, weak situational support hinders entrepreneurial action despite strong intentions, while in Türkiye, stronger institutional structures amplify entrepreneurial outcomes. These insights can guide policymakers in designing entrepreneurship programs, incubators, and digital infrastructure that lower barriers and enhance resilience, thus advancing sustainable growth in line with the conference theme of resilient economies.

Keywords
Sustainable Entrepreneurship, TPB, PLS-SEM, Pakistan, Türkiye

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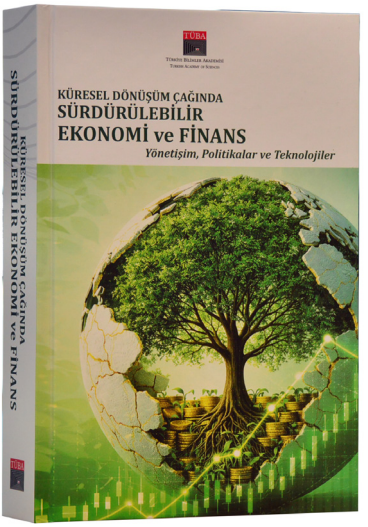
Muhammad Hassan Abbas holds a Ph.D. in Islamic Economics and Finance from Istanbul Sabahattin Zaim University (2025), a Master's degree in Islamic Banking and Finance, and a Bachelor's (Hons) degree in Economics and Finance from Minhaj University Lahore, Pakistan, where he graduated with Roll of Honor and Merit Certificate distinctions.

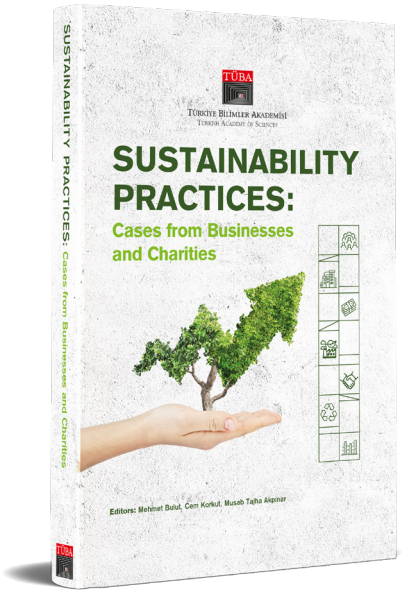
He brings over 8 years of cross-sector experience spanning academic research, Shariah governance, regulatory compliance, and ESG advisory. He currently serves as Assistant Professor at the School of Islamic Economics, Banking and Finance, Minhaj University Lahore, and as Visiting Researcher at Istanbul Sabahattin Zaim University. He has previously held positions as Head of Compliance at Al-Mawakhat Microfinance Company, Pakistan, and Director of Governance at NEKST Group, Saudi Arabia, advising senior leadership on compliance architecture, policy reform, and organisational restructuring.

His research concentrates on sustainable entrepreneurship, ESG integration, international trade finance, and cross-national policy in emerging markets. He has published over nine peer-reviewed articles in internationally indexed journals including Borsa Istanbul Review (WOS SSCI), Journal of International Entrepreneurship (Scopus, WOS), and Journal of Islamic Marketing (Scopus, WOS ESCI). He has presented at international conferences in Bosnia and Herzegovina, Qatar, Malaysia, and Turkey. At graduate level he teaches Microeconomics, International Trade Finance, and Research Methods, and has substantial experience in curriculum development, thesis supervision, and academic mentoring at doctoral and master's level.



Sustainable Economy and Finance in the Age of Global Transformation: Governance, Policies, and Technologies

One of the most critical issues of the 21st century, sustainability is not merely an environmental concern; it is a multidimensional field of transformation that directly impacts the economy, finance, governance, and social welfare. This study examines this broad framework through an interdisciplinary approach, providing an in-depth analysis of the role of economics and finance in achieving sustainable development goals. The book examines a wide range of current themes, from the impacts of climate change on agriculture to green finance policies, and from the opportunities offered by digital inclusion to the ethics-based approaches of Islamic economics. Topics such as the prediction models of international institutions, the new roles of central banks, corporate sustainability strategies, and innovative financial instruments are also detailed through comprehensive analyses. In this regard, the book serves as a guiding resource not only for academics but also for policymakers, the business community, representatives of the financial sector, and all stakeholders with a stake in sustainable development.



Sustainability Practices: Cases from Businesses and Charities

Addressing different dimensions of sustainable development, the book aims to encourage strategic thinking and raise awareness in this field. By emphasizing the importance of sustainability in both theoretical and practical terms, the book contributes to expanding knowledge and comprehension in this field.



The Synthesis Report on COP31 Action Agenda Targets

Prepared as a multidisciplinary work that brings together the collective expertise of 17 scientists from TÜBA Working Groups in the lead-up to COP31, the report consists of seven chapters. It outlines a science-based roadmap ranging from electrification and net-zero emissions to climate-resilient cities and green industrialization. The report examines how education, technology, and artificial intelligence can accelerate climate resilience worldwide. Based on meticulous and rigorous scientific research, this synthesis study presents concrete policy recommendations for the COP31 Action Agenda while reflecting TÜBA's commitment to evidence-based climate science and international cooperation. Prepared for scientists, policymakers, and diplomats, the report calls for a global consensus based on shared responsibility. As Türkiye prepares to host COP31 in Antalya, this report serves as a scientific guide for climate action. Overall, the report demonstrates that lasting sustainability, just like lasting peace, depends on unity across nations and disciplines.



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