



“Sustainability in Western Balkans in  
an Era of Uncertainty”

Marche Polytechnic University  
& University of Banja Luka

Conference Proceedings

Ancona, Italy – 17-18 September 2024  
Faculty of Economics, Piazzale R. Martelli 8

[www.redete.org](http://www.redete.org)



## 11<sup>th</sup> REDETE Conference 2024

### Publisher

Faculty of Economics, University of Banja Luka  
Majke Jugovića 4, 78 000 Banja Luka  
Republika Srpska, Bosnia and Herzegovina  
Phone: + 387 51 430 012. Fax: + 387 51 430 053

### Managing Editors

Jovo Ateljević, Donato Iacobucci and Dragan Gligorić

### Local Organising Committee

Erblin Berisha  
Marco Cucculelli  
Valentina Giannini  
Donato Iacobucci  
Marco Ciro Liscio  
Francesco Perugini  
Martina Orci  
Andrea Perna  
Roberta Ruggeri  
Paolo Sospiro

### Faculty of Economics University of Banja Luka

Jovo Ateljević  
Dragan Gligorić  
Milenko Krajišnik  
Dragan Milovanović  
Jadranka Petrović  
Vladana Ritan

### Scientific Committee – Editorial Board

Ruta Adis, USA  
Nikša Alfirević, Croatia  
Jovo Ateljević, BiH  
Nemanja Berber, Serbia  
Giulia Bettin, Italy  
Predrag Bjelić, Serbia  
Jelena Budak, Croatia  
Andrew Burke, UK  
Ron A. Boschma, Netherlands  
Marijan Cingula, Croatia  
Marco Cucculelli  
Diego d'Adda, Italy  
Maja Đukić Ivanović, Serbia  
Ljiljana Eraković, New Zealand  
Dragan Gligorić, BiH  
Donato Iacobucci, Italy

Dejan Jović, Croatia  
Joern Kleinert, Austria  
Milenko Krajišnik, BiH  
Dragan Milovanović, BiH  
Ana Mugoša, Montenegro  
Georgios Panos, UK  
Andrea Perna, Italy  
Saša Petković, BiH  
Schampa Roy-Mukherjee, UK  
Peter Rosa, UK  
Suzana Stefanović, Serbia  
Andreas Stergiou, Greece  
Ilija Stojanović, U.A. Emirates  
Marjan Svetličić, Slovenia  
Roy Thurik, Netherlands  
Kivanc Ulusoy, Turkey

### Conference Advisor

Vassilis K. Fouskas, University of East London

## Sponsors and Partners

### Hosts:



UNIVERSITÀ  
POLITECNICA  
DELLE MARCHE



УНИВЕРЗИТЕТ У БАЊОЈ ЛУЦИ  
UNIVERSITY OF BANJA LUKA  
ЕКОНОМСКИ ФАКУЛТЕТ  
FACULTY OF ECONOMICS



### Sponsors:



## Table of Contents

ENGENDERING SOCIO-ECONOMIC PROSPERITY OF THE UNITED KINGDOM THROUGH GENDER EQUALITY: SHELVING THE UK-RWANDA AGREEMENT ON ASYLUM-SEEKERS .....	5
THE GEOPOLITICS OF ENERGY IN SOUTH AMERICA: RUSSIAN INFLUENCE AND THE RISK OF REGIONAL INSTABILITY .....	19
UNVEILING THE ROLE OF ARTIFICIAL INTELLIGENCE IN STRENGTHENING PUBLIC INTEGRITY AND COMBATING CORRUPTION .....	29
PRODUCTIVITY AT THE GRASSROOTS THE SIGNIFICANCE OF LOCAL GOVERNMENT ACTIONS .....	43
UTILIZING THE DELPHI TECHNIQUE TO EXAMINE OPEN INNOVATION AND SUSTAINABLE ENTREPRENEURSHIP: INSIGHTS FROM SMES IN ALBANIA.....	55
IMPROVING CLIMATE AND SUSTAINABILITY ACTION IN THE WB REGION THROUGH HIGHER EDUCATION .....	64
EXPLORING SUSTAINABLE ENTREPRENEURSHIP IN ALBANIA: INSIGHTS FROM GREEN ENTREPRENEURS .....	81
ECONOMIC PERFORMANCE AND PERSPECTIVES OF THE WESTERN BALKAN COUNTRIES .....	96
EFFECTIVENESS OF DIFFERENT GREEN ECONOMIC POLICIES - EVIDENCE FROM HIGH ACHIEVERS .....	109
THE ROLE OF FISCAL RULES IN ENSURING THE STABILITY OF PUBLIC FINANCES IN WESTERN BALKAN COUNTRIES.....	122
OBSERVING THE ROLE OF SECTORAL EMPLOYMENT SHIFTS IN THE CONTEXT OF GREEN TRANSITION: EVIDENCE FROM BOSNIA AND HERZEGOVINA AND THE EUROPEAN COUNTRIES.....	138
EVALUATING THE IMPACT OF PROCEDURAL NON-TARIFF BARRIERS ON BOSNIA AND HERZEGOVINA’S EXPORTS TO ITS MAIN PARTNERS FROM THE EUROPEAN UNION.....	154
EFFICIENCY OF INVESTMENTS IN TOURISM IN BOSNIA AND HERZEGOVINA .	163

# ENGENDERING SOCIO-ECONOMIC PROSPERITY OF THE UNITED KINGDOM THROUGH GENDER EQUALITY: SHELVING THE UK-RWANDA AGREEMENT ON ASYLUM-SEEKERS

Felix Nana Kofi Ofori <sup>1,\*</sup>

<sup>1</sup> Sunderland University in London

\*Corresponding author: Ofori.Ofori@sunderland.ac.uk

DOI: [10.63356/978-99976-57-34-3\\_1](https://doi.org/10.63356/978-99976-57-34-3_1)

## Abstract

Most women suffer discrimination, which denies them the freedom to engage actively in the socio-economic endeavours of society in consonance with Sustainable Development Goals (SDG 5). This article contends that the United Kingdom-Rwanda Agreement on deportation of asylum-seekers to that country, is brazen demonstration of the policy as a malleable concept misused by politicians to achieve expedient political gains. Although the challenges of asylum and immigration are partially pervasive in the UK, the article argues, that the erstwhile Conservative government's agreement with Rwanda as strategy to stem the problem is not only ill-thought-out, but a drain on national coffers which should have been prudently invested in health or education productively. Furthermore, this article holds the view that a percentage of the £700mn paid to the Rwandan government should have been expended to revamp the technical and logistical facilities of Asylum processing centres, as a ploy to integrate the asylum seekers, especially women, to take up essential vacant positions in the NHS, social care services and agricultural activities to expand the economy. The article opines that the UK government should have leveraged the asylum seekers as strategic asset by re-training and assigning them to shore up sectors with dire vacancy challenges, post implementation of the Brexit agreement. Moreover, the article proposes that with society's confidence waning in domestic British politics, coupled with the UK's reputational decline globally, the government endeavours to protect the dignity and human rights of women asylum-seekers to regain credit as proclaimed by the Labour Party's 2024 elections manifesto. Finally, the article recommends that securing gender equality enhances SDG 5, thus, the government must thrive to win the British people's trust by instituting an inclusive committee, with a diverse membership of society to deliberate on the issues of refuges/immigration; so that governmental decisions and policies on the topic bear strands of public /community support.

**Keywords:** Asylum-women, Aphasia, Rwanda, SDG 5, Socioeconomics, and strategic thinking

## 1. Introduction

*“A renewed outburst of violent disorder broke out in several English towns and cities Yesterday, further escalating the most widespread far-right violence in the UK for years”* (Williams and Uddin, 2024).

The preceding quotation reflects the perennial and vexatious issues characterising asylum-seekers and immigration, confronting the United Kingdom (UK) and its allied western states on the continent of Europe. On the 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> of August 2024, violent protestors believed to be orchestrated by far-rights congregated in certain cities and town centres of the UK, to demonstrate against the government’s policy of using public funds to house asylum-seekers in expensive hotels in Rotherham, South Yorkshire and other places (Sinmaz and Vinter, 2024). The violence resembles other public upheavals and protestations in major cities across Europe, exhibiting anti-asylum and immigrants’ sentiments. Similarly, in the US, Donald Trump (Trump) was fiercely revving up anti – asylum and immigration campaigns with a view to appeasing his base; and specifically espoused, that “the world’s criminals are pouring into a town near you and being sent by their governments” (Wolf, 2024: 25). Notwithstanding the human rights abuses such comments would have on immigrants and asylum seekers in US, Europe and more particularly in the UK, Trump’s statement was not only irresponsible of him as a former president, but also has the potential of distorting international relations and collaborative efforts by states and organisations seeking to solve the problem. In the UK, the issue of asylum and immigration was a dominant topic which was exploited by selfish politicians in the 2024 general elections, contributing partially to ousting the Conservative government from power (Rahman, 2024). Like their counterparts in the US, both the Conservative and Labour governments have failed over the years to devise cogent and pragmatic policies to tackle the phenomenon but resorted to it as a convenient political weapon. Against that backdrop, this article examines how gender equality is stymied through the proposed UK-Rwanda agreement, initiated by Rishi Sunak’s conservative government to undercut the United Nation (UN)’ s Sustainable Development Goal (SDG5). For the purposes of this article, the terms, asylum- seekers and immigration, are used interchangeably, while the paper is organised as follows.

First, some literature and the causes of asylum/immigration into the UK is discussed; second, a brief geography of Rwanda is to situate the discussion; third, the agreement between the UK - Rwanda as an offshore strategy to stem refugees is considered; fourth, the perilous state of asylum women is explored; fifth, the status of asylums/immigration in the UK is examined; six, the potential contribution of women asylum seekers to the British economy is engaged; and seventh, some recommendations are proffered to help the government leverage the skills and talents of asylum-women to expand the economy.

## 2. Literature review

As a malleable concept/principle, deportation of asylum-seekers is conveniently manipulated by politicians, policymakers and some civil organisations to pursue an agenda or initiate a campaign, which promotes their selfish interests or secure expedient socio-political results, with prevalence of this development in Europe and United States of America (US) (Ofori, 2021). The controversies of the abounded UK-Rwanda deportation scheme exemplify an expedient objective subtly deployed by people in and of places of authority towards the issue, without leveraging the strategic benefits these asylum-seekers can contribute towards host states. Pre-eminently, the pernicious political debates associated with the 2024 British general elections; including those that characterised the US presidential election, with Trump emerging as the 47<sup>th</sup> president-elect for a second term (Strauss, 2024) is instructive. While such harmful characterisations of immigrants/asylum-seekers prevent open and critical discussions at the

national level to secure effective strategies to resolve the challenge, Ofori (2023) contends that it offers policymakers and public institutions, especially short-sighted politicians, easy and cheap opportunity to feed off the immigration debate, thus denying society the long term and sustainable rewards of immigrants to augment businesses' growth. The contributions of immigrants to any host country, particularly in the spheres of rebuilding the socio-economies of the US and UK post second world and contemporaneously are well documented. However, in pursuit of their geo-political interests in developing regions of the world, the US and UK have repeatedly treated immigration as an existential threat to their existence without openly engaging with stakeholders inside and outside public spaces to find lasting solution to the phenomenon (Shilliam, 2021). The resultant impact of such policy failures among the British, Europeans and their American counterpart has been the exacerbation of the crisis in the affected states (Ofori, 2021). There is an argument that the erratic geo-political strategic formulations within NATO and their allied powers/states, breed foreign conflicts that compound immigration -asylum crises along the borders of European states (Ofori, 2021). This dimension of the immigration argument has received little scholarship, which will be addressed partly in this article. Despite the substantive roles played by immigrants and asylum women to shore up the socio-economic welfare of European states and US, there are still untapped creativity and novel ideas embodied in immigrant women, which ought to be harnessed by their host states to promote sustainable development, including restoration of climate change and environmental crisis (Barber, 2005). Exploiting the issues of immigrants, asylum-seekers and undocumented foreigners in Britain, Europe and US to score political victory do not address any substantive economic challenges nor help to utilise the creative resources inherent in those groups by host states to expand their social, economic and political status (Jones et al. 2022). Rather, they present an opportunity for political agitators to pressurise politicians and their policymakers to devise ambiguous and populous policies which are detrimental to asylum-seekers, thereby designating them as human parasites bent on sapping state funds while compromising social amenities in host states; such thinking not only dehumanises the dignity and human rights of immigrants, but also stifle and constrain them from unleashing their skills to live as dignified humanity (Rosenbaum, 1980; Ofori, 2021). The view that asylum-seekers are burden and strain on the socio-economic resources of Britain is purely a redundant proposition; and obscures the fact that, these peoples are endowed with several academic qualifications, skills, technical knowledge and expertise to be leveraged strategically to boost the British society; especially, in health, education, construction and agriculture (Ofori and Sarpong, 2020). Perusing the literature, one recognises that immigrants/ asylum-seekers are not a drain or parasites on the UK's economy, and should not be treated as secondary human beings, but as humanity endowed with creative skills and critical expertise to contribute towards expanding the worth of the UK's socio-economic fortunes. Furthermore, the available literature addresses the general immigrant/asylum – economic dichotomy, however, this article seeks to explore the untapped contributions of asylum women towards the attainment of socio-economic growth of the UK through the prism of the UN's gender equality (SDG 5). Similarly, the word immigration and by extension asylum-seekers, will be used interchangeably throughout this article.

### **3. Increased Asylum-Seekers into the UK: The Factors**

Many factors are responsible for the rise in asylum numbers to the UK. According to the International Labour Organization (ILO) (2021), the gap in average wages between the rich and poor countries is an enormous cause. For example, the purchasing power of average monthly earnings in Ethiopia was five percent of those in Germany, creating the largest arbitrage opportunity on the planet and enormous potential welfare gains (Wolf, 2025:25). The

arbitrage opportunity creates voluntary migration among citizens of the global south who venture into the cities of developed states, seeking asylum rights and protection for socio-economic survival. Without a doubt, economic solace and security needs induce asylum seekers and migration movements along the borders of European states with the UK included. Intricately linked to the economic factors are poorly framed foreign policies by the UK and its allied states to gender destabilisations in African, Middle East and other developing states. While sponsored internal conflicts in developing states are acute and executed to displace populations from the global south, the US and UK, consider it as an opportunity to execute proxy wars with a view to achieving their geo-political interests, culminating in asylum-seeking and uncontrolled immigration across Germany, Italy France and the UK (Mearshimer and Walt, 2007). This ill-informed policy, which is backed by lop-sided strategic initiatives and devoid of achieving true reconciliation between factional states - Israel and Palestine and other states in the Middle East- are not only unjustified in international diplomacy but intended to earn the UK a parochial political gain (Schiff, 2003). Glaring examples of such irreconcilable and inhumane foreign policies are on display in the Middle- East, where Netanyahu's Israeli Defence Forces (IDF) is callously killing and maiming thousands of Palestinians, destroying their properties and basic means of livelihood (Wolf, 2024). Without hope of returning to their home-countries coupled with uncertainties, the viable alternative is to secure asylum in European states, especially the UK. The perennial public outcry against the Conservative government together with its repeated failure to stem and secure the borders led to initiating the Rwanda compact.

Another factor contributing to the increase in population of asylum seekers to UK is the enormous pressure exerted on the application and processing system. In response to the Home Office Affairs Committee on 23 November 2023, former Home Secretary, Suella Braverman, stated that: *"there has been mounting pressure on asylum system for several years because of the number of people putting in claims. Some of those claims involve complex needs, safeguarding measures and issues to do with age assessment. Some people are very vulnerable. If there is a modern slavery claim, that requires more resources. Those claims, because of our legal duties, need to be considered fully and robustly, and that takes time and certain level of expertise"* (Home Affairs Committee, 2022). Recognising the pressure and its attendant legal implications of processing asylum applications, it is also the case that successive UK governments were ill-prepared to manage the challenges; because the £577 million which the Sunak government paid to Rwanda for resettling the asylum seekers, could have been utilised creatively and strategically to resource new information technology facilities centres to expedite the processing of asylum-seekers with a view to reintegrating them. Equally, part of that money could also be utilised to retrain suitable asylum-seekers to participate constructively in sectors such as the NHS, social care, Construction and agriculture. With that, women and young girls who are often marginalised will be empowered, to contribute to the economy as well as fend for themselves, thereby dwindling the gender gap. One point worth stating here is that different sources quoted varied figures the Sunak's conservative government paid in respect of the abandoned UK-Rwanda agreement; however, irrespective of the variation in the amount, the fact remains that the amount was enormous enough to be invested judiciously to address to the challenges more strategically at home.

Furthermore, the obsession among the UK's political elites for temporal and external redemptive measures is yet one factor responsible for expanding the asylum and immigration crises. Cavendish (2024) explains that net migration in the year 2022 stood at 764, 000 whilst the figure was 685, 000 in 2023. Cavendish also stated that: *"yet we have seen no coherent strategy from the government which is obsessed over a relatively small number of asylum-seekers crossing the channel. Failure to acknowledge the scale of legal migration or plan for it, has been running for years"* (Cavendish 2024:14). Partly, Blair's open policy to allow the early accession member states of the European Union (EU) to the UK has been blamed for the asylum and immigration challenges in the country as well; yet the attraction of offshoring these people to Rwanda, dull the vision



of the political elites to expend domestic resources wisely in retraining those vibrant asylum seekers to assume active and participatory roles to grow the economy of Britain. Although the above factors are not exhaustive, the Conservative government opted for Rwanda as a magic bullet to stem the crisis.

#### 4. Rwanda as an offshore site/deportation base for Asylum Seekers

The Conservative government's policy of deporting asylum-seekers to Rwanda was intended to stem the influx of asylum seekers into the UK; but it ended with the Labour Party's victory at the general elections, ushering them into power on 7 July 2024 (McKee and Pannell, 2024). Rwanda is a country located in Central Africa, bordered to the North by Uganda, to the East by Tanzania, to South by Burundi and the West by the Democratic Republic of Congo (Republic of Rwanda, 2024). It has a total area is 26,338 km<sup>2</sup> with a population size of 14, 256, 567 and Kigali as the capital city (Worldometer, 2024). Rwanda has a population density of about 445 people per Km<sup>2</sup> with a life-expectancy of 68.02 years (Republic of Rwanda, 2024); while the two major ethnic groups - Hutus and Tutsi -speak English and French as their official major languages. Besides its dark past characterised by the 1994 genocide atrocities, Rwanda has recovered through ethnic and natural reconciliation and currently ranked as the 8th business-friendly country in the sub-region of Africa (World Bank, 2024).

Figure 1. A map of Rwanda



Under the premiership of Rishi Sunak's Conservative government, the choice of Rwanda to resettle and process asylum applications from that country, culminated in the proposition of the Rwanda Bill as an attempt to stifle illegal migration as well as break the business model of the gangs, who ferry illegal migrants across the French channel into the (UK government, 2024). Although the UK government stated among other factors, that its primary objective was to stop the smuggling of illegal migrants into the UK, however, the policy was saddled with criticisms by the then opposition labour party, human rights institutions, political commentators and a section of the judiciary on the basis that it violates the human rights and dignity of the migrants/asylum seekers. For example, the International Rescue Committee (IRC, 2024), argued that the Rwandan Bill compromises the Refugee Convention, of which Britain is a signatory; and states that asylum seekers have the right to apply for asylum in the UK, and not to be penalised for arriving irregularly. Also, an IRC and YouGov poll conducted in June 2023 revealed that 65% of the UK public support asylum seekers; contending that, the Rwanda bill

undercuts the UK's international obligations and is incompatible with the UNHCR's 1956 Convention, thereby calling on the UK government to uphold its responsibility for protecting Refugees (IRC, 2024). No country, developed, developing or underdeveloped, has infinite resources to manage the challenges of asylum indefinitely. However, in the case of the UK, for example, the phenomenon of asylum and immigration has morphed into a political "prey" with which the two major political parties – Conservatives and Labour – take turns to exploit for their political gains. Over the years, Rwanda had been criticised and labelled by western states, including the UK, as undemocratic state governed by a despot, Paul Kigame, for suppressing opposition forces; however, for expedient political reasons, the Sunak government found in Rwanda a solace country to deport and process asylum and immigration applications. (Ofori, 2023). This glaring manifestation of double standards in national policy formulation reveals the expediency and hypocrisy that characterised both the Conservative and Labour governments in resolving the asylum challenge. This calls for an urgent humane and genuine thought-out policy to address the phenomenon in the interest of economic and social stability.

## **5. The Status of UK's Asylum/Immigration**

The Office for National Statistics (ONS) report indicates that between 2015-2016, approximately 16,360 refugees had resettled in England and Wales under the vulnerable persons resettlement scheme (VPRS) and the vulnerable children resettlement scheme (VCRS) (ONS, 2021). The ONS report also showed that out of the 16,360 resettled, 52% were males; 48% were females and 50% were those under the age of 18 years with majority living in local authority accommodations (ONS, 2021). With respect to gender equality goal (SDG 5), the above figures mirror the precarious state of women, because often they are unable to escape during famine, wars and severe natural disasters, a phenomenon that further entrenches gender inequality. According to the Refugee Integration Outcomes Data of 2022, most of the UK's asylum seekers are people fleeing war torn countries, political persecutions, natural disasters including famine. Also, the report stated that most of the refugees originated from countries; namely: Algeria, Bahrain, Egypt, Iran, Iraq, Israel, Jordan, Kuwait, Lebanon, Syria, Tunisia, Yemen Palestine, Qatar and Saudi -Arabia. As stated in section two above, the causes responsible for asylum and immigration to UK, are partly because of the UK governments' foreign policy initiatives in the Middle East; particularly the blanket support provided to the Israeli government without a corresponding effort to implement the two-state solution, has practically exacerbated the asylum crises within and without the frontiers of the UK (United Nations, 2024).

Despite feeble attempts by the Conservative government to address the challenges of asylum, another report has stated that at the end of 2021, there was a backlog of 83, 535 cases awaiting an initial decision for asylum claims made since the end of 2006 (ONS, 2021). Furthermore, that outstanding numbers have quadrupled since ex- Home Secretary- Priti Patel assumed office in 2019 (Mackenzie, 2022). The backlog of 83, 535 unprocessed asylum applications under the fourteen years of the Conservative government's reign suggests two things. First, it indicates limited political-will on the part of the government to resolve the problem; and second, that the policy and strategies adopted by the government to address the problem is ineffective, thus compounding the crisis. The conclusive view is that the asylum/immigration issues remain a challenge for the UK; however, it requires substantive creative solutions backed by genuine political-will, rather than the lukewarm policies which have/had been experimented over the years by both Conservatives and Labour regimes. The earlier constructive strategy is addressed to the challenge; the better SDG 5 will be enhanced to minimise gender inequality in the British society. Although Starmer's Labour government has repudiated the Rwanda Agreement, there is still considerable cynicism among the public that Labour, like the Conservatives, are not

keen in dealing with the crisis (Atkinson, 2024). However, as proffered in the recommendation (section seven) of this Article, building a genuine trust with the British people by the Labour government will stand it in good faith as well as and serve aid in implementing formidably its immigration and socio-economic agenda favourably.

## **6. Gender Equality in Perilous State**

The path to a prosperous and sustainable development of every state, especially the UK, requires the active, prominent involvement and engagement of its female population, with the inclusion of asylum seekers. Contrary to this fact, women and young girls continue to suffer endemic discriminatory practices which consign them to the lowest ebbs of society ( Alston and Robinson, 2005). The United Nation’s (UN) report on gender states that “*Gender inequalities are still deep-rooted in every society. Women suffer from lack of access to decent work and face occupational segregation and gender wage gaps. In many situations, they are denied access to basic education, and health care and are victims of violence and discrimination. They are underrepresented in political and economic decision-making*” (UNSDG, 2011). As a developed state with responsibility to protect women’s dignity and human rights in the spheres of health care and education, the UK government’s lousy attitude to integrate asylum seekers into the economy, has had adverse impact on women’s wellbeing, thus widening the inequality gap between women and men; further designating women as dependents on existing meagre resources to fend for themselves and their dependents (CEDAW, 1981). Also, pervasive indifference among successive UK Prime Ministers which manifests as microaggressions have contributed to demonise asylum seekers as parasites with little contribution towards the UK economy (Filds, 2024). This attitude has roots in bias and discriminatory practices against asylum seekers and immigrants, leading not only to harmful treatments and oppressive tactics meted out against these groups of people, but also gender disrespect and acute stress towards women (Field et al. 2024). Besides governmental indifference towards asylum seekers, political statements made by leading public figures across the Atlantic, have played a prominent role in treating women, especially asylum seekers, as criminals and saboteurs on the people’s socio-economic wellbeing. For example, former permanent Secretary David Normington was reported to have labelled asylum seekers and immigrants as “terrorists, criminals, illegal migrants and bad guys” (Mackenzie, 2022). Categorising asylum seekers and immigrants as criminals and bad people without according to them dignity is antithetic to sustainable development, particularly gender equality. Humanity is not determined by citizenship or right of residence, therefore, subjecting young girls and women seeking asylum from war-infested countries, which in many cases are caused by the UK’s bad foreign policy, undercut the ideals of SDG 5. The reason is that majority of asylum seekers and immigrants, especially women, have rich and diverse educational qualifications, professional skills, and expert knowledge with which to contribute to the UK’s economy and themselves (Parker et al. 2024). The potential contributions of asylum seekers toward the UK’s socio-economic fabric will remain untapped if the government fails to re-orient officials, institutions and the public to assume a favourable image of asylum seekers.

## **7. Potential Contributions of Asylum Women towards the UK Economy**

As a result of the elongated impact of the Russia-Ukraine debacle, including the Israeli – Palestinian conflict, the UK government granted visas and partial residential permits to some Ukrainians to resettle in Britain, thereby compounding the existing backlog of asylum applications and its associated challenges (Public Policy Exchange, 2022). Although the preferential treatment and the swift way the Ukrainian applications were processed and granted betray a degree of bias and discriminatory tendencies towards African nationals seeking asylum

in the UK; however, the potential contributions by these groups of people to the UK's economy should not be glossed over.

First, there is a firm view that "... *asylum, if managed well, could provide dynamism that translate into a positive overall contribution to GDP. Successfully integrating only refugees who have arrived in Europe since 2015 into the labour market could add £70- £80 billion to annual GDP by 2025*" (McKinsey Global Institute, 2018). The contributory prowess of asylum seekers to the economic, social, political, and cultural spheres of a host- state, such as the UK, has been sacrificed by the conservative and labour governments over many years for expedient political gain, like offshoring them abroad (Goldin, 2018). With the implementation of the Brexit agreement and its attendant departure of most Europeans back to their native countries, the asylum population should engage the British government's attention for socio-economic strategic thinking. The reason is that the need to achieve economic stability post-Covid, the promotion of social equality and integration of ethnic groups within the UK's mainstream economic activities ought to be considered by the government and its key institutions (Open Working Group, 2014).

Second, the global push to achieve the objectives of SDG 5 will remain a mirage without recognising the indispensable contributions of women to bridge the gender gap. As stated above, human worth is not determined by citizenship or resident permits, thus, asylum women's rights and dignity should be protected and promoted by regularising their immigration status to allow them to participate actively and creatively in the social and economic affairs of the British society (Herre et al., 2023). By integrating asylum women into the mainstream economy of the UK, they will become less dependent on state's resources and be empowered to make life-enhancing decisions in recognition of their human rights, political and cultural rights; thus, reflecting the tenets of a liberal democracy of which the UK prides itself. Keeping asylum women in solitary confinements under the pretext of flouting immigration rules exerts undue pressure on government's resources and compromises SDG 5. Researchers have affirmed the positive contributions of displaced people by contending that asylum women could contribute significantly towards a host state's economy when they are properly integrated. They stated thus: "*our new findings on the unrealized economic potential of refugees women buttress the strong case for increasing their access to jobs and closing the market gaps*" (Paolo and Schuetter, 2019). The same researchers argued further that: "... *closing the employment and earnings gaps that constrain refugee women and men would accelerate and not only restrict the achievement of the sustainable development goals but also undercut the effort to promote gender equality through full employment and women empowerment*" (Paolo and Schuetter, 2019). The above statements evidence the utility of asylum-seekers because empowering women with job opportunities are critical to securing their socio-economic autonomy as well as liberating them from the explicit and implicit maltreatment from which they flee. That strategic thinking should engage the attention of the British government constructively.

Third, at the cusp of the twenty-first century, most British women and their counterparts in western developed states are determined to secure prominent leadership roles in pursuit of their socio-economic and political ambitions; as a strategy, to promote gender equality on the global stage (Northouse, 2022; Northouse). The following examples buttress this premise. Tina McKenzie of Ireland's Staffline Recruitment Agency; Elaine Bedell of London's Southbank Centre on creative sector career; Deanna Oppenheimer, chair of hospitality multinational (IHG); Lisa Donahue, co-head of the American and Asia at AlixPartners; and Vivienne Artz, head of the FTSE Women Leader Review. Although the above list is not exhaustive, yet it demonstrates women's capacity to assume high echelons of power and leadership as well as underscores the urgency to frame pragmatic and targeted national policies to promote women's participations in all sectors of engagement to secure the objectives of SDG 5; and more particularly, the socio-economic competitiveness of the UK on the global plane (Northouse,

2103). Relating this to SDG 5, there is little doubt that women can actively contribute to expand the socio-economic fabric of the British society. However, the vestiges of discriminatory practices and policies operating within governmental corridors, public and private institutions continue to stifle women's creative force, thus inducing gender inequality (Nash, 2009). As an advocate of women's rights, the UK has a political and moral obligation to promote asylum women's right to ensure that they are productively and economically engaged in the British system.

Fourth, by creating an embracing working environment devoid of undue criticisms against women in managerial positions, women need encouragement and supported to enter sectors, traditionally designated as male-reserved to promote equality (Northouse 2022). For example, females' participation in the labour market, often shaped by the cultural and social mores of the British system needs reformation. In this respect, the health sector should be engaged to expand decent working opportunities for women. However, the marginalisation of women within most formal industries, occasioned by government policy, such as the Rwanda scheme not only stifles SDG 5, but is also antithetic to the UK's socio-economic revival post-Covid-19 (Mathonsi, 2024). Despite advancements in technology on healthcare delivery and social support, there is severe pressure on the NHS to recruit people to fill vacant positions as nurses, ward-aids, medical-doctors and allied health workers, to offer substantial care and social support services to protect humanity (High Commission on Health, 2016). Yet, blinded by political aphasia, coupled with the determination to achieve political expediency, most asylum seekers given accommodation in expensive hotel and private facilities without any strategic plans to reintegrate them to take advantage of those vacancies characterising the NHS, thus overwhelming the skeletal staff across the institution. The failure to think creatively about using the skills and talents of these human resources, may culminate in public riots as transpired in Rotherham and South-Yorkshire in August 2024. One caveat here is that this article does not support those racist behaviour/acts in any form or shape but is cited as an illustration of poor governmental policy on the asylum matters. Lastly, denying working rights and permits to asylum women because of their irregular entry into the UK, coupled with the archaic application and associated bureaucratic processes is pandering to gender inequality which undermines the UK's economic growth (Nash, 2009).

Fifth, there is little denial that women can participate in sectors designated as male preserved. With the departure of thousands of Europeans back to their native countries post-Brexit, a plethora of vacancies exist which should be filled by the asylum seekers, most of whom are young and energetic women with requisite expertise. A report by the Financial Times indicates that the construction industry faces a shortage of 150,000 people to assume various roles to realise Labour government's target of building 1.5 million homes over the next five years (Foster et al., 2024:2). Any serious government desiring to achieve its objective of meeting the housing target would realise the strategic opportunities available in the diverse human resources presented by the asylum seekers in the country (Fosters et al, 2024). Thus, dissipating state resources to offshore asylum seekers, especially women, to Rwanda; is a bad policy fashioned to waste critical state resources. Confining women and young girls with energy and creative prowess to hotel and council accommodations throughout regions of the UK entrenches gender inequality, resonating with the antiquated thinking of Britian's imperialist policy of centuries gone by (Reed and Singh, 2024). Sustainable development is not only a global objective, but a national obligation requiring states, the UK included, to ensure that irrespective of immigration status, policies and laws formulated by the government expedite the welfare and integration of women towards the promotion of human wellbeing.

Sixth, asylum-seeking is not a new phenomenon but a century-old practice undertaken by a group of people escaping threatening situations such as persecutions, wars, natural disasters, and severe famine for safety (Brucker et al., 2019). Notwithstanding the political expediencies asylum situations offer politicians, together with the pretext it provides the far-right groups to demonise the immigrant population, asylum-seekers can contribute enormously to consolidate the socio-economic, cultural, and political fabrics of the British society. Researchers have buttressed this point when they argued that *“By adapting innovatively and contributing ideas, migrants’ advance societies. Migration shaped our economies which embody the collective contribution of diverse peoples. It is no accident that the most dynamic cities are those with a relatively high share of migrants”* Goldin et al., 2019:17). While their unfortunate status makes them no less human than citizens of host nations, these peoples possess good academic qualifications, skills, expertise and experiences which ought to be harnessed by the British government to sharpen the competitive edge of its domestic industries to re-fashion a new economic model of a global stature. However, endemic bureaucratic barriers, supported by governmental inertia, have dimmed the vision of public officials from strategising these crucial human resources into potent socio-economic powerhouse. With a forward- thinking political leadership, these antiquated British asylum processes and procedures should be revolutionised to achieve a two-pronged benefit strategy for the peoples and the state (Northouse, 2022). First, most of the young women constituting the asylum population can be cross -mentored and retrained to take up diverse and critical roles within the NHS and social services, to shore up declining staff numbers; and second, the government should institute motivational schemes to entice more women to participate in the construction sectors of the economy dominated by men, as a novel policy to generate mutual and beneficial advantages to the state and asylum population (Asgari, 2024).

## **8. Recommendations**

The preceding discussion demonstrates that there is no magic bullet to resolving asylum and immigration crisis confronting the UK. Although the UK’s foreign policy, coupled with its internal political exigencies had contributed to deepening its immigration/asylum challenges, the recommendations proffered by this article will offer some strategic policies to help the government to deal with the challenges sustainably.

First, Sir Keir Starmer, the current British Prime Minister, whose Labour party won majority 411 parliamentary seats, to form the new government, and who campaigned to resolve the asylum and immigration challenges should initiate a flagship scheme to address the problems, (House of Commons Library, 2024). By flagship initiative, it is means that a government-led committee into which experts, citizens, respective government agencies and affected asylum communities would be brought to deliberate and recommend modalities/approaches to stem the crisis. Since successive British governments enjoy wounded reputation on matters of asylum and immigration, it is crucial that Stammer’s government endeavours to regain public trust by holding open fora to elicit recommendations to manage/ resolve the issues. Second, there is urgent need for the government to think strategically in devising measures to curb the asylum-immigration challenge in a manner that is mutually beneficial to the asylum-community and the British society. For example, the government should introduce a temporary contract work-permit without formal reunion, or the possibility of citizenship should be implemented as a policy to minimise the problem. This strategic scheme will not only provide ready needed skills, expertise and knowledge lacking in certain critical sectors of the economy but also advance the socio-economic prosperity of those foreign immigrants, thus reforming the bogus asylum seekers agenda (Wolf, 2024). Notwithstanding the prospects of creating a two-tier human society, the temporary worker permit will offer sustainable opportunities for

people from developing states to gain economic and social security by taking up such temporary job opportunities, which is much dignified than the current disjointed asylum system (Ofori, 2023). Third, as stated in sections three and four of this article, one-third of the financial resources paid to the Rwandan government to offshore and process asylum applications from that country, should have been deployed strategically to revamp the technological facilities of all centres in the UK; as well as, retrain those vibrant and able-bodied asylum seekers to take up vacant positions in the NHS, constructions, agriculture, education and care-services. The benefits of such strategic policy will not only prop up the productivity of the UK's economy but also promote the socio-economic fortunes of the marginalised women. Contrary to this initiative, the Sunak's government spent a total amount of £700mn of taxpayers' money on the failed Rwanda deportation Scheme, which had since been cancelled by the Labour party on resumption of governance (Courea, 2024). The Guardian reported that Yvette Cooper, the current Home Secretary, has told the commons that *“over the course of six years ministers had intended to spend £10bn on the policy but they never divulged this figure to Parliament. The Home Secretary said she had formally notified the Rwanda government that the partnership was over and thanked it for working with the UK in good faith”* (Courea, 2024). The frugality of this policy is not in doubt; however, it further affirms the earlier argument, that successive Labour and Conservative governments adopted short term approaches to resolving the asylum/immigration challenges. Lastly, Labour's foreign policy, which seeks to reposition the UK as a global power will not be achieved with sponsorship of proxy wars in Ukraine, including aiding Israel to destroy humanity and properties in Palestine; instead, it will be realised through honest and open negotiations anchored in international law and regional diplomacy (Barston, 1983, Ofori,2023), earmarked to respect and enforce international conventions, especially the Refugee Convention (Illegal Migration Act, 2023). Commenting on the Illegal Migration Act, Grogan and Donald have urged the British government to honour its international obligations, stating that the Act sets *“a worrying precedent for dismantling asylum-related obligations of other countries, including in Europe, may be tempted to follow, with a potentially adverse effects on the international refugee and human rights protection system as a whole”* (Illegal Migration Act, 2023:9). To regain domestic confidence which had been lost during the fourteen-year reign of the Conservative government as well as pursue respectable international relations with its European neighbours and the international in general, an active adherence to the Refugee Convention should be the prime focus of Starmer's reign as an attempt to reset a favourable relationship with France, Italy, Germany and Spain on the subject, including gender equality.

## 9. Conclusion

This article examined the Rwanda-UK agreement on deportation of asylum-seekers to that country to process their asylum claims. It situated the debate within the context of SDG 5 by exploring that the deportation stifles asylum women's dignity, human rights, skills, and expertise, which should be harnessed to expand the UK's competitive edge on the global socio-economic frontiers. The article also outlined factors responsible for the increased asylum cases in the UK with a focus on the geo-politics and foreign policy nexus as contributory antecedents. Also, the article engaged with the potential contributions the UK stands to gain from the asylum communities were it to integrate these peoples strategically into the economic fabric. Furthermore, this article discussed the perilous state of asylum women in the UK, suggesting that their continuous confinements will only deepen the challenge of gender inequality to which the UK has expended resources in combating. Finally, as a strategy to reassert its influence and to be recognised favourably on the international stage, this article offered some recommendations to guide the current Labour government to formulate considerate and forward-thinking policies earmarked to end the Israel-Palestine conflict, as well as sponsor a dialogue with Russia, with a view to ending the Ukraine-Russia debacle, thus protecting the

dignity and human rights of all refugees within and without its borders. With those measures implemented, the Middle East and Africa will become peaceful and the phenomenon of asylum/migration movements along the English borders will stop. Thus, integrating asylum women into the mainstream economy of the British society will promote the objectives of SDG 5 concretely.

## REFERENCES

1. Asgari, N. "The Comfort of Conversations with Strangers" *Financial Times*, June 11, 2024, p. 3.
2. Atkinson, W. "Blaming Everything on the Terrible Tories will only get Labour so far", *City Am*, August 29, 2024.
3. Alston, P., and Robinson, M. (eds) (2005). *Human Rights and Development: Towards Mutual Reinforcement*. Oxford: Oxford University Press.
4. Baker, J.A., and Hamilton, L.H. "The Iraq Study Group Report" *Washington Post*, April 21, 2004.
5. Barber, S (2005). *Political Strategy: Modern Politics in Contemporary Britain*, Great Britain: Liverpool Academic Press.
6. Barston, P. R., (1983). *International Negotiation: The Development of Central Concepts*. *European Journal of political Research*, Vol. 11, issue 2, pp. 129-138.
7. Brucker, H., Crosier, J., Kosyakova, Y., Kroger, H., Pie traction, G., Rother, N., and Schupp, J. (2019). *Language Skills and Employment Rate of Refugees improving with BAMF Brief Analysis*. Germany: Bundesamt Fur Migration und Fluchtinge, BAMF.
8. Cavendish, C. "The Immigration Mess is a Nightmare for both Tories and Labour" *Financial Times*, June 8, 2024.
9. Cavendish, P. "The Immigration Mess is a Nightmare for both Tories and Labour" *Financial Times*, June 8, 2024.
10. Courea, E. "Failed Rwanda Deportation Scheme Cost £700m, says Yvette Cooper," *The Guardian*, July 22, 2024.
11. *Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW)*, G.A.res. 34/180,34U.N. GAOR Supp. (No.46) at 193, U.N. Doc. A/34/46, entered into force 3 September 1983.
12. Field, E., Krivkovich, A., Kugell, S, Robinson, N., Yee, L. (2023). "Women in Workplace" McKinsey & Company, available at: <https://www.mckinsey.com/features-insights/diversity-and-inclusion/women-in-the-workplace>. (Accessed July 20, 2024).
13. Fildes, N. "Australia to Reduce Oversea Student Quota" *Financial Times*, August 28, 2024, p.8.
14. Foster, P., Oliver, J., and Pickard, J. "Skills Shortage threatens Building Plans, Industry says" *Financial Times*, July 18, 2024.
15. Goldin, I., Pitt, A., Boyle, C. *Migration and the Economy: Economic Realities , Social Impacts and Political Choices*, (September, 2018), available at: [https://www.oms.www.files.srdcdn.com/production/downloads/reports/2018\\_OMSt\\_cite\\_mitugation\\_GPS.pdf](https://www.oms.www.files.srdcdn.com/production/downloads/reports/2018_OMSt_cite_mitugation_GPS.pdf). (July 12, 2024).
16. Herre, B., Arriagade, P., Ortiz-Ospina, E., Richtie, H., Hassel., and Roser, M. *Women's Right*, available at: <https://www.ourworldindata.org/women-rights>. (Accessed July 12, 2024).
17. *High-Level Commission on Health Employment and Economic -Growth: Final Report of the Expert Group* (2016), available at: <https://iris.who.int/bits/ream/handle/10665/250040/?sequence=1>. (Accessed July 25, 2024).
18. House of Common Library, "General Election 2024 Results" available at: <https://commonslibrary.parliament.uk/research-briefings/cbp-10009/>. (Accessed August 14, 2024).
19. House of Lords Justice and Home Affairs Committee corrected oral evidence: The Secretary of State for the Home Office (sic), 21 December 2022, Q4.
20. *International Rescue Committee, The Rwanda Scheme explained*, June 13, 2022, available at: <https://www.rescue.org/uk/article/rwanda-explained-why-uk-government-should-rethink-scheme>, (Accessed May 13, 2024).
21. Jones, B., Norton, P., and Hertner, I. (2022). (eds). *Politics UK*, 10<sup>th</sup> edn. Abingdon: Routledge.
22. Mackenzie, P. "Reforming Our Broken Asylum system" *Sanctuary UK*. London: Demons, November 2022.
23. Mackenzie, P. "Sanctuary UK: Reforming Our Broken Asylum System" London: Demons, November 2022.



24. Macro Poverty Outlook for Rwanda: April 2024 – Datasheet, available at: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/099531204082422534/idu1250f21b01f71514ca71b16d16c8ce72a6f51>. (accessed August 20, 2024).
25. Mathonsi, C. (2024). “Women’s Contribution to the Economy we cannot ignore-the- evidence” Business Women’s Association of South Africa, available at: <https://www.bwasa.co.za/news/women-s-contributions-to-the-economy-we-cannot-ignore-evidence>. (Accessed June 25, 2024).
26. Mckee, R., and Pannell, J. “What will Keir Starmer’s first few weeks as prime Minister look like?” July 8, 2024, available at: <https://www.instituteforgovernment.org.uk/explainer/keir-starmer-need-to-do-first-few-weeks-after-general-election>. (Accessed, August 23, 2024).
27. McKinsey Global Institute, “Refocusing on Integration” (May 2018), available at: <https://mckinsey.com/media/mckinsey/featured%20insights/emps%20refocusing%20on%20integration/mgi-europes-refugees-refocusing-on>. (Accessed August 13, 2024).
28. Mearsheimer, J. and Walt, S. (2007). *The Israel Lobby and the US foreign Policy*. London: Penguin.
29. Nash, K. (2009). *The Cultural Politics of Human Rights: Comparing the US and UK*. Cambridge: Cambridge University Press.
30. Northouse, G. P. (2022). *Leadership: Theory and Practice*, (9<sup>th</sup> edn), London: Sage Publication Limited.
31. Northouse, G. P. (2013). *Leadership: Theory and Practice*, (6<sup>th</sup> edn), London: Sage Publication Limited.
32. Office for National Statistics (ONS) (2021), *Early Integration Outcomes for Refugees Resettled in England and Wales*, available at: <https://ons.gov.uk>. (Accessed July 13, 2024).
33. Ofori, F.N. K. (2023). Defacing the Dignity of Minorities through the Prism of the Covid-19 Pandemic: The Plight of Bame Groups in Britain. *Journal of Law, Policy and Globalization*, vol.135, pp. 1-11.
34. Ofori, F.N.K and Sarpong, D. (2020). Geo-politics, Geo-economics and the Fourth Industrial Revolution: An Interview with Maxim Shashenkov, (Arterial Capital Management). *South African Journal of Business Management*, vol. 54, (1).
35. Ofori, F.N.K. (2021). The North Atlantic Treaty Organisation (NATO): An Obsolete Security Institution or A Group of Self-seeking Elites: Rethinking Reform. *International Affairs and Global Strategy*, vol.91.
36. Ofori, F.N.K. (2023). Defacing the Dignity of Minorities through the Prism of the Covid-19 Pandemic: The Plight of BAME Groups in Britain. *Journal of Law, Policy and Globalization*, Vol. 135, pp.
37. Ofori, F.N.K. (2024). Africa through the Prism of the Sudan War: Reconfiguring Internal ‘Castles’ Across the Region. *Journal of Business and Economics*, Vol. 15(10), pp. 34-43.
38. Ofori, FN.K. (2021). Water is the “Blue Gold” : Upholding Access to Water as Human Rights in Ghana. *Journal of Law, Policy and Globalization*, vol. 110, pp. 2224-3259.
39. Open Working Group Proposal on Sustainable Development Goals, (2014).
40. Paolo, L. and Schuetter, K., (2019). *The Impact of Forced Displacement on Host Communities: A Review of the Empirical Literature in Economic Policy Research Working Paper*, No. 8727, Washington World Bank, available at: <https://openknowledge.worldbank.org/handle/1098613123>. (Accessed July 4, 2024).
41. Parker, G., Hancock, A., Wallis, W. “Starmer Open to Offshoring Asylum Claim” *Financial Times*, July 19, 2024.
42. Public Policy Exchange (2022). *Ukrainian Refugees in the UK: has Britain adequately provided for them?* Available at: <https://www.publicpolicyexchange.co.uk/event.php?eventUID=OA23-PPE#:~:text=Overview,Russia%20on%2024%20February%202022>. (Accessed, August 4, 2024).
43. Reed, J. and Singh, J. “Modi Condemns ‘atrocities’ against Women” *Financial Times*, August 16, 2024.
44. Rosenbaum, S. A. (ed). (1980). *The philosophy of Human Rights: International Perspectives*. London: Aldwych Press.
45. Rwanda Bill to become law in major illegal migration milestone” Press Release, April 23, 2024, available at: <http://www.gov.uk>. (Accessed May 9, 2024).
46. Rwanda Demographics, available at: <https://workdometers.info/world-populations/Rwanda-populations-world>. (Accessed August 23, 2024).
47. Schiff, Z. “Filling into America Strategy”. *Ha’aretz*, August 1, 2003.
48. Shilliam, R. (2021). *Decolonizing Politics*. Cambridge: Polity Press.
49. Sinmaz, E., and Vinter, R. “Rioters Try to Torch Rotherham Asylum Seeker Hotel amid Far-Right Violence” *The Guardian*, August 4, 2024.
50. Strauss, D. ‘Migration to Rich Nations at Record High’ *Financial Times*, November 15<sup>th</sup> 2024, p. 4.

51. The Illegal Migration Act 2024, available at: <https://www.ukandedu.ac.uk/explainers/illegal-migration-act-2023/>. (Accessed July 18, 2024).
52. UN Gender Report on Gender Equality and Women’s Empowerment (SDG 5), available at: <https://www.sdgs.un.org/topics/gender-equality-and-women-empowerment>. (Accessed July 10, 2024).
53. United Nations, “Secretary-General Underscores Two-State Solution Only Way to End Israeli-Palestinian Conflict, One-State Formula Inconceivable, in Day-Long Debate” Press Release, January 23, 2024, available at: <https://press.un.org/en/2024/sc15569.doc.htm>. (Accessed August 28, 2024).
54. Williams, J. and Uddin, R. ‘Starmer Reviles “Violent Thuggery” as Rioting Flares again across England’, Financial Times, Monday, 5 August 2024.
55. Wolf, M. “Immigration is both Essential and Impossible” Financial Times, Wednesday, July 24, 2024.

# THE GEOPOLITICS OF ENERGY IN SOUTH AMERICA: RUSSIAN INFLUENCE AND THE RISK OF REGIONAL INSTABILITY

Teodora Stanković<sup>1,\*</sup>

<sup>1</sup> Institute for Advanced Studies, University of Montenegro

\* Corresponding author: [teodora.s@ucg.ac.me](mailto:teodora.s@ucg.ac.me)

DOI: [10.63356/978-99976-57-34-3\\_2](https://doi.org/10.63356/978-99976-57-34-3_2)

## Abstract

In order to analyze South America from the aspect of energy geopolitics, it is necessary to examine energy resources, so that, based on the capacity of energy sources, we can focus more or less on certain regions. Of particular importance for South America is the study of Russian influences and connections and its geopolitical interest in this part of the world. As Russia's economic power has grown, it strengthened its geopolitical influence and interest in this region, and it did so by renewing and strengthening the ties that the former USSR had in South America. Besides Russia's geopolitical interest, another important factor is the susceptibility of this region to the influence of third parties. In this sense, competitive authoritarianism in certain countries that are rich in energy resources will be discussed. Namely, the economic situation and social unrest are significant factors that make these countries suitable for third-party influence. This analysis becomes particularly important if we take into account the fact that there are all the prerequisites and a significant potential for this region to become a source of intense conflicts, as a result of the conflicting interests of the great powers.

**Keywords:** geopolitics, energy resources, South America, Russia, United States, regionalism, UNASUR, MERCOSUR

## 1. Introduction

South America has significant potentials in terms of oil production and supply. After the Middle East, it ranks second in the world for oil production. Venezuela holds the first place globally for oil reserves (303 billion barrels, accounting for about 17.9% of the world's reserves) (Mares, 2015; OPEC, 2020). Vast deposits of oil and natural gas are located in the Maracaibo basin in western Venezuela and they extend towards the east. Ecuador is also a major oil exporter, while Bolivia and Chile are among the world's leading producers of lithium and copper.

Bolivia has more than half of the world's lithium reserves, estimated at 21 million metric tons, which is crucial for the production of batteries for electric vehicles, while Chile has lithium reserves of 9.2 million metric tons (Statista, 2021). Most of the lithium reserves are located in Salar de Uyuni (Bolivia). According to the 2009 constitution adopted by the Bolivian government, the country's natural resources belong to the people of Bolivia and must be managed by the state in their collective interest (Heredia, Martinez, and Surraco Urtubey, 2020; Aguirre, 2021).

South America is characterized by the fact that countries that derive a significant part of their income from energy resources tend to have lower economic growth and higher poverty rates. The political instability associated with oil is emphasized in the concept of the "resource curse". The theory of the "resource curse" deals with the assumption that the abundance of natural

resources, instead of leading to economic growth, causes a multitude of political and social problems in developing countries. Higher rates of poverty, economic crisis, authoritarianism and greater intensity of conflict are characteristics that are often associated with resource wealth (Papyrakis and Pellegrini, 2019). Systems with such characteristics are prone to external influence. The influence of Russia in this region is particularly interesting, which is based on the relations that the USSR had with left-wing parties around the world, with a special emphasis on South America.

## **2. Historical overview of relations between the USSR and countries in South America**

The Russian geopolitical component was characterized by a significant decline in intensity after the dissolution of the USSR, and then its geopolitical component began to grow. With the growth of the geopolitical component, Russia's tendencies to renew and strengthen the ties that the USSR once had in South America also intensified. Therefore, in order to better understand the current developments, we will provide a brief overview of the historical ties and influence of the USSR in South America.

After the Cuban Revolution in 1959, the Soviet Union began to focus on South America as a strategically important region to invest in, which led to more intense relations established between the Soviet Union and countries in Latin America (Nolte and Wehner, 2015; Shuya, 2019). By supplying weapons to leftist forces, as well as providing economic aid to Cuba and Nicaragua, Russia at that moment began military activities in an effort to oppose the United States (US) and disrupt the global order.

The Soviet Union cultivated ties with leftist parties and revolutionary movements in South America. At that time, the USSR began to establish institutes for Latin American studies, partly motivated by optimism about the possibility of advancing the Soviet strategic position on this continent.

Moreover, the Soviet Union also maintained ties with leaders who, although not communists, had a populist orientation that made them more or less willing to cooperate with the USSR. Among those leaders were General José Torres in Bolivia, Juan Perón in Argentina, and Salvador Allende in Chile. Later, the Soviet Union continued to maintain significant economic relations with more conservative governments. For example, when the US stopped supplying grain to the Soviet Union in 1980, Argentina, which was under a military dictatorship at that time, became a significant exporter of grain to the USSR. During the Cold War, Soviet economic relations with South America also included participation in the construction of hydroelectric plants in Brazil and Colombia, irrigation projects in Venezuela, as well as trade relations such as the import of bananas from Ecuador (Sanchez, 2010).

During the 1990s, economic aid as well as diplomatic activities of the new Russian government in this region decreased significantly. In the early years after the Cold War, alongside the transformation of the Russian economy, its economic relations with South America were focused on industries such as mining, oil and weapons, through which Russia later built more intensive international relations.

## **3. Renewal of Russian presence in South America**

After the rise of leftist authorities in South America during the 2000s, relations between Russia and South America began to improve significantly. Russia views South America as a region of increasing economic and geopolitical importance, as well as a fertile ground for marketing the idea and successfully advancing its idea of “multipolar world” (Beasley-Murray, Cameron, and Hershberg, 2009; Ellis, 2015; Pavlova, 2017). It is also important to emphasize that South America is strategically important for Russia also because of its geographical proximity to the USA.

As we mentioned, in the mid-2000s, Russia began to re-establish more intensive relations with countries in South America. Russia is active in South America primarily through arms sales as well as trade agreements (Blank and Kim, 2015; Shuya, 2019). Although these activities are largely driven by economic incentives, Putin’s motivation to strengthen Russia’s position in the region is also firmly rooted in geopolitics. It is especially important to point out that Russia has tried to develop partnerships with countries with which they have a common interest and which are not dominated by the US or the European Union (EU).

As a counter-balance to the efforts of the US and the EU to isolate Russia due to the Ukraine crisis, Russia wanted to demonstrate its influence around the world. In this sense, after the outbreak of the Ukrainian crisis, South America once again became a focal point for Russia through a series of diplomatic activities; Putin visited Cuba, Argentina, and Brazil in July 2014, and the goal of the visit was a whole set of trade agreements (Ellis, 2015). Russia uses economic relations in industries where it has a competitive advantage, such as arms sales and the sale of nuclear reactor, to gain the political support of its allies in favor of its own policy positions, while countering the international activities and influence of the US (Jeifets, 2015; Shuya, 2019).

Thus, in order to expand its influence in this region, Russia has often relied on arms sales and trade agreements in the energy sector. Such efforts by Russia to strengthen ties with South America have one significant benefit. Namely, certain South American countries are already familiar with Soviet weapons and equipment because they bought them before, and they are especially attracted to Russian weapons because of the lower price. On the other hand, Russia aims to sell weapons in order to maintain and strengthen its partnership with countries such as Venezuela, Peru and Cuba in terms of security.

However, the US is aware of the fact that the Russian government’s assistance to the energy industry in Venezuela is actually one of the key elements in the attempt to improve the political situation in that country and thus make it more dependent on Russia. The fact that Russia has bought and resold about 70% of Venezuelan oil shows how crucial it is for Venezuela, in the conditions of US sanctions, to cooperate with Russian oil companies (Ellis, 2019).

It is important to note that other activities of Russia have also intensified, such as the strengthening of cultural and political ties and the use of Spanish-language media. Namely, Russia aims to increase its information influence in South America. Through its Spanish-language edition, RT en Español, the TV channel Russia Today has, over the past ten years, developed into the most powerful and prominent Russian soft power tool. The Russian channel serves as a platform for leftist politicians in this region and closely collaborates with the Venezuelan channel Telesur (Milosevich-Juaristi, 2020).

Although Russia has been intensively cooperating with countries in South America since 1997, its diplomatic and political activities reached their peaks in 2008 and 2014. Both of these periods coincided with a decrease of Russia’s cooperation with the West due to the wars in Georgia and Ukraine (Ellis, 2019). This is yet another indicator of the importance of South

America for Russian geopolitics, so it is expected that Russia's activities in the region will significantly intensify in the coming period.

Given that no South American country imposed sanctions on Russia after the annexation of Crimea, this led to a political rapprochement between Russia and South America. Instead of prompting sanctions that would act as barriers, this situation encouraged more intense cooperation. For example, even though a right-wing government in Argentina was elected in 2015, Argentina decided to remain neutral when it comes to imposing sanctions on Russia. In this way, Argentina tried to derive economic benefits (such as the exports of Argentinian meat) from the sanctions imposed by the US and the EU, helping Russia to compensate for some of the losses caused by these sanctions.

Russia clearly expresses political support towards countries and in its relations gives priority to countries whose policy is based on anti-Americanism and populist forms of socialism. Russia's policy towards South America aims to present itself as balanced and pragmatic, with which Russia pursues strictly economic and geopolitical goals. However, in South America, Russia's political orientation is often classified as left-wing, and by aligning with left-wing regimes, Russia has shown that it is a direct continuation of the USSR, that is, a power that will implement the same policy, but under new conditions.

However, there is a limit for Russia in dominating the entire region due to the emergence of right-wing governments in South America in recent years. In this sense, Russia has tried to position itself not only as a friend of left-wing governments, but also as capable of establishing good relations with right-wing governments. For example, while Russia supports the government of Nicolás Maduro in Venezuela, its ability to cooperate with the right-wing government of Brazil is very limited, because the right-wing governments in South America are political allies of the US, and they are also economically oriented towards the US.

Through its presence in South America, Russia wanted to show that, even though sanctions were imposed on it due to the conflict in Ukraine, this would not prevent it from acting as a global power on the international stage. Also, Russia's main motivation is to establish intensive relations with South America, considering that, after the EU sanctions, the majority of its imports of fruits, vegetable and meat imports now come from Ecuador, Chile, Paraguay and Argentina.

The common goal of Russia and certain countries in South America, which also have tense relations with the US, is to promote multilateralism and oppose the dominant position of the US. What appeals to the countries in South America is the Russian ideology, since Russia does not strive for changes in political systems, in terms of democratization in this region, nor does it demand guarantees of human rights from those governments.

#### **4. Competitive authoritarianism and social turmoil**

The governments of Latin American countries with abundant deposits of natural gas and oil and lithium enjoy a privileged position despite the fact that their communities are affected by social injustice and inequality. On top of that, the gap between rich and poor is wide, and democratic institutions are weak and unstable.

At the beginning, in order to overcome the crises, South American countries supported neoliberalism. In the 1980s and 1990s, Venezuela was an advocate of neoliberal reform policies and free trade, sponsored by the US. To stop hyperinflation in 2000, Ecuador renounced its national currency (the Sucre) and adopted the US dollar. Additionally, Ecuador allowed the US

to establish a military base to monitor illegal immigration, thus creating the perception that Ecuador's sovereignty is under threat. Bolivia has gone through social conflicts and human rights violations, because the military unsuccessfully attempted to implement the US policies of military eradication of coca leaf production.

However, this concept of neoliberalism has led to social inequalities, which in turn sparked unrest in this region. The protests against neoliberalism in Venezuela, which were known as the 'Caracazo', occurred in 1989, and the Gas War in Bolivia took place in 2003. People also protested because of the perception that politicians have 'handed over' national sovereignty to institutions like the International Monetary Fund, and the World Bank, viewing the neoliberalism as a threat to national sovereignty. Left-wing populists emerged as a result of widespread resistance to neoliberalism (De La Torre, 2016; Zamora Zúñiga, 2018).

Populist leaders in Venezuela, Bolivia and Ecuador came to power with utopian promises to eradicate corruption, improve the economic situation and redistribute wealth. After the leftists came to power, the situation in Venezuela, Bolivia and Ecuador improved in the short term, as these countries benefited enormously from the economic boom of the 2000s, driven by the sharp rise in oil and natural gas prices (Levitsky and Loxton, 2013). As a result, public investment has increased significantly, and poverty rates and socio-economic inequality have been reduced. They also proposed a project, which counters neoliberal trade initiatives/projects dominated by the US, based on regional cooperation. The Bolivarian Alternative for America (ALBA) aimed to create unity in Latin America, which is based on social justice and solidarity among the peoples of the region. Also, its goals were to create a multipolar international system and stop the dominance of the US in this region.

However, countries with a lower degree of democracy tend to move into competitive authoritarianism, which has emerged in Venezuela, Bolivia and Ecuador, as a result of democratic backsliding and economic crisis (Levitsky and Loxton, 2013). Authoritarian regimes are more likely where state control of the economy is extensive. Let us briefly outline several factors that are the causes of competitive authoritarianism.

Certainly, the first factor is weak institutions. Competitive authoritarianism occurs in the context of a weak state and institutions, where constitutional rules are disputed, the judiciary lacks independence. Second, competitive authoritarianism tends to emerge where political parties are weak. The collapse of the party system leads to a weak opposition, which makes it easier for authoritarian leaders to concentrate power (Levitsky and Way, 2010; Zamora Zúñiga, 2018; Schenoni and Mainwaring, 2019).

In this case, Venezuela, Bolivia and Ecuador had weak democratic institutions, which led to the emergence of competitive authoritarianism in these countries. Bolivia and Ecuador had a long history of democratic instability and remained in crisis throughout the 1980s. Although democracy in Venezuela was stronger, it began to deconsolidate in the 1980s and early 1990s (Zamora Zúñiga, 2018).

Left-wing populist leaders promoted modern socialism, which they defined as a third option between capitalism and socialism in the Soviet Union. Populist social programs were focused on the poor, increased the popularity of the leaders and functioned as instruments to maintain power since populist leaders were portrayed as providers of social benefits for the poor. However, such programs are unsustainable in the long run. The social programs were politicized, and their implementation lacked efficiency and transparency.

Additionally, left-wing populist leaders maintain control over the media, restrict the activities of non-governmental organizations and pass new laws that would make anti-government

protests illegal (Levitsky and Loxton, 2013). Those who did not support the authoritarian leaders were labeled as enemies of their leaders and the state.

Given their social turmoil, the situation in these countries has worsened. Dissatisfaction grew due to the decline in the standard of living (rise in prices, inflation, socio-economic inequality). As soon as there are social unrests, then there are increased sensibility and susceptibility to the influence of third parties. If the interests of great powers are involved, then such states become potential sources of intense conflicts.

## **5. Discussion with analysis of the current situation**

When we look at the current situation in these countries, we can say that it is not characterized by stability. On the contrary, there is social turmoil that often leads to the deterioration of political situations. The economic situation is unsatisfactory, because rising prices and inflation cause a decline in the standard of living standards and increase socio-economic inequality. We will briefly analyze the situation in Chile, Bolivia and Venezuela with a focus to the period on the past few years.

What is characteristic of the countries of South America, which also applies to Chile, is a considerable political distance between the left and the right, which has been influenced by the military junta, whose legacy still significantly marks the political life of those countries. As we have already pointed out, the left-wing in South America is characterized by significant populism, so any attempt by right-wing governments to introduce economic measures that would accelerate economic growth often provokes aggressive reactions from the left. What is notable about Chile is that its economic situation was quite good compared to other Latin American countries, and the political situation was such that Chile was an example of stability. However, during the second term of President Piñera, the leftists established control over the parliament and practically blocked the adoption of the laws. Since then, the narrative portraying Chile as a socially unjust country has been pushed, even though it has managed to reduce poverty by about five and a half times due to the economic growth. It is obvious that there are logistical resources outside of Chile, which are forcing the problem of economic inequality and which are slowly being accepted by students. As a result, since the end of 2019, Chile has been gripped by intense riots that have brought the country into a state of political instability, causing a significant economic decline while endangering the basic security of citizens. Chile is yet another example that, when globally opposing concepts are at play, even a good economic situation cannot be a guarantee of stability.

Unlike Chile, in Bolivia the left led by Evo Morales was in power until 2019. After several weeks of protests, tensions and conflicts, the military took power and brought the Vice President of the Assembly, Jeanine Áñez, as the head of Bolivia. It seemed that Bolivia would move away from the path of populism, that characterized Morales's rule. In order to take that path as decisively as possible, the new government banned Morales to return to the country, leading him to flee to Argentina. However, after the elections that were organized a few months later, the left came back to power, and Morales was allowed to return to the country.

A similar political development took place in Venezuela. Namely, after protests due to the bad economic situation and tensions in the country, the president of the Assembly, Juan Guaidó, tried to take over the leadership of the country. For a time, he acted as the interim president and was recognized by a significant number of democratic countries. It seemed that this might turn the situation in the country around and finally take power from Maduro's leftists, who had been



supported by Russia for many years. However, in this case as well, after the election, Nicolas Maduro solidified his power, and the President of the Assembly is a member of his party.

It is evident that there is significant political and social turmoil in the energy-rich countries of South America with heightened sensitivity and susceptibility to third-party influence. Considering that there are interests of great powers in this region, these states can be viewed as potential sources of intense conflicts.

## **6. Is the current variety of Latin American regionalism an indicator of strength or weakness?**

The dynamics of integrations in Latin America has been in the focus of interest of many researchers. Namely, although the process of integration started from 1960s through various forms of regional organizations, it can be generally seen as unsuccessful so far. Some authors even directly conclude that regionalism in Latin America failed. To provide an answer for such situation it is necessary to analyze regionalism in Latin America, which can be characterized as segmented, but on the same time overlapping. Namely, this process was consisted of too many regional organizations that exhausted the integration potential.

The predecessor of integration process can be seen in the Economic Commission for Latin America and Caribbean (ECLAC), which was established to encourage the economic cooperation and to establish regional market for member states. The impact of ECLAC was expressed through the establishment of Latin American Free Trade Association (LAFTA) and the Central American Common Market (CACM, with members: Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua) in 1960s trying to increase intra-regional trade and to enlarge market to compete globally and to attract investors. LAFTA was created by the Treaty of Montevideo in 1960 between Argentina, Brazil, Chile, Mexico, Paraguay, Peru, and Uruguay, with the goal to eliminate most of the duties and restrictions toward the free trade zone. Later, LAFTA became Latin American Integration Association (LAIA in 1980) (Garnelo, 2011). Also, the Andean Pact was formed by Bolivia, Chile, Colombia, Ecuador, Peru, and Venezuela joining last in 1973. Currently it is known as the Andean Community where Chile and Venezuela withdraw their membership, but four new members joined: Argentina, Brazil, Paraguay, and Uruguay. The Andean regionalism was initiated by Chile and Colombia to foster socio-economic reforms, but without having a political homogeneity (Cruz, 2011). The Caribbean Community (CARICOM) appeared also in 1973 as an organization bringing together Caribbean nations for developing joint economic policies and trade.

In 1990s, the second neo-liberal wave of integration started. Thus, the Common Market of South (MERCOSUR) was created, as well as the North American Free Trade Agreement (NAFTA) that included US, Canada and Mexico. MERCOSUR was established to decrease the dependence from extra-regional markets. Although it increased intra-regional trade, it is still far from the corresponding volume of trade within the regions in Europe, North America and Asia. It has four full members Argentina, Brazil, Paraguay and Uruguay (Venezuela was suspended in 2016), as well as seven associated countries.

The third wave of integrations (post-hegemonic or post-liberal regionalism) started at the beginning of this century aiming to change focus from economics to physical integration, political issues and creating a platform for security issues. Hence, the new form of integration has been created through the Union of South American Nations (UNASUR), with the tendency to merge the Bolivarian Alliance for the Peoples of our America (ALBA) and the MERCOSUR. However, in 2018 Colombia announced that will leave UNASUR since block did not oppose

the regime of Maduro in Venezuela. Also, Chile and another four members (Argentina, Brazil, Paraguay and Peru), allegedly, consider to temporarily suspend their membership within this organization. Without these countries the existence of UNASUR would become irrelevant (Sanchez, 2018).

The main divergence of these projects/waves is a consequence of different political and policy positions, which resulted in the lack of synergy and common intersection of concepts (organizations), which is required for successful integration process as it was the case in EU. The organizations in Latin America seems to be quite decentralized, in the same time being multiplied and overlapped regarding the aims and purposes, thus being competitive to each other. This further has led to diluted and in the worst case to emptied outcome. Note that at this moment MERCOSUR, ALBA and UNASUR are the most relevant regional projects in South America, but with quite different political visions. ALBA mostly reflects the socialist vision of Venezuela. The role of Venezuela in ALBA was to spread the idea of Bolivarian revolution, but from the other side the rest of members are more interested in Venezuela's oil.

UNASUR can be considered as organization through which Brazil aims to promote itself as a global player and regional leader, and also to promote vision of South America opposing Latin American concept. For Venezuela, Bolivia and Ecuador, UNASUR is used as an opportunity to increase the autonomy and reduce the influence of Organization of American States (OAS), especially of the US. UNASUR helped the dialog in South America regarding Columbia decision to accept US military basis on its territory. Concerning Paraguay democratic crisis in 2012, UNASUR showed more consistent position than OAS to provide answer to the crisis (Weiffen, Wehner, and Nolte, 2013).

MERCOSUR as organization for free trade, for Brazil represents a tool to share influence to the neighbors but without big economic expectations. At the same time for Argentina, Paraguay and Uruguay the economic factor is important as well as the access to Brazilian market. Although UNASUR seemed to be a serious integration form, the member countries have completely different economic strategy (e.g. Chile and Ecuador) and political attitudes (Columbia and Venezuela). It appears as a limiting factor for multilateral issues.

Andean Community looks like stacked due to the lack of essential share of sovereignty, although the organization has supranational character imitating the institutions of the EU. Obviously, Latin American states have no interest in shared sovereignty scenario. The main reason for that is low level of 'stateness' (Buelvas (2013)). This factor explains the reluctance of the states to transfer their sovereignty to regional organizations. One of the reasons for facing with low 'stateness' is the fact that these countries were colonialized territories, with remote governing and without exercising strict application of laws on the entire territory. It can be said that these countries cannot fully establish political and economic system to the whole territory (they had more territory than state) (Buelvas (2013)). Strong central governance acted like cohesion for society, producing a strong populism as an outcome which attempt to suppress the internationalization by imposing internal issues over external ones. All of these produce lack of ability to transfer sovereignty to regional level, mainly because they cannot share something that is not in their full possession. Therefore, when comparing to Europe, where the integration purpose was to weaken sovereignty, because it has been seen as a risk (due to the two world wars), in Latin America the integration aimed to strengthen 'stateness' being essentially an embedded defect for operational integration. It is important to emphasize that in the first two waves of integration there was no willingness for sovereignty transfer, but in contrary the focus was to strengthen the 'stateness'. In the third post-hegemonic wave, beside the trade integration, the efforts were made toward the re-formulation of regional politics. Namely, to

move forward, the integrations need to be led by a deeper ideological strategy. This ideological strategy became visible within the UNASUR.

Although there are many regional organizations, these are irrelevant for big business partners like China that prefers to deal with individual countries like Brazil. For successful integrations, it would be very important to develop institutions and leadership for supranational developments. It could be articulated by a new motto: 'Speak regional, act unilateral, and go global' (Malamud and Giardini, 2012). Based on the previous facts, one may conclude that the variety of regional organizations in Latin America is an indicator of weakness and disability to find an optimal integration model as a response to internal needs and global tendencies.

## 7. Conclusion

As for South America, there is a clear correlation between large energy resources and enhanced geopolitical interests of Russia. Russia is using traditional ties from the Soviet era, working on their further deepening. Economic problems and social tensions make a significant part of this region susceptible to external influences. The mere presence of Russia, its geopolitical interests, together with political systems with a lack of democracy, makes this region a potential new source of conflict caused by the opposing interests of the great powers – in this case Russia and the US, though China's ambitions should not be ignored. It is evident that the possession of energy resources, or what is referred to in the literature as the 'the curse of energy resources', is the basis for geopolitical games and conflicts of great powers in order to achieve supremacy over a given region. What is characteristic is that these conflicts are not localized only in the areas of interest, but due to the great international intertwining and interests, they quickly spread to other areas as well. In this sense, the geopolitical games of the great powers have a global impact in which a large number of countries are directly or indirectly affected. That is why the study of energy geopolitics can significantly help in predicting tensions and conflicts, and based on that, better geopolitical positioning of each country individually.

## LITERATURE

1. Aguirre, F. B. (2021). The lithium triangle – the importance of Bolivia. *Journal of Energy & Natural Resources Law*.
2. Beasley-Murray, J., Cameron, M. A. and E. Hershberg (2009). Latin America's Left Turns: an introduction. *Third World Quarterly* 30 (2): 319-330.
3. Blank, S. and Y. Kim (2015). Russia and Latin America: The New Frontier for Geopolitics, Arms Sales and Energy. *Problems of Post-Communism* 62 (3): 159-173.
4. Buelvas, E. P. (2013). Why Regionalism has failed in Latin America, *Contexto Internacional* 35 (2): 443-469.
5. Cruz, G.M. (2011). The Andean Integration Process: Origins, Integration, Structures, Integration and Trade 15 (33): 35-45.
6. De La Torre, C. (2016). Left-wing Populism: Inclusion and Authoritarianism in Venezuela, Bolivia, and Ecuador. *Brown Journal of World Affairs* 23 (1).
7. Ellis, E. R. (2015). The new Russian engagement with Latin America: Strategic position, commerce and dreams of the past. Strategic Studies Institute and U.S. Army War College Press.
8. Ellis, E. R. (2019). Russian Activities in Latin America. In N. Peterson (ed.), *Russian Strategic Intentions*. Strategic Studies Institute, U.S. Army War College.
9. Garnelo, V. (2011). The relevance of LAIA. *Integration and Trade* 15 (33): 27-34
10. Heredia, F. Martinez, A. L. and V. Surraco Urtubey (2020). The importance of lithium for achieving a low-carbon future: overview of the lithium extraction in the 'Lithium Triangle'. *Journal of Energy & Natural Resources Law* 38 (3): 213-236.
11. Jeifets, V. (2015). Russia is coming back to Latin America: perspectives and obstacles. *Anuario de Integracion*.

12. Levitsky, S., and L. Way (2010). *Competitive Authoritarianism: Hybrid Regimes After the Cold War*. New York: Cambridge University Press.
13. Levitsky, S. and J. Loxton (2013). Populism and competitive authoritarianism in the Andes. *Democratization* 20 (1): 107-136
14. Malamud, A. and Giardini, G. L. (2012). Has Regionalism Peaked? The Latin American Quagmire and its Lessons, *International Spectator* 47 (1): 116-133.
15. Mares, D. R. (2015). The impact of political instability on the development of Latin American energy supplies. In J. R. Deni (ed.), *New Realities: Energy Security in the 2010s and implications for the U.S. military*,. Strategic Studies Institute and U.S. Army War College.
16. Milosevich-Juaristi, M. (2020). *Russia in Latin America: repercussions for Spain*. Elcano Royal Institute.
17. Nolte, D. and L. E. Wehner (2015). *Geopolitics in Latin America: Old and New*. Routledge Handbook of Latin American Security Routledge.
18. OPEC (2020). Venezuela facts and figures. [https://www.opec.org/opec\\_web/en/about\\_us/171.html](https://www.opec.org/opec_web/en/about_us/171.html)
19. Papyrakis, E., and L. Pellegrini (2019). *The Resource Curse of Latin America*. Oxford: Oxford University Press.
20. Pavlova, E. (2017). A Russian Challenge to Multipolarity?, *Problems of Post-Communism* 65 (6):1-15.
21. Sanchez, A. (2010). Russia and Latin America at the dawn of the twenty-first century. *Journal of Transatlantic Studies* 8 (4): 362-384.
22. Sanchez, A. (2018). How Will Demise of UNASUR Affect Latin American Integration?, *Diplomatic Courier*, <https://www.diplomaticcourier.com/2018/10/03/how-will-the-demise-of-unasur-affect-latin-american-integration>
23. Schenoni, L. L. and S. Mainwaring (2019). US hegemony and regime change in Latin America. *Democratization* 26 (2): 269-287.
24. Shuya, M. (2019). Russian Influence in Latin America: a Response to NATO. *Journal of Strategic Security* 12 (2): 17-41.
25. Statista (2021). Lithium resources in Bolivia from 2018 to 2021. <https://www.statista.com/statistics/1094627/lithium-reserves-bolivia/#statisticContainer>
26. Weiffen, B., Wehner, L. and Nolte, D. (2013). Overlapping regional security institutions in South America: the case of OAS and UNASUR. *International Area Studies Review* 16 (4): 370-389
27. Zamora Zúñiga, C. (2018). Maskirovka in Latin America: Russia's Pivot toward the Western Hemisphere. *International Journal of Intelligence and CounterIntelligence* 31 (3): 479-506

# UNVEILING THE ROLE OF ARTIFICIAL INTELLIGENCE IN STRENGTHENING PUBLIC INTEGRITY AND COMBATING CORRUPTION

Jelena Budak<sup>1,\*</sup>, Bruno Škrinjaric<sup>1</sup>

<sup>1</sup>Institute of Economics, Zagreb, Croatia

\* Corresponding author: [jbudak@eizg.hr](mailto:jbudak@eizg.hr)

DOI: [10.63356/978-99976-57-34-3\\_3](https://doi.org/10.63356/978-99976-57-34-3_3)

## Abstract

The process of digitalization accelerated the transformation of government and public services. The general belief is that digitalization positively affects the quality of public service and the integrity of public administration. Although digitalizing public administration and services correlates with lower corruption levels, the relationship is not straightforward. Knowing the characteristics of artificial intelligence (AI), one can speculate on its potential to strengthen transparency and accountability within the public sector, aiding in the fight against corruption. However, implementing advanced ICT tools, including AI, does not automatically yield anti-corruption outcomes, and new information technologies can also create new corruption risks. Based on the recent literature review and presentation of digitalization and corruption levels across the EU countries with a closer look at Croatia, this paper aims to highlight the potential and risks of AI's usage in the public sector to seize corruption, delineating future research framework.

**Keywords:** artificial intelligence, corruption, public integrity, digitalization of public administration

**Acknowledgements:** This work was supported by the National Recovery and Resilience Plan 2021–2026 – NextGenerationEU under Grant – Project number OTS-3402.

## 1. Introduction

Improving public governance by increasing transparency, participation, and accountability is essential for providing fair public services to citizens and the business sector. Good governance concepts may develop by adopting and diffusing new technologies within public sectors. The literature suggests that changes brought by technological progress to enhance the quality of the public sector depend on adopting digital technologies as the digitalization process noticeably accelerated the transformation of government and public services. The general belief is that “going digital” yields positive effects on the quality of public administration: increased use of digital technologies enables more efficient, professional, transparent, and prompt, i.e., improved public service to citizens and businesses (Androniceanu & Georgescu, 2023).

Although the digitalization of public administration and services by introducing e-government and integrating information and communication technologies (ICT) in public administration bodies is believed to lead to lower corruption levels, the relationship is not straightforward. The fast-paced spread of disruptive technologies, specifically artificial intelligence (AI), raises research interest in its implications. However, studies on how AI might contribute to the integrity of public administration and help seize corruption are scarce (Adam & Fazekas, 2021,

2018; Berryhill et al., 2019). Knowing the characteristics of AI, one can speculate on its potential to strengthen transparency and accountability within the public sector and its relations with citizens, businesses, and nonprofit organizations (Agostino et al., 2022).

Transparency and accountability practices are instrumental in building public trust in government institutions. Trust, in turn, is a vital component in the battle against corruption, fostering citizen engagement and monitoring and creating a more informed and participatory governance environment (Uslaner, 2013). However, implementing advanced ICT tools, including AI, does not automatically yield anti-corruption outcomes, and new information technologies can also create new corruption risks (Adam & Fazekas, 2021). There are several issues in deploying AI in public administration, including generating more corruption risks. This paper aims to highlight potentials and risks, delineating the framework to evaluate the impact of AI's usage in the public sector to seize corruption.

The paper is structured as follows. Digitalization's role in boosting public administration's integrity is used as an introductory overview in the next section devoted to identifying potentials and pitfalls of deploying AI in the anti-corruption context, as assessed in the recent literature. The prevalence of digitalization and corruption across European countries is presented in Section 3 and demonstrated in more detail using the example of Croatia. Croatia was chosen as a country with prevalent corruption practices, almost becoming part of the culture. According to Transparency International (2022), Croatia has consistently fallen below the average among the EU-11 group of new European Union member states, all of which share a common post-socialist heritage. Furthermore, corruption levels have remained unchanged even after Croatia acceded to the EU (Budak & Škrinjarić, 2024). The final section concludes and suggests the avenues for further research.

## **2. Literature review**

Adopting and spreading new technologies within public sectors can influence the development of good governance concepts. Digitalization has hastened the transformation of government and public services, with a prevailing belief that "going digital" enhances the quality of public administration. This enhancement includes more efficient, professional, transparent, and prompt services for citizens and businesses. While the digitalization of public administration, through the introduction of e-government and the integration of ICTs, has been linked to reduced corruption levels, the relationship is complex and not entirely straightforward. Existing literature suggests that scholars have only recently explored emerging technologies' role in fighting corruption (Adam & Fazekas, 2021; 2018).

From early studies advocating introducing e-government as an effective tool to seize corruption (Shim & Eom, 2008; Mistry & Jalal, 2012; Elbahasawy, 2014), the beneficial role of integrating ICTs in the public sector has been further corroborated. Digitalization has been considered a perceived solution for reducing corruption risks due to its effect on transparency and accountability, two fundamental building blocks of public integrity.

Transparency and accountability are critical in making public administration operations open to scrutiny (Adobor & Yawson, 2023; Margetts, 2022), establishing trust between the government and the public (Ravšelj et al., 2022), and increasing efficiency in service delivery (Sadik-Zada et al., 2022). Elements such as open government data, transparent decision-making processes, and trust-building are indispensable in combating corruption.

Digitalization of public administration and services by introducing e-government and integrating ICTs in public administration bodies was shown to be correlated with lower corruption levels (Zhao & Xu, 2015). Park and Kim (2020) found that e-government significantly seizes corruption, while the impact of open government as its subtype remains ambiguous. As most of the relevant studies favor supporting ICT's role in fighting corruption, after the initial digitalization, advancing to a mature e-government level might be deterred by corruption (Nam, 2018; Khan & Krishan, 2019). Another study in a large set of countries suggests that the e-government and corruption nexus is mitigated by a range of other variables that should be included in future research models (Basyal et al., 2018). Castro and Lopes (2023) argue that e-government should be developed to a specific (upper) level to curb corruption, showing the E-Government Development Index threshold of 0.39 on a scale of 0 to 1<sup>1</sup>.

The scholarly debate on digitalization's multiple and lasting effects on curbing corruption, primarily administrative corruption, is developing in new directions. The fast penetration of new (and disruptive) technologies, particularly AI, raised questions and issues to explore.

In their overview of AI perspectives, Dwivedi et al. (2021) offer definitions of AI, pointing out its ability to overcome the cognitive limitations of humans by independently interpreting and learning from large sets of external data. The outcomes of AI imply problem-solved results and specific tasks delivered with ultimate performance. This was enabled by the AI's use of big data and its capability of flexible adaptation. The use of AI in many sectors and areas of life undoubtedly produced radical changes, and this transformation increased research interest in the impacts and consequences of AI technology (Dwivedi et al., 2021). In this context, several open questions emerged: What is the role of AI in building government performance? How can AI be employed in public sectors to enhance the efficiency of public administration and effective public service delivery? What preconditions should be met for successful usage of AI? What are the risks? These and other issues are opening an entirely new research area, where AI's impact on public integrity, specifically on seizing corruption, is one of the most intriguing aspects.

As is valid for digital governance, where trust in government enhances the use of open data by citizens (Ravšelj et al., 2022), AI-enhanced technologies may build public trust in government. By making government datasets publicly available, open government data initiatives enable AI technologies to analyze patterns potentially indicative of corrupt practices while allowing for the independent verification of government claims. Moreover, AI significantly supports transparency and accountability in fighting corruption by boosting public trust in institutions and technology (Henman, 2020). AI can enhance transparency by automating processes and auditing tools, making it more difficult for corrupt practices to go undetected (Bao et al., 2022). Besides aiding in identifying and addressing corruption instances, AI assists organizations in implementing compliance measures, thus showcasing institutional accountability in assessing corruption risks (Adam & Fazekas, 2018).

AI adoption fortifies transparency in combating corruption by efficiently analyzing vast datasets. Extensive data analysis could help assess the risk of corruption and provide a helpful auditing tool. For instance, AI algorithms may facilitate extensive data analysis of financial transactions, government contracts, and public spending by employing machine learning techniques to detect corrupt practices such as embezzlement, bribery, or fraud. Machine learning algorithms identify suspicious patterns in financial records and alert them to potential corruption (Humpherys et al., 2011). Predictive analytics forecast future corruption trends,

---

<sup>1</sup><https://publicadministration.un.org/egovkb/en-us/About/Overview/-E-Government-Development-Index>

aiding proactive measures (Köbis et al., 2021a). AI-powered monitoring systems detect deviations in real time, deterring corrupt behavior (Gallego et al., 2021). AI-driven data visualization tools make information accessible, promoting transparency and accountability (Robinson, 2020).

Further, AI-driven optimization models can improve the efficiency of public service delivery, reducing bureaucratic inefficiencies that often breed corruption. AI can assist policymakers in making more informed decisions by analyzing data and providing insights into areas vulnerable to corruption (Costa, 2023). Furthermore, AI can enhance the transparency of decision-making processes by providing a clear trail of how decisions were made, a step crucial for accountability that enables citizens to understand and scrutinize governmental actions. Finally, AI might be used as an anti-corruption tool where potentials and pitfalls have been identified (Köbis et al., 2021a, 2021b).

However, several problems arise before AI reaches its full potential to seize corruption. Adam and Fazekas (2021) warned that implementing advanced ICT tools, including AI, does not automatically yield anti-corruption outcomes. New information technologies can also create new corruption risks (e.g., misuse of databases). For AI to effectively prevent corruption, it must align with the principles of good public governance, including privacy protection regulation and ethics (Jang, 2023; Toniolo, 2023; Kieslich et al., 2022).

Problems associated with AI deployment in terms of generating corruption risks stem from dishonest (unethical) human behavior and the imperfection of AI as a tool. Recent studies showed that AI might generate dishonesty-promoting advice (Leib et al., 2024; Köbis et al., 2021a) and suggest more research on the unethical consequences of AI behavior on the ethical conduct of humans using AI tools. Although AI's corruption power may not exceed humans' corruption power, AI might enable unethical behavior of humans (Köbis et al., 2021b).

One of the areas where AI could be employed is to help in anti-corruption efforts for citizens to scrutinize government. Köbis et al. (2021b) outlined that the development of machine learning and digitalization of public administration enabled AI mechanisms to be employed as an effective anti-corruption tool. E-government programs resulted in more publicly available data, meeting the transparency criteria. AI enables transparency to be turned into accountability in public administration because only with AI tools can large datasets be analyzed autonomously to detect corruption risks. The success of AI as an anti-corruption tool depends on the quality of input data, the reliability of the data sources (the crowdsourced data being the most problematical one), and the potential biases in AI algorithms, i.e., the AI algorithmic design. Leib et al. (2024) argue that the transparency of AI algorithms is insufficient to restrain AI's corruptive force. Finally, AI should be implemented appropriately to benefit from its full anti-corruption potential. Otherwise, the misuse of AI tools in public administration deteriorates public trust in institutions (Kuziemski & Misuraca, 2020).

One peril Köbis et al. (2022) identified is that employing AI as an anti-corruption tool might consolidate power structures in their (further) abuse of power actions. Given that the ruling elites and other power groups might control (sensitive) data, code, and technical infrastructure allowing access to and analysis of data, it might undermine the government-led top-down AI anti-corruption initiatives. The probability of such misuse of AI as an anti-corruption tool is higher in countries with a high prevalence of corruption where the fight against corruption is of the utmost importance (Köbis et al., 2022).

Another precondition for the successful deployment of AI to fight corruption is the capacity of public administration to adopt AI as a new technology and to become a proficient user of its potential, controlling in parallel for possible misuse. Henman (2020) identifies the following



public administration challenges to deploying artificial intelligence: accuracy, bias and discrimination; legality, due process and administrative justice; responsibility, accountability, transparency and explainability; and power, compliance and control.

Users must trust the new technology for the AI to be successfully implemented and used. Acceptance of AI technology is crucial for the spread of AI-based public services. As shown for the fast-spreading assistive AI (Choung et al., 2022; Schmidt et al., 2020), AI users must have confidence in AI and individual capabilities and knowledge before putting AI into operation.

Therefore, AI readiness is a prerequisite for effectively adopting AI to combat corruption and create substantial public value (Wirtz & Müller, 2018). AI readiness is defined as a public administration's willingness and ability and the suitability of its environment, processes, data, and resources for adopting and operating AI (Tehrani et al., 2024). AI readiness also encompasses the cultural and operational frameworks required to effectively use AI to reduce corruption risks, leading to hybrid governance models (Radu, 2021). This includes the organizational dimension and readiness at the state level, measured by the AI Readiness Index (Oxford Insights, 2023).

AI readiness is a specific indicator of necessary preconditions to deploy AI in digitalized public organizations and services, and it does not describe the current level of digitalization of public services. The next chapter presents the nexus between the digitalization that has been achieved and the prevalence of corruption in EU countries, with a particular focus on Croatia.

### **3. Digitalization and corruption levels in Europe**

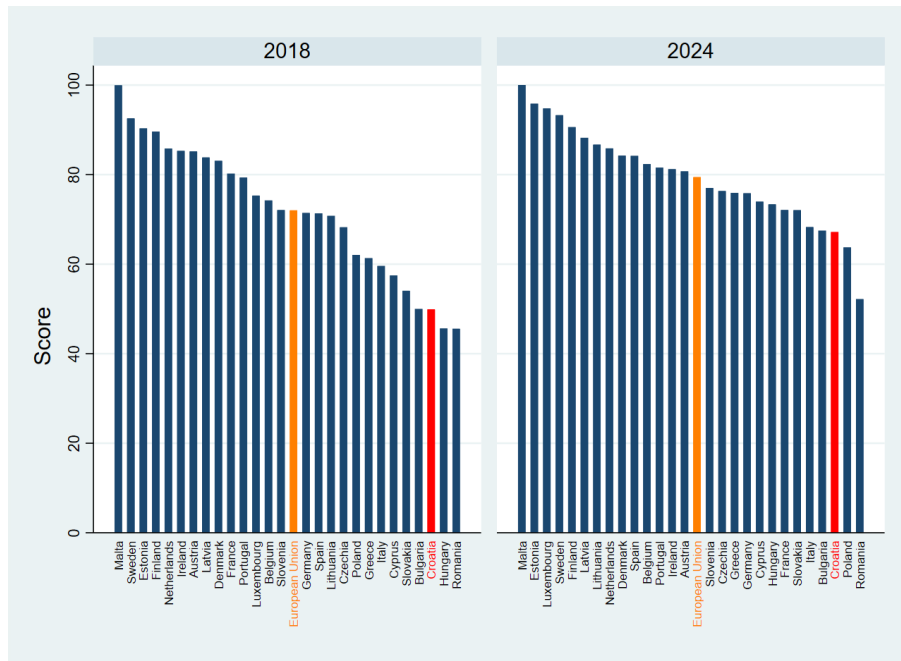
Empirical studies exploring the impact of digitalization on public administration and corruption showed that the effects are not straightforward for different groups of countries. E-government contribution to reducing administrative (petty) corruption is more pronounced in developing and post-transition countries (Sadik-Zada et al., 2022). In the new EU member states, the digitalization of public administration is not followed by lower corruption levels, as is observed among more advanced countries (Androniceanu et al., 2021; Androniceanu et al., 2022).

There is no standard and precise definition of digitalization nor a way to measure it; however, the EU countries' standardized indicators on some aspects of digitalization exist. The European Commission monitors the progress of the EU in its digital transformation, measured in 4 key areas: digital infrastructure, digital skills, digitalization of public services, and digitalization of businesses. From 2024, the “State of the Digital Decade” report also explores key drivers and challenges, including the current geopolitical paradigm, the complex economic context influenced by new technologies such as generative AI, and their impact on competitiveness (European Commission, 2024). Digital Economy and Society Index (DESI)<sup>2</sup> is incorporated in the yearly EU report. For this study, several DESI indicators were selected to represent, although not perfectly, the level of digitalization of public administration and services and the users of e-government services and AI technology.

---

<sup>2</sup> <https://digital-decade-desi.digital-strategy.ec.europa.eu/datasets/desi/indicators>

**Figure 1.** Digital public services for citizens

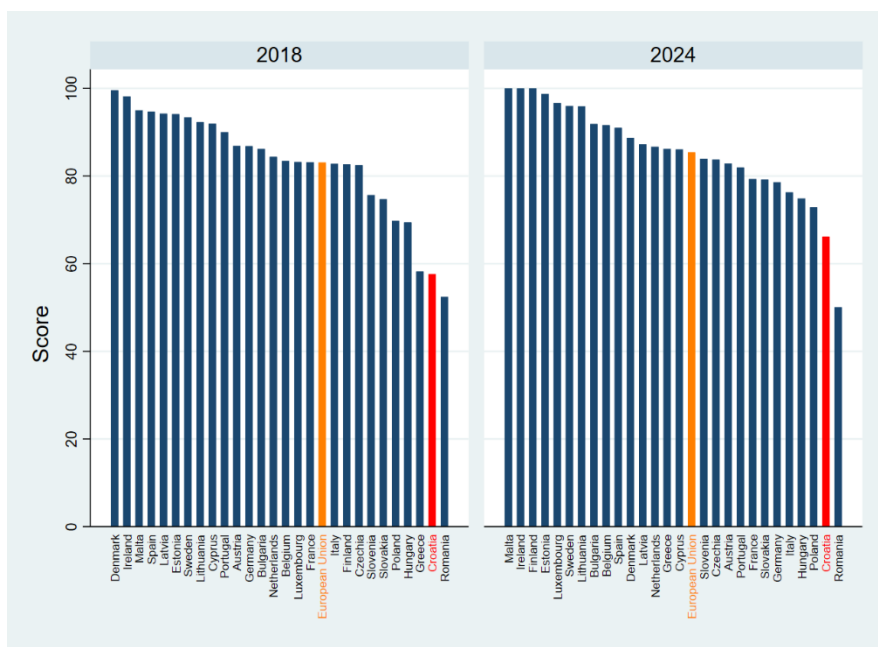


Source: DESI dataset, Eurostat

Notes: This is defined as the share of administrative steps that citizens can do online during significant life events (birth of a child, new residence, etc.). The country's score is from a minimum of 0 to a maximum of 100.

The availability of digital services for citizens has, from 2018 onwards, increased in all EU countries (Figure 1), and the availability of digital services to businesses is even at a higher level throughout the observed period 2018-2024 (Figure 2). This trend might have been further accelerated during the COVID-19 pandemic. Still, it is reasonable to assume that “going online” is a continuous process given the rising and significant share of the adult population using the internet across the EU. Therefore, further offering a range of public services online might stimulate citizens and firms to use the available digital public services more extensively.

**Figure 2.** Digital public services for businesses

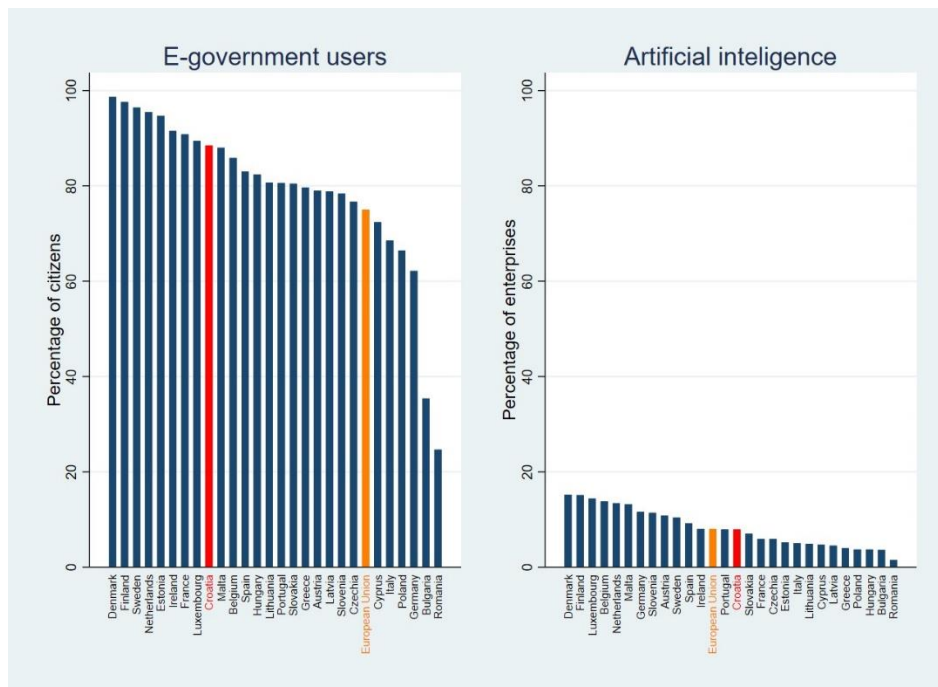


Source: DESI dataset, Eurostat

Notes: The indicator broadly reflects the share of public services needed for starting a business and conducting regular business operations available online for domestic and foreign users. Services provided through a portal receive a higher score; services that provide only information (but must be completed offline) receive a more limited score. The country's score is from a minimum of 0 to a maximum of 100.

This interaction regarding the practical usage of e-government services by citizens is presented in Figure 3. In 2024, there was a significant difference observed among the best-performing countries, such as Scandinavian ones, where the percentage is above 90%, compared to Bulgaria and Romania, where only three out of ten citizens used the Internet in the last 12 months for interaction with public authorities. The historical data showed the rising share of adult internet users in the EU who communicate online with public organizations, including gathering information, searching public administration websites, etc., revealing the potential to expand e-government to more areas that might benefit citizens. In return, this interaction enables the government to collect a large set of information and develop databases that, if properly analyzed, could help create new, more advanced services. As EU citizens exhibit interest (and need) in using e-government, businesses are, as expected, more prone to the usage of AI (Figure 3). The share of firms using any AI technology in 2024 is still low (less than 10% on the EU average and not surpassing 18% in the most performing countries). The new EU-11 member states are all lagging behind the EU average.

**Figure 3.** E-government and AI users, 2024.



Source: DESI dataset, Eurostat

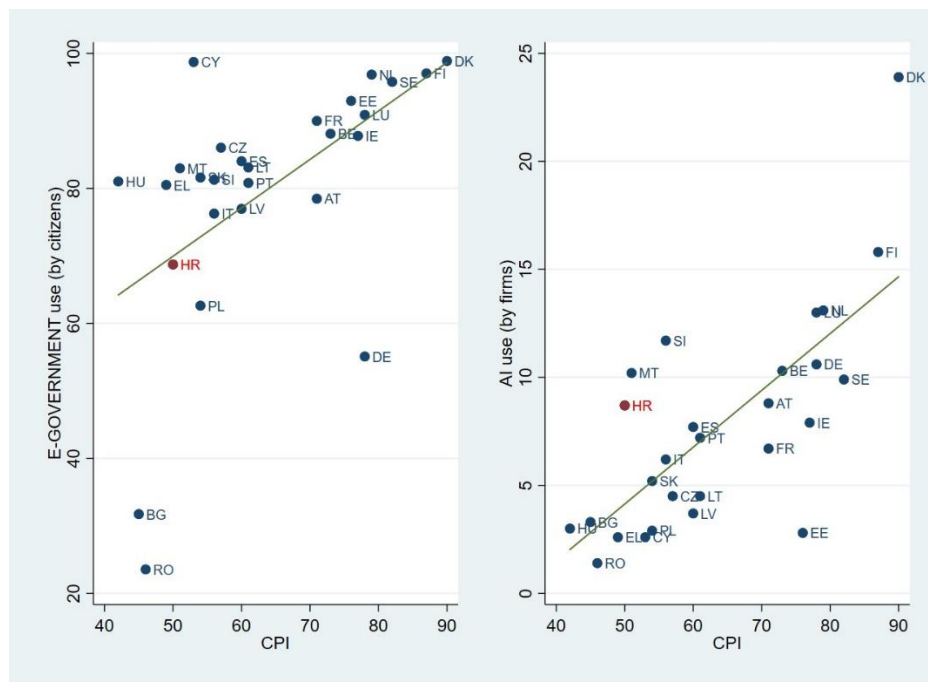
Notes: E-government users are a percentage of individuals (aged 16-74) who used the Internet in the last 12 months for interaction with public authorities. It includes obtaining information from public authorities' websites, downloading official forms, or sending filled-in forms. AI users are a percentage of enterprises (with ten or more persons employed; all manufacturing and service sectors, excluding the financial sector) using AI technology.

Unfortunately, no data on AI usage in public administration across the EU is available to show its correlation with corruption prevalence. Therefore, we use the indicators of e-government use by citizens and AI use by firms as a proxy of AI readiness and digitalization in providing

public services in a country and correlate them to the country's Corruption Perceptions Index (CPI) (Figure 4).

A strong correlation between higher levels of digitalization and lower levels of corruption is observed for the EU member states. As was found in previous empirical studies (Androniceanu et al., 2021; Androniceanu et al., 2022), more digitally developed Nordic countries have deficient levels of corruption, while post-socialist countries with less digitalized public administration suffer from higher corruption prevalence. However, this is not the case for some new EU member states. Namely, post-socialist Hungary, Slovakia, and the Czech Republic are outperforming in e-government usage by citizens having, at the same time, a high prevalence of corruption. Malta and Cyprus belong to this group, too, as well as several old EU member states, such as Greece. Bulgaria and Romania are the only countries with widespread corruption and low e-government use. Denmark, Sweden, and Finland, as the most corruption-clean countries, also scored the best in e-government usage by citizens. These variations indicate that although e-government usage generally correlates to lower corruption perceptions in the EU member states, other country-specific factors might affect this relationship.

**Figure 4.** Digitalization and corruption in the EU-28, 2024



*Source:* DESI dataset, Eurostat, and Transparency International (2022).

Notes: The CPI ranges from 0 (an utterly corrupt society) to 100 (a society without corruption), i.e., a higher index value indicates a lower perceived presence of corruption in the country. E-government use is a percentage of individuals (aged 16-74) who used the Internet in the last 12 months for interaction with public authorities. It includes obtaining information from public authorities' websites, downloading official forms, or sending filled-in forms. AI use is a percentage of enterprises (with ten or more persons employed; all manufacturing and service sectors, excluding the financial sector) using AI technology.

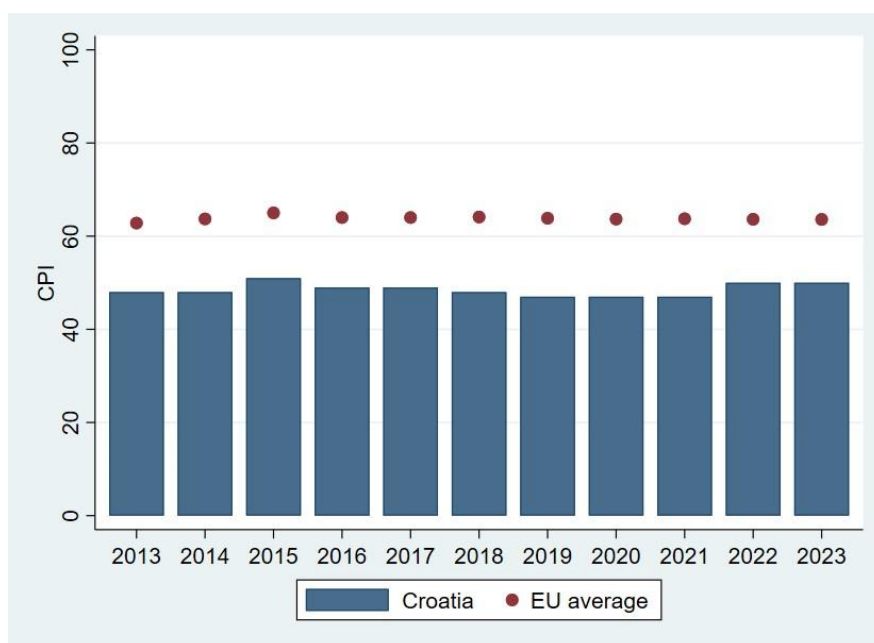
Firms' use of AI also correlates with lower corruption levels in a country. The countries grouped at the bottom of the graph are new EU member states characterized by low AI use and high corruption prevalence. Despite rather prevalent corruption, firms in Slovenia, Malta, and Croatia use AI more than firms in other EU new member states. Scandinavian countries are, as expected, again positioned on the upper part of the graph (Figure 4).

Since the latest trends in DESI showed that in the component “digitalization of public services,” Croatia lags behind the EU average (European Commission, 2024) and that corruption in Croatia is widespread, it is worth giving a closer look to digitalization in the context of corruption prevalence in this EU country.

### 3.1 Closer look at Croatia

According to the CPI, Croatia has for several years been below the average of the group of new member states of the European Union (EU-11)<sup>3</sup> that share the same historical post-socialist heritage (Transparency International, 2022). Some countries, such as Estonia, improved their CPI, while Croatia is in the lower group with Bulgaria, Romania, and Hungary, whose CPI has been deteriorating in recent years. Compared to the EU-28 average, Croatia's position is even worse (Figure 5).

**Figure 5.** Corruption Perceptions Index in Croatia compared to the EU-28 average



*Source:* Transparency International (2022).

Note: The CPI ranges from 0 (an utterly corrupt society) to 100 (a society without corruption), i.e., a higher index value indicates a lower perceived presence of corruption in the country. Countries whose CPI is lower than 50 are considered corrupt societies, to which Croatia also belongs.

In the latest public opinion survey on corruption in EU member states, 94% of citizens believe corruption is widespread in Croatia, significantly higher than the European average (68%) (European Commission, 2022a). Two-thirds of Croatian citizens believe that corruption has increased in the last three years (67% of respondents compared to the European average of 41%), and it is particularly worrying that 18% of them have had experience with corruption in the last year. Croatians see corruption as a remedy to an inefficient state and express shallow confidence in public and state institutions. They have no faith in the state’s willingness to decisively tackle the corrupt practices within its ranks (Jurić, 2020).

<sup>3</sup> EU-11 includes Bulgaria, Czech Republic, Estonia, Croatia, Latvia, Lithuania, Hungary, Poland, Romania, Slovakia, Slovenia.

Similarly, businesspeople in Croatia also have a bleak view of the domestic business environment. Namely, in the 2022 Eurobarometer Business Survey on Corruption, 93% stated that corruption is widespread in Croatia (the highest perception level in the EU), and 66% said corruption is a severe problem when doing business (European Commission, 2022b). These results also show a negative trend compared with the 2019 Eurobarometer Business Survey on Corruption, in which Croatian businesspeople had a somewhat better opinion of corruption in their country. Previously, in the 2013–14 Global Competitiveness Report, corruption is cited as the third most problematic factor for doing business in Croatia (after inefficient bureaucracy and political instability) (World Economic Forum, 2013).

Corruption in Croatia is not just an issue of perception. The public is informed about real corruption cases from affairs heavily covered by the media, especially about corruption scandals in business. This provides a basis for the perceptions of corruption among businesspeople in Croatia. The Croatian justice system has had to deal with several high-level corruption scandals in which those involved came from the very top of business and political structures: for example, the Agrokor affair, the Hypo-Alpe-Adria affair, the JANAF affair, and the INA affair.

Despite the prevalence of corruption, Croatia has significantly improved in some areas of digital society. As selected DESI indicators show, in 2024, 8 out of 10 adult individuals used the internet at least once a week, a considerable increase compared to 2018. However, according to this indicator of population internet usage, Croatia still lags behind the EU-28 average and remains in the worst-ranking group of EU countries. Those internet users, however, increasingly use the internet for interaction with public authorities, and here Croatia made significant progress: while in 2018, only about 50% of internet users communicated with public administration online, including browsing their websites, downloading or filling forms, etc., this share amounted to almost 90% in 2024. In five years, only Croatia moved from the 5th worst performing EU-28 country to the top performing 30%, as previously presented in Figure 3). The sharp increase is probably due to the development of *e-citizens* public service, which was affected by the general changes in behavior and habits during the pandemic. Shifting to online activities in significant areas of life and work in Croatia, such as working from home, online shopping, online classes, etc., was a turning point for going online. This irreversible process continued in the post-pandemic years as well. A part of these individual online activities is certainly using e-government public services. The “e-citizens” platform has been significantly upgraded from 2018 to 2024 with new services provided by different public sectors and organizations so citizens can quickly obtain necessary information and complete administrative procedures online. Recent studies confirm the rise of e-citizens usage due to the increasing public acceptance and expanding the range of services offered by e-citizens since its establishment in 2014 (Bebić et al., 2023). Therefore, it is somewhat surprising that according to the indicator of digital public services for citizens in the EU-28, Croatia holds a low position both in 2018 and 2024, despite the noted progress (Figure 1). The possible explanation stems from the methodological definition of this indicator, measuring the share of administrative steps that can be done online for citizens' major life events (birth of a child, new residence, etc.). Indeed, some life-events-related administrative documents and bureaucratic procedures citizens still need in person, at least for the first time, and then might have to obtain extensions, certificates, and copies online. The indicator does not encompass other important e-services that the e-citizens platform offers and reflects the broad public services available online to citizens.

The same is true for businesses: digitalization of public services for firms to conduct regular business operations and to start business is evident. Croatian public administration made specific progress from 2018 to 2024, but Croatia remains around the score of 60, faring the

second worst of all EU-28 countries (Figure 2). Finally, since the indicator of AI use by enterprises was introduced in the DESI dataset in 2022, no significant changes regarding Croatia's standing have been observed. Less than 10% of firms in Croatia use some AI in their operations, around the EU-28 average. Here, one could doubt AI usage awareness because some firms might not be aware that they are using AI-assisted technologies or tools, so they fail to report themselves as AI business users. This thinking brings us to the issue of poor AI awareness and AI readiness, which is confirmed by Croatia's standings in the AI Readiness Index (Oxford Insights, 2023). Croatia's index value of 49.34 on a scale of 0 to 100 places it as the lowest-ranked EU country. A closer look at the components of the Government pillar of the AI Readiness index (scored 42.25) shows that the government in Croatia has better digital capacity (scored 60) as well as governance and ethics (62.95) but lacks adaptability (41.18) and vision (0; Croatia is as well one of only two EU countries together with Romania, that still lack national AI strategies).

Croatia policy decision-makers must be aware of the future, inevitably bringing AI into all segments of our lives. Regarding AI deployment in the public sector and related regulations, Croatia officially supports its usage, so it follows the EU debate and waits for recommendations on AI usage from higher instances. One's impression is that all policy stakeholders know that AI is here to stay, but the official standpoint is somehow missing or at least too vague and blurred.

For instance, one of the eminent public companies that provide services to the public and government sector organizations in Croatia, among others, in developing and monitoring the implementation of the directives, norms, and policies in e-Government, recognizes 'the importance of AI to automate simple and repetitive actions, increase the predictive capabilities of IT systems and support the personalization of services, that will have a strong impact on increasing efficiency in the work of public administration.' Further, AI usage is mentioned in the Digital Croatia Strategy until 2032, but only to a modest extent (Box 1).

### **Box 1. AI role in the strategy of future public administration digitalization in Croatia**

As part of the digitalization of public administration in Croatia, the introduction of advanced digital technologies in the work of public administration will be encouraged, such as blockchain technology and **artificial intelligence**, which at its core contains integrated elements of machine and deep learning, computer vision, speech recognition, and robotics. In the next ten years, it is expected that the development and application of **artificial intelligence** will result in a global transformation of society, so particular emphasis will be placed on monitoring good practices in the application of **artificial intelligence** in the public sector, and based on this, on the preparation and implementation of similar projects in the Croatian environment. For the above to be applied, necessary amendments to the legislation will be made to enable and encourage electronic communication and the digitalization of public bodies' administrative and other procedures and business processes.

Note: Text bolded by authors.

*Source:* Digital Croatia Strategy for the period until 2032, December 2022. <https://rdd.gov.hr/istaknute teme/strategija-digitalne-hrvatske-za-razdoblje-do-2032/2009>

The Central State Office for Digital Society Development elaborated the strategic document and was the focal government point of digitalization. It has been integrated into the Ministry of Justice, Public Administration and Digital Transformation in mid-2024. It remains to see if this integration will enhance the process of public administration digitalization in line with the European Commission State of the Digital Decade 2024 report for Croatia, stressing that in Croatia, "particularly important challenges persist in the digitalization of government services and the adoption of AI and data analytics" (European Commission, 2024).

Evidence of AI use in local government units in Croatia is scarce. Introducing *ChatGPT* into administrative processes at the local government level in Croatia develops slowly and by deploying the essential AI tools. One of the pioneering examples is implementing *ChatGPT* in the city of Split in 2024. There, the local government promoted its usage as an example of how AI can be used to simplify and speed up administrative tasks, making the city administration more efficient and accessible to citizens: *ChatGPT* will assist from quickly composing meeting invitations to extracting specific data from large documents, allowing city officials to save time and resources that can be diverted to strategic projects and infrastructure improvements.

#### 4. Conclusion

Using advanced technologies in public administration depends on its capacity to adopt new technologies and readiness to employ AI, particularly to combat corruption and prevent failure risks in implementing AI-based anti-corruption tools. Recent literature argues for the potential of AI usage in public administration to seize corruption by mitigating human (mis) behavior attempts. AI usage promotes transparency and contributes to the accountability of public administration, increasing the trust in government and institutions, yet its impact on public integrity remains unclear. Several studies pointed out that AI's irresponsible, unethical, or malicious usage might generate corruption risks. Ironically, this threat is even more prevalent in countries with high levels of corruption.

The simplistic presentation of digitalization and corruption nexus across the EU showed that e-government usage by citizens and readiness to use AI by firms are correlated to lower corruption levels. This might serve as the research stimulus for further exploring the interdependencies and specifically for assessing how AI usage in public administration might contribute to seizing corruption. Indeed, more research is needed before advocating the usage of AI in the public sector to seize corruption. The starting point would be to assess what preconditions should be met to introduce AI in public administration in terms of AI readiness, AI acceptance, and trust in the AI, including their antecedents, and then to proceed with an in-depth empirical analysis of particular cases (country-specific, central vs. local government, exact public sectors, etc.) and related comparative studies. Analyzing AI-generated corruption risks could yield useful findings on prevention measures in implementing AI in public administration.

#### LITERATURE

1. Adam, I., & Fazekas, M. (2018). Are emerging technologies helping win the fight against corruption in developing countries? *Pathways for Prosperity Commission Background Paper Series*, 21, 1-34. <https://doi.org/10.1016/j.infoecopol.2021.100950>
2. Adam, I., & Fazekas, M. (2021). Are emerging technologies helping win the fight against corruption? A review of the state of evidence. *Information Economics and Policy*, 57, 100950. <https://doi.org/10.1016/j.infoecopol.2021.100950>
3. Adobor, H., & Yawson, R. (2023). The promise of artificial intelligence in combating public corruption in the emerging economies: A conceptual framework. *Science and Public Policy*, 50(3), 355-370. <https://doi.org/10.1093/scipol/scac068>
4. Agostino, D., Saliterer, I., & Steccolini, I. (2022). Digitalization, accounting and accountability: A literature review and reflections on future research in public services. *Financial Accountability & Management*, 38(2), 152-176. <https://doi.org/10.1111/faam.12301>
5. Andronicăeanu, A., & Georgescu, I. (2023). Public Administration Digitalization and Government Effectiveness in the EU Countries. *Central European Public Administration Review*, 21(1), 7-30. <https://doi.org/10.17573/cepar.2023.1.01>



6. Androniceanu, A., Georgescu, I., & Kinnunen, J. (2022). Public administration digitalization and corruption in the EU member states. A comparative and correlative research analysis. *Transylvanian Review of Administrative Sciences*, 18(65), 5-22. [1 http://dx.doi.org/10.24193/tras.65E.1](http://dx.doi.org/10.24193/tras.65E.1)
7. Androniceanu, A., Nica, E., Georgescu, I., & Sabie, O. M. (2021). The influence of the ICT on the control of corruption in public administrations of the EU member states: a comparative analysis based on panel data. *Administratie si Management Public*, (37), 41-59. <https://doi.org/10.24818/amp/2021.37-03>
8. Bao, Y., Hilary, G., & Ke, B. (2022). Artificial intelligence and fraud detection. In: Babich, V., Birge, J.R., Hilary, G. (eds) *Innovative Technology at the Interface of Finance and Operations: Volume I*, 223-247. Springer Series in Supply Chain Management, vol 11. Springer, Cham. [https://doi.org/10.1007/978-3-030-75729-8\\_8](https://doi.org/10.1007/978-3-030-75729-8_8)
9. Basyal, D. K., Poudyal, N., & Seo, J. W. (2018). Does E-government reduce corruption? Evidence from a heterogeneous panel data model. *Transforming Government: People, Process and Policy*. <https://doi.org/10.1108/TG-12-2017-0073>
10. Bebić, D., & Dolinar, D. (2023). Rise of e-Citizens in Croatia: A Case Study of the Croatian Main e-Government Platform During the Time of the Pandemic. In *Digital Communication and Populism in Times of Covid-19: Cases, Strategies, Examples* (pp. 149-159). Cham: Springer Nature Switzerland.
11. Berryhill, J., Heang, K. K., Clogher, R., & McBride, K. (2019). Hello, World: Artificial intelligence and its use in the public sector. OECD Working Papers on Public Governance, No.36, OECD Publishing, Paris. <https://doi.org/10.1787/19934351>
12. Budak, J., & Škrinjarić, B. (2024). Korupcija i povjerenje u institucije u Hrvatskoj prije i poslije ulaska u EU. *Croatian and Comparative Public Administration*, 24(1), 147-182. <https://doi.org/10.31297/hkju.24.1.1>
13. Castro, C. & Lopes, I. C. (2023). E-Government as a Tool in Controlling Corruption. *International Journal of Public Administration*, 46(16), 1137-1150. <https://doi.org/10.1080/01900690701590553>
14. Choung, H., David, P., & Ross, A. (2022). Trust in AI and Its Role in the Acceptance of AI Technologies. *International Journal of Human-Computer Interaction*, 39(9), 1727-1739. <https://doi.org/10.1080/10447318.2022.2050543>
15. Costa, S. (2023). *Transforming Integrity: AI, Blockchain and the Fight against Corruption*. Santos Costa.
16. Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., et al. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. *International Journal of Information Management*, 57, 101994.
17. Elbahnasawy, N. G. (2014). E-government, internet adoption, and corruption: an empirical investigation. *World Development*, 57, 114-126. <https://doi.org/10.1016/j.worlddev.2013.12.005>
18. European Commission. (2022a). Special Eurobarometer 523 Corruption July 2022. Available at <https://europa.eu/eurobarometer/surveys/detail/2658>
19. European Commission. (2022b). Businesses' attitudes towards corruption in the EU: summary. Publications Office of the European Union. Available at <https://data.europa.eu/doi/10.2837/019748>
20. European Commission. (2024). Report on the State of the Digital Decade 2024 Annex - Short Country Report 2024 – Croatia. Retrieved from: <https://digital-strategy.ec.europa.eu/en/policies/2024-state-digital-decade-package>
21. Gallego, J., Rivero, G., & Martínez, J. (2021). Preventing rather than punishing: An early warning model of malfeasance in public procurement. *International Journal of Forecasting*, 37(1), 360-377. <https://doi.org/10.1016/j.ijforecast.2020.06.006>
22. Henman, P. (2020). Improving public services using artificial intelligence: possibilities, pitfalls, governance. *Asia Pacific Journal of Public Administration*, 42(4), 209-221. <https://doi.org/10.1080/23276665.2020.1816188>
23. Humpherys, S. L., Moffitt, K. C., Burns, M. B., Burgoon, J. K., & Felix, W. F. (2011). Identification of fraudulent financial statements using linguistic credibility analysis. *Decision Support Systems*, 50(3), 585-594. <https://doi.org/10.1016/j.dss.2010.08.009>
24. Jang, C. (2023). Coping with vulnerability: the effect of trust in AI and privacy-protective behaviour on the use of AI-based services. *Behaviour & Information Technology*, 1-13. <https://doi.org/10.1080/0144929X.2023.2246590>
25. Jurić, T. (2020). Najskuplji liječnik i sestra su oni kojih nema. *MEDIX*, 26(144-145), 30-33. Url: [https://www.researchgate.net/profile/Tado-Juric/publication/347465149\\_Najskuplji\\_lijecnik\\_i\\_sestra\\_su\\_oni\\_kojih\\_nema\\_Medicinski\\_casopis\\_M\\_E\\_D\\_I\\_X\\_2\\_0\\_2\\_0/links/5fdce870a6fdccdb8de099f/Najskuplji-lijecnik-i-sestra-su-oni-kojih-nema-Medicinski-casopis-M-E-D-I-X-2-0-2-0.pdf](https://www.researchgate.net/profile/Tado-Juric/publication/347465149_Najskuplji_lijecnik_i_sestra_su_oni_kojih_nema_Medicinski_casopis_M_E_D_I_X_2_0_2_0/links/5fdce870a6fdccdb8de099f/Najskuplji-lijecnik-i-sestra-su-oni-kojih-nema-Medicinski-casopis-M-E-D-I-X-2-0-2-0.pdf)
26. Khan, A., & Krishnan, S. (2019). Conceptualizing the impact of corruption in national institutions and national stakeholder service systems on e-government maturity. *International Journal of Information Management*, 46, 23-36. <https://doi.org/10.1016/j.ijinfomgt.2018.11.014>

27. Kieslich, K., Keller, B., & Starke, C. (2022). Artificial intelligence ethics by design. Evaluating public perception on the importance of ethical design principles of artificial intelligence. *Big Data & Society*, 9(1), 20539517221092956. <https://doi.org/10.1177/20539517221092956>
28. Köbis, N., Bonnefon, J. F., & Rahwan, I. (2021b). Bad machines corrupt good morals. *Nature Human Behaviour*, 5(6), 679-685. <https://doi.org/10.1038/s41562-021-01128-2>
29. Köbis, N., Starke, C., & Rahwan, I. (2021a). Artificial Intelligence as an Anti-Corruption Tool (AI-ACT) -- Potentials and Pitfalls for Top-down and Bottom-up Approaches. *arXiv preprint arXiv:2102.11567*. <https://doi.org/10.48550/arXiv.2102.11567>
30. Köbis, N., Starke, C., & Rahwan, I. (2022). The promise and perils of using artificial intelligence to fight corruption. *Nature Machine Intelligence*, 4(5), 418-424. <https://doi.org/10.1038/s42256-022-00489-1>
31. Kuziemski, M., & Misuraca, G. (2020). AI governance in the public sector: Three tales from the frontiers of automated decision-making in democratic settings. *Telecommunications policy*, 44(6), 101976. <https://doi.org/10.1016/j.telpol.2020.101976>
32. Leib, M., Köbis, N., Rilke, R. M., Hagens, M., & Irlenbusch, B. (2024). Corrupted by algorithms? how ai-generated and human-written advice shape (dis) honesty. *The Economic Journal*, 134(658), 766-784. <https://doi.org/10.1093/ej/uead056>
33. Margetts, H. (2022). Rethinking AI for good governance. *Daedalus*, 151(2), 360-371. [https://doi.org/10.1162/daed\\_a\\_01922](https://doi.org/10.1162/daed_a_01922)
34. Mistry, J. J., and Jalal, A. (2012). An Empirical Analysis of the Relationship between e-government and Corruption. *The International Journal of Digital Accounting Research*, 12, 145–176. [https://doi.org/10.4192/1577-8517-v12\\_6](https://doi.org/10.4192/1577-8517-v12_6)
35. Nam, T. (2018). Examining the anti-corruption effect of e-government and the moderating effect of national culture: A cross-country study. *Government information quarterly*, 35(2), 273-282. <https://doi.org/10.1016/j.giq.2018.01.005>
36. Oxford Insights (2023). Government AI Readiness Index 2023. Retrieved from: <https://oxfordinsights.com/wp-content/uploads/2023/12/2023-Government-AI-Readiness-Index-2.pdf>
37. Park, C. H., & Kim, K. (2020). E-government as an anti-corruption tool: Panel data analysis across countries. *International Review of Administrative Sciences*, 86(4), 691-707. <https://doi.org/10.1177/0020852318822055>
38. Radu, R. (2021). Steering the governance of artificial intelligence: national strategies in perspective. *Policy and society*, 40(2), 178-193. <https://doi.org/10.1080/14494035.2021.1929728>
39. Ravšelj, D., Umek, L., Todorovski, L., & Aristovnik, A. (2022). A review of digital era governance research in the first two decades: a bibliometric study. *Future Internet*, 14(5), 126. <https://doi.org/10.3390/fi14050126>
40. Robinson, S. C. (2020). Trust, transparency, and openness: How inclusion of cultural values shapes Nordic national public policy strategies for artificial intelligence (AI). *Technology in Society*, 63, 101421. <https://doi.org/10.1016/j.techsoc.2020.101421>
41. Sadik-Zada, E. R., Gatto, A. & Niftiyev, I. (2022). E-government and petty corruption in public sector service delivery. *Technology Analysis & Strategic Management*, <https://doi.org/10.1080/09537325.2022.2067037>
42. Schmidt, P., Biessmann, F., & Teubner, T. (2020). Transparency and trust in artificial intelligence systems. *Journal of Decision Systems*, 29(4), 260–278. <https://doi.org/10.1080/12460125.2020.1819094>
43. Shim, D. C., & Eom, T. H. (2008). E-government and anti-corruption: Empirical analysis of international data. *Intl Journal of Public Administration*, 31(3), 298-316. <https://doi.org/10.1080/01900690701590553>
44. Tehrani, A. N., Ray, S., Roy, S. K., Gruner, R. L., & Appio, F. P. (2024). Decoding AI readiness: An in-depth analysis of key dimensions in multinational corporations. *Technovation*, 131, 102948. <https://doi.org/10.1016/j.technovation.2023.102948>
45. Toniolo, F. (2023). Artificial Intelligence and Public Administration: Ethical Implications of the Use of Automatic Decision-making Systems. <https://titula.universidadeuropea.com/handle/20.500.12880/8079>
46. Transparency International. (2022). Corruption Perceptions Index. Available at [www.transparency.org/en/cpi/2022](http://www.transparency.org/en/cpi/2022)
47. Uslaner, E. M. (2013). Trust and corruption revisited: How and why trust and corruption shape each other. *Quality & Quantity*, 47, 3603-3608.
48. Wirtz, B. W., & Müller, W. M. (2019). An integrated artificial intelligence framework for public management. *Public Management Review*, 21(7), 1076-1100. <https://doi.org/10.1080/14719037.2018.1549268>
49. World Economic Forum. (2013). The Global Competitiveness Report 2013–2014: Full Data Edition. Available at [https://www3.weforum.org/docs/WEF\\_GlobalCompetitivenessReport\\_2013-14.pdf](https://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2013-14.pdf)
50. Zhao, X., & Xu, H. D. (2015). E-government and corruption: A longitudinal analysis of countries. *International Journal of Public Administration*, 38(6), 410-421. <https://doi.org/10.1080/01900692.2014.942736>

# PRODUCTIVITY AT THE GRASSROOTS THE SIGNIFICANCE OF LOCAL GOVERNMENT ACTIONS

Mariel Frroku <sup>1</sup>, Arjan Tushaj <sup>1</sup>

<sup>1</sup>Department of Finance, Faculty of Economics, University of Tirana

\*Corresponding authors: Mariel.Frroku@unitir.edu.al; arjantushaj@feut.edu.al

DOI: [10.63356/978-99976-57-34-3\\_4](https://doi.org/10.63356/978-99976-57-34-3_4)

## Abstract

This paper explores the critical role of local government actions in fostering productivity at the grassroots level of public services. As the closest administrative body to citizens, local governments are uniquely positioned to influence economic, social, and environmental outcomes in their communities. By analyzing the case of Albania based competencies of local government, the paper shows how local government initiatives can drive significant productivity, as the enhancing of infrastructure and public services to support small businesses and fostering innovation. By analyzing the last ten-year correlation between local government expenditures and the annual growth rate of GDP of Albania we will define the contribution of local government on national productivity.

The research underscores the importance of decentralized decision-making, community engagement, and tailored policy interventions in addressing the unique challenges faced by local communities. The findings suggest that strengthening local governance and empowering grassroots actors are essential for achieving broader national and global development goals.

**Keywords:** Local Government, Gross Domestic Product, Public Finance, Fiscal Decentralization, Functional Responsibilities

**JEL:** H70; H72; H76; H77

## 1. Introduction

Economic development is a multifaceted process that requires the coordinated efforts of various stakeholders, including national and local governments, private sector entities, and civil society. Traditionally, the focus has been on national governments as the primary drivers of economic policy, with their ability to implement broad macroeconomic strategies that shape the overall direction of an economy. However, in recent decades, the importance of local governments in this process has become increasingly recognized. Local Government is near of the citizens problems, for this reason they can understanding the specific needs and opportunities within their communities. This proximity allows local government units to implement policies and initiatives that can directly influence local economic conditions and contribute to Gross Domestic Product (GDP). Economic stability, quality of public services, and many functions implemented directly by local government impact the national productivity of a country.

Local governments are charged with various responsibilities that directly impact national economic development. Responsibilities in Albania are for essential services such as primary and secondary education, social protection, and public services etc. The effectiveness of local governments on performing functionalities can influence the economic development of all regions of country. The maintenance of infrastructure, both level of education, and water supply systems, are critical to enable economic development of local government.

Local governments play a crucial role on supporting enterprises (specially SMEs), which are the backbone of local economic development. The good governance of local units can provide access to finance, offering business development services, and creating a favorable regulatory environment and quality of the services.

Enhancing the human capability is another critical role where local governments can impact by the local productivity. Through investments on training and sharing knowledge mechanisms, local governments can equip their citizens with the skills needed to meet the demands of the labor market. A well-trained workforce is essential for growth investment innovation, both elements that are key drivers of economic growth. In this sense, local government units can play a pivotal role in aligning educational programs with the specific needs. This will help to ensure that workforce is equipped to support the economic priorities of every region of the country.

The key indicators of economic performance are important to assess the economic impact of local government actions. These indicators can provide valuable insights into the effectiveness of local government policies and programs and help to identify areas where improvements can be made.

**Gross Domestic Product (GDP)** is the most commonly used indicator to measure the economic performance a county. In this regard by analyzing GDP impact of every region, it is possible to assess the overall economic impact of local government actions.

**Employment** based on the theoretic definition it measures the rate of unemployment. By analyzing this indicator, it is possible for an evaluation of effectiveness of local government policies in creating jobs and reducing unemployment.

**Investment is the third indicator that can impact directly local productivity.** This economic performance indicator, is the amount of capital that is being invested in an economy. From the analyze of investment data, is possible to identify the effectiveness of local government policies and stimulating economic growth.

Based on the traditional economic analyses, the evaluation of local government actions on local government are very difficult. This paper will address an example of examination how local government activities contribute to GDP. This study explores the mechanisms on how local governments can influence economic outputs, focusing on key areas such as employment, investments and workforce training. By highlighting successful case from regions countries, is demonstrated how local government actions have led to measurable improvements in economic performance.

## 2. Literature review

Odo (2014) investigated the determinants of robust outcomes related to the local government toward grassroots development through the socio-economic and political contests in rural Nigeria. He highlighted the improvement of the local governments' capacity related to the services distribution towards the individuals referring to the grassroots level. Meanwhile, he

demonstrated the substantial impact of local government on grassroots development and inclusive development in Nigerian countries. The author emphasized the actual necessity of effective policies of the local government to embed appropriate programs due to the deprived outcomes of government schemes correlated to grassroots development.

Tobi and Oikhala (2021) examined the inappropriate impact of several transformations on the Nigerian local government organization. They emphasized the persistent letdown of local government schemes despite essential changes. The authors remarked on the adequate improvement of efficacy towards the Nigerian local governments to complete the legal roles due to the gap of grassroots governance and development in Nigeria. They highlighted that federal and state governments should take into consideration the substantial progress to achieve successfully the constitutional functions by the local governance. The authors stressed that the crucial solution to lead the grassroots governance and development in Nigeria should approve the compulsory autonomy for each tier of government.

Choi (2021) examined the effect of the performance of local government capacity through the panel data of 152 local bodies in Korea during 2013 – 2018. His outcomes demonstrated the irrelevant effect of the quality and quantity determinants on the performance of government capacity. Also, he emphasized the worth of management to enhance and contribute towards the maintainable advanced performance. He stressed the significance of developmental policies to converge towards sustainability, particularly infrastructure development. The author highlighted that policymakers should take into consideration the role of diverse policies to combine the comprehensive dimensions of societal sustainable development.

Vasstrøm and Normann (2019) investigated the incorporation of local development and diverse governance strategies to contribute to the development of rural societies referring to various dimensions. They concluded that several strategies should be implemented taking into consideration the numerous comprehensive circumstances, particularly the local context, history, institutions, and culture, to achieve robust outcomes in rural communities.

### **3. Methodology**

This paper employs a mixed methods approach to examine the impact of local government actions on economic development and their contribution to Gross Domestic Product (GDP). The research begins with a comprehensive review of existing literature on the role of local governments in economic development, focusing on expenditures of local government. Quantitative data on key economic performance indicators, GDP growth, employment rates, and investment levels, will be analyzed for correlation between local government initiatives and economic outcomes. This analysis will be supported by tables and graphs to show the results of data verified and to identify significant patterns and relationships between local government activities and economic performance.

In addition to the quantitative analysis, the paper will incorporate a qualitative case study from Albania where local government actions have led to notable economic improvements. This case study will be based on interviews with local and central government officials, secondary resources of macroeconomic data, as well as a review of relevant policy documents and reports. The qualitative data will provide deeper insights into the local expenditures and growth rate of the GDP of Albania, which have impacted the economic growth at the grassroots level. By combining of quantitative with qualitative data, this methodology ensures a comprehensive understanding of local government decision making on economic development and GDP growth rate.

#### 4. Role of local government in economic development

Economic development is crucial for public policies, and fundamental to improve living standards, reducing poverty, and ensuring a sustainable growth rate. While national governments often set broad economic policies, local governments play a crucial role on transposing the policies into tangible outcomes at the community level. Local governments, as a closest administrative bodies to public services, have a unique possibility to address specific needs of communities. This ability allows them to support policies and initiatives that influence local economic conditions.

Local government units by ensuring that public services are delivered efficiently and effectively, can create an good environment for economic activities. Local government can tailor their policies based on unique economic, social, and cultural characteristic of their regions, thereby enhancing the relevance and impact of their interventions. In Albania based on the law for local self-government functions, municipalities are obligated to offer infrastructure and public services, social and environmental protection, and special functions on the local economic development. In the case of Albania for direct impact on economic development, the factions of the local government are obligated by law to:

- Drafting of strategic development plans and programs for local economic development.
- The establishment and operation of public markets and the trade network.
- Support for the development of small businesses, through incentive activities, such as fairs advertising in public places.
- Organization of services in support of local economic development, such as information for businesses, promotional activities, making public assets available, etc.
- Publication of informative brochures, creation of portals with an economic profile, etc.
- Giving financial grants to support small and medium business activities, according to the way defined in the legislation in force, guarantees balanced gender access.

Local governments have a broad mandate that encompasses a wide range of functions, all of which have direct or indirect implications for economic development. The functions of local government can be categorized into several key areas: service delivery, regulation, planning and development, and fiscal management. Albanian local government experience explains a good case of function decentralization progress that can influence economic development.

One of the primary functions of local governments is the delivery of essential **public services**. These include education, sanitation, water supply, public transportation etc., which are dependent on the level of functional decentralization. The quality and availability of these services have a direct impact on public services and the productivity of the local economy. Access to a good quality education is crucial for developing a skilled workforce, which is directly related with economic growth. The reliable public transportation is necessary for ensuring that businesses can operate efficiently and is conducive to economic activity.

In addition to ensure service delivery, local governments have a **regulatory function** that is essential for economic activity. This function includes the regulation of land use, building codes, environmental standards etc. For example, by enforcing environmental standards and regulations, local governments can protect natural resources, reduce pollution, and ensure that development is sustainable. This is particularly important in the context of climate change, where local governments have a critical role in implementing mitigation and adaptation measures.

**Planning and development** are very important role of local governments to support economic development. By ensuring strategic planning local government can project the future growth and development. This includes the development of comprehensive plans on different fields.

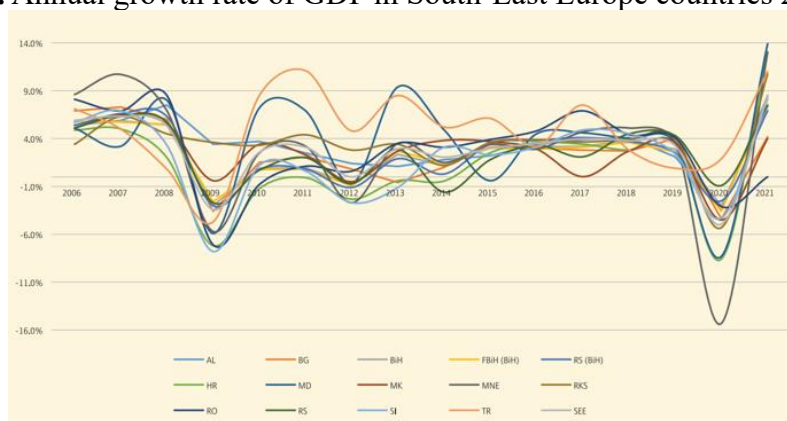
By approved long-term plan local government can set out goals and objectives for land use, infrastructure, housing, and economic development. By developing strategic plans, local government can ensure sustainable and aligned development of the community. Economic development strategies are a tool for local governments interventions, by implementing specific actions and initiatives to promote economic growth. These strategies can include initiatives to attract investment, support businesses and create jobs. By implementing economic development strategies, local governments can play a proactive role in shaping the economic future of their communities.

**Fiscal management** is a important function of local governments, on how resources are allocated and spent for public services. Through an effective fiscal management, local governments will ensure that public resources are used efficiently by delivering e effective public services. On this process are included management of revenue, expenditure, and debt, as well as the development of budgets and financial plans.

Revenue administration is important, on determining the resources available for local governments to deliver public services. Local governments by law can generate revenue through taxes, fees, and grants from higher levels of government or foreign grants.

The annual change of the national productivity is a particularly important moment in the analysis of the impact of local government expenditures. The countries of Southeast Europe are characterized by a similar trend of change in annual productivity, but the amplitude of the change depends a lot on the location and economic consolidation of the country.

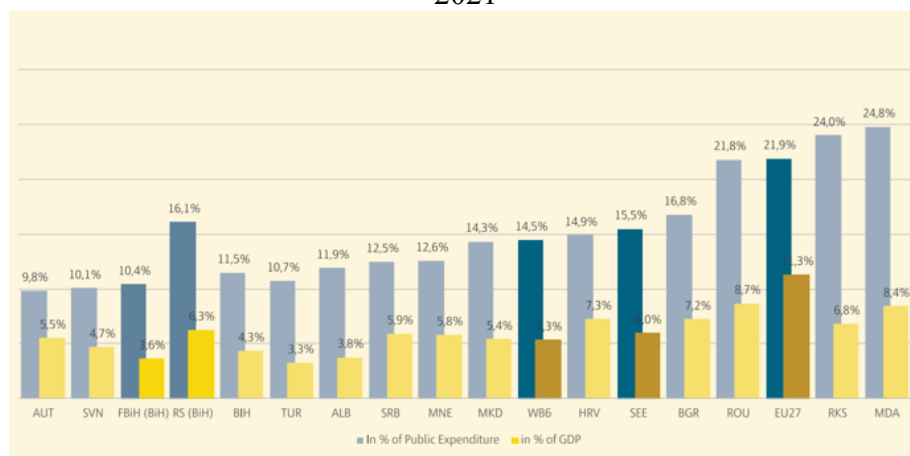
**Graph 1.** Annual growth rate of GDP in South-East Europe countries 2006-2021.



Source: NALAS ( <https://nalas-observatory.eu/>)

While we will compare the GDP change indicator with the ratio of local government expenditures according to the states, we find that there is no direct relationship between the productivity growth of a country and the amount of local government expenditures relative to its productivity. This shows that in those independent countries, the indicator of fiscal importance (local expenditures to public expenditures) is quite high, it does not have a direct relationship with the ratio of local expenditures to GDP. The change in these indicators is evident in Moldova, where regardless of the fiscal importance, of the national productivity (GDP), the local expenses are low.

**Graph 2.** Local Government Expenditure as Percentage of Public Expenditures and GDP, 2021

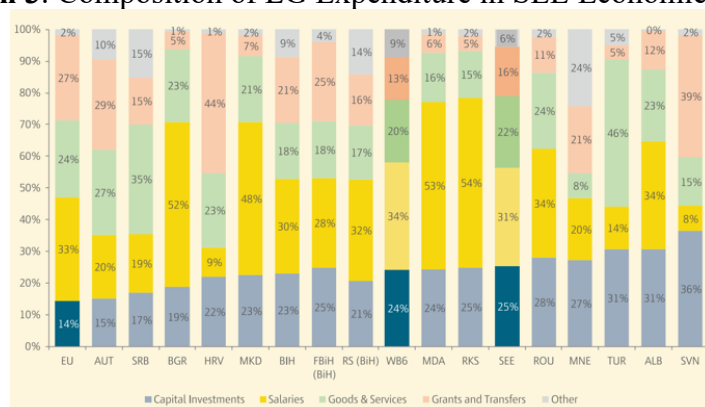


Source: NALAS (<https://nalas-observatory.eu/>)

Another important point in our analysis is the contribution of the local government with investments in infrastructure and public services, expenses that directly impact the rate of economic growth and the productivity of society. In the countries of South-Eastern Europe, the countries with the highest rate of economic growth in 2021 are those countries that also have the highest weight of investments in their domestic expenditures.

The contribution of the local government by increasing the weight of investments directly affects the quality of life and is also reflected in the promotion of the productivity of society. The countries that have a high level of decentralization, an indicator that is reflected in the fiscal importance and the ratio of local expenditures to GDP, are the countries with the highest rate of economic growth.

**Graph 3.** Composition of LG Expenditure in SEE Economies, 2021



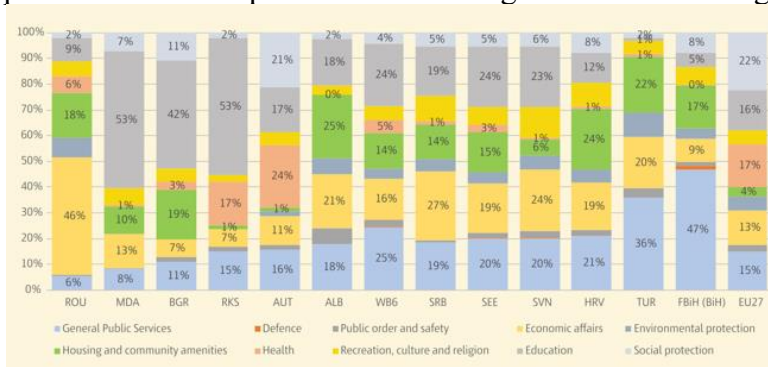
Source: NALAS (<https://nalas-observatory.eu/>)

The impact of the nature of spending according to functions is different in increasing the productivity of a country. Investment in public services and local infrastructure are those that have the greatest impact on the economic growth and productivity of that country. During the year 2021, there is no direct relationship between the countries that spend more on Public Services and economic issues and those with the highest economic growth. Unlike the



connection between economic growth and local investments, in the case of spending according to functions, it does not reflect the same thing in form.

**Graph 4.** Composition of local expenditures according to the function of government, 2021



Source: NALAS (<https://nalas-observatory.eu/>)

## 5. Correlation of local expenditures and national productivity in Albania

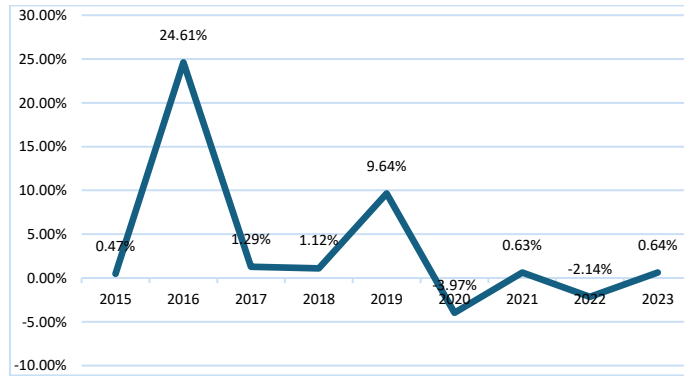
In Albania, the correlation between local government expenditures and national productivity is increasingly evident based on regional investments that have influence GDP, unemployment rate, and overall economic development. Local governments in Albania have a pivotal role in economic growth based on targeted spending. This contribution is closely related to the stage of functional and fiscal decentralization that Albania has undergone in recent years. The administrative-territorial reform promoted the decentralization process in Albania from 2016 onwards, significantly improving the fiscal indicators of the local government about the central government and national productivity.

### a. Gross domestic product

In 2015, an administrative structural reform was undertaken in Albania, but also decentralization, which basically aimed to increase the role of local government in the realization of public services. The growth of this role should be accompanied by a greater impact of local government spending decisions on national productivity, which in this case is measured through gross domestic product (GDP).

The first year of the implementation of this reform, 2016, had a great impact compared to the previous year in the ratio of expenses to GDP, increasing by about 24.6%. But this process does not continue further to consolidate, as this report continues a fluctuating trend of annual increase and decrease in the graph below.

**Graph 5.** Annual growth rate of the report Local Expenditures to GDP



Source: Ministry of Finance of Albania 2024

The very low ratio of local expenditures to GDP in Albania shows the small weight that local government must influence national productivity through regional policies. Despite this impact, the trend of change in this ratio has been the same between local expenditures and gross domestic product.

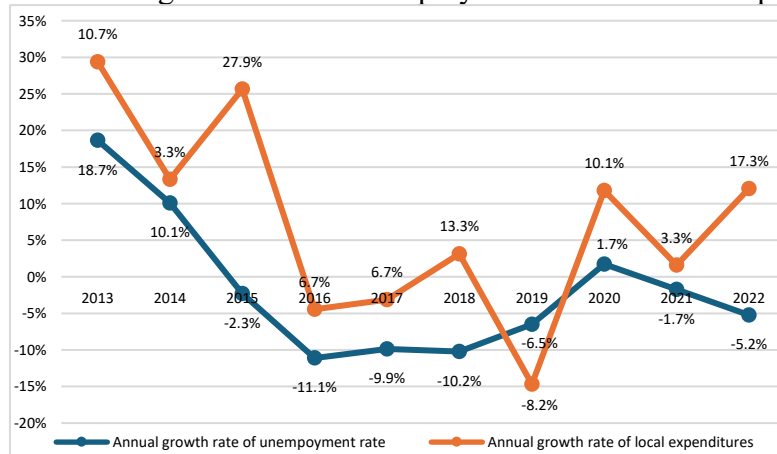
This shows that there is a close relationship between the impact of local expenditures on national productivity and the measure of the impact directly depends on the level of functional and fiscal decentralization that a country has.

### b. Unemployment rate

The change in unemployment indicators over the years, as a result of appropriate public policies at the local level, is one of the most important indicators of the assessment of the impact on productivity. From 2013 onwards, unemployment in Albania has had a constant rate of decline until 2020, when this indicator increased as a result of the COVID-19 pandemic.

The role of the local government in this indicator is quite important, and it is found that in the years where the growth rate of local expenditures is higher, such as in 2018 or 2022, we have a decrease in the unemployment rate.

**Graph 6.** Annual growth rate of unemployment rate and local expenditure



Source: Ministry of Finance of Albania 2024

In the case of Albania, periods of increased local expenditures correspond to periods where the unemployment rate growth declines or is negative, this result suggests that higher local spending can contribute to reducing unemployment rate.

Local expenditures and unemployment rate growth are high on 2015, where local expenditures peaked at a growth rate of 27.9% while the unemployment rate slowed down to -2.3%. This indicates that despite significant local spending, unemployment still rose sharply, possibly due to other macroeconomic factors or the time lag in the impact of local spending. Meanwhile, the

level of impact of local spending on the unemployment rate depends greatly on the nature of the decentralized functions. If the local government has competence over services with massive impact such as economic development or education, the impact will be greater than services related to security or recreation.

The sharp increase in local expenditure growth in 2022 (17.3%) are in the same direction with reduction in the unemployment rate growth (-5.2%). This difference suggests that when Local Government is focus on local spending that can helping to drive down unemployment rate. Those results express an inverse relationship between local expenditure growth and unemployment rate growth. The increased local government spending tends is correlate with lower unemployment rates, which is in aligned with economic theory that government spending can stimulate economic activity and job creation.

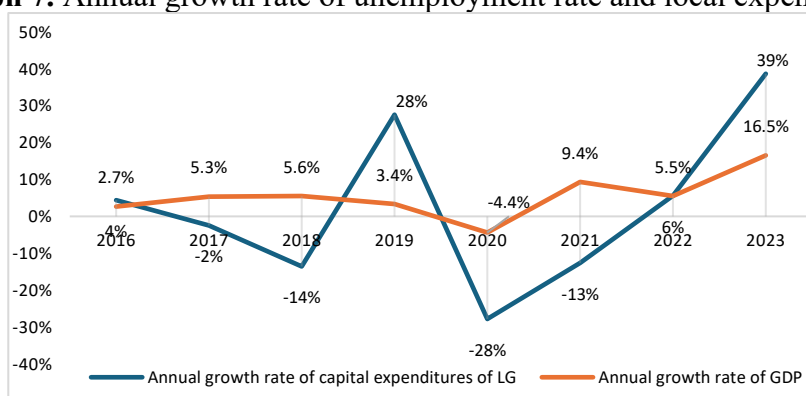
The correlation between increase on local spending and unemployment growth shows that impact may take time to be evaluated. The graph emphasizes the importance of sustained and strategic local government spending on reducing unemployment and stimulating economic growth in Albania. The general trend suggests that effective local expenditures can play a crucial role in enhancing national productivity and reducing unemployment over time.

### c. Investments

Another aspect of the influence of the local government on the indicators of economic development and national productivity is related to the public investments that the local self-government units make. Investing in the main services for which they are responsible, and which are directly related to the benefit of citizens will have a direct impact on national productivity.

Local government investments in relation to the gross domestic product in Albania remain modest or only 1% of GDP has been invested in 2023. This is due to the low fiscal decentralization that Albania has in relation to other developed countries. Regardless of the level of impact, the graph below analyses the trend of annual changes in investments and national productivity measured through GDP.

**Graph 7.** Annual growth rate of unemployment rate and local expenditures



Source: Ministry of Finance of Albania 2024

The annual growth rate of capital expenditures by LG exhibits significant volatility over the observed period in Albania. There are sharp increases and decreases, indicating fluctuations in local government investments. The GDP growth rate is much more stable in comparison, showing moderate fluctuations but generally following an upward trend, particularly from 2021 onward.

This 2016 when the territorial-administrative reform suggests that local government investments were modest, aligning with a relatively stable GDP growth. However, this situation

started to change in 2017, when reduction in local government investments has indicate a cautious approach or possibly budgetary constraints to impact on the GDP annual growth rate.

Is important to mention that in 2019 local government capital expenditures has proven a huge increase of 28%, the highest of the observed period. GDP growth rate remains low at 3.4% despite the growth of the local government capital expenditures. By having significant increase could have been aimed at addressing infrastructure needs or other critical projects, but the GDP growth rate's stability suggests that the broader economic benefits of this spending were still unfolding. Despite another decline in local government capital expenditures (-28%) in 2021, GDP growth rebounded to 9.4%.

The combination of strong growth in capital expenditures (39%) and GDP (16.5%) explain that the increase of local government spending in Albania is contributing positively to economic growth. The fluctuations in local government capital expenditures suggest the implementation of reactive or project-based approaches. On the conclusion the spendings need to be tried with specific initiatives that can be influence directly on economic conditions. By avoiding periods of instability on local government expenditures, sustainable economic growth can be ensured.

The increase of local government spending does not have a direct correlation with the increase of GDP growth of Albania. This indicates that after e periods of investments the reflection to GDP takes time because of the period of materialization of the project on the impact to citizens. In this sense, projects need to be completed and integrated into the economy and after that we can measure impact to the national productivity. The subsequent increase in local government expenditures suggests that maintaining high levels of investment is crucial for sustaining economic recovery and growth.

The Albanian case has evident that importance of consistent and well-targeted local government capital expenditures in supporting national economic growth. While external factors (such as the global pandemic) have impact in shaping GDP trends, the data suggests that local investments are a critical component of long-term economic resilience and growth. This investments can be beneficial for local governments to adopt a more stable and strategic approach to capital expenditures and to maximize their positive impact on GDP growth.

## **6. Conclusions**

Local government is crucial in impacting the economic productivity at the grassroots level, by executing their functions and moving forward with strategic capital investment into the regions. In this paper is mentioned that the correlation between local government expenditures and national productivity is in both side significant and multifaceted. By delivering quality public services through economic policies and infrastructure development can create enhance the conditions to impact on economic growth.

The analysis of correlation between local government spending, specific in capital investments, and GDP growth rates highlights the importance of strategic and well-managed expenditures. Local governments units, by planning the medium-term resources to capital investments on infrastructure, education, public health etc., creates the foundational environment necessary for businesses to thrive and for communities to develop. This, boosts economic productivity, reduces unemployment, and fosters a more resilient economic structure.

However, the relationship between local government actions and national economic outcomes is not linear or immediate. The effects of local expenditures on productivity and growth often exhibit a lag, as the benefits of infrastructure projects, educational investments, and other public

goods take time to materialize. Moreover, external factors, such as global economic conditions, national policies, and unforeseen crises like the COVID-19 pandemic, can either amplify or diminish the impact of local government actions.

Observed volatility in local government capital expenditures, has evidence the challenges faced by entities in maintaining consistent and impactful expenditures. The differences in local expenditures may result from budgetary constraints, by shifting political priorities, or reactionary measures to economic crises. Such instability can disrupt the continuity of economic benefits, underscoring the need for more sustainable and forward-looking fiscal policies at the local level.

In conclusion, the importance of local government actions in impacting the national productivity cannot be overstated. Local government role is important in addressing the specific needs for services of communities, for impacting economic inclusivity, and ensuring sustainable growth. Moving forward on this analyze, it is crucial for local governments to adopt a more strategic approach to the medium-term planning expenditures, prioritizing long-term capital investments that impact directly sustained economic benefits. They can enhance their contribution to national productivity and play a pivotal role in economic development of their countries.

Finally, local governments to maximize their impact must be a stronger alignment with national policies and greater financial autonomy on secure own source revenues and budget planning expenditures that allows for more consistent and strategic investments. To achieve this result is recommended to have a collaborative effort between various levels of government, with support of institutional capacities that ensure accountability, transparency, and efficiency in the management of public resources.

This paper bring evidence that productivity is a function of economic policies but also the governance structures and the quality of decision-making at the local level. The future of economic growth will increasingly depend on how well local governments can harness their potential to drive productivity from the ground up.

## REFERENCES

1. Choi, N. (2021), Analyzing local government capacity and performance: Implications for sustainable development, *Sustainability* 2021, 13, 3862: <https://doi.org/10.3390/su13073862>.
2. Odo, L.U. (2014), Local government and the challenges of grassroots development in Nigeria, *Review of Public Administration and Management* Vol. 3, No. 6, December 2014, ISSN: 2315-7844.
3. Tobi, A. A., Oikhala, G. I. (2021), Local government reforms and grassroots development in Nigeria, *Journal of Administrative Science*, Vol.18, Issue 1, 2021, pp. 113 – 133.
4. Vasstrøm, M., Normann, R. (2019), The role of local government in rural communities: culture-based development strategies, *Local Government Studies*: <https://doi.org/10.1080/03003930.2019.1590200>
5. Rodden, J. (2004). What fiscal federalism theory is missing? *The Journal of Economic Perspectives*, 18(4), 135-146. <https://doi.org/10.1257/089533004773563421>
6. Scharpf, F. W., & Streeck, W. (1992). Fiscal federalism and national political institutions. *Cambridge University Press*.
7. Williamson, C. E. (2000). Fiscal federalism: Principles and practice of multi-order governance. *Oxford University Press*.
8. Deininger, K., & Squire, L. (1996). A new data set measuring income inequality. *World Bank Economic Review*, 10(3), 565-591. <https://doi.org/10.1093/wber/10.3.565>
9. Tiebout, C. M. (1956). A pure theory of local expenditures. *Journal of Political Economy*, 64(5), 416-424. <https://doi.org/10.1086/258469>
10. Bahl, R., & Linn, J. F. (1992). Urbanization and local governance in developing countries. *World Development*, 20(5), 699-712. [https://doi.org/10.1016/0305-750X\(92\)90054-I](https://doi.org/10.1016/0305-750X(92)90054-I)
11. Kote, J. (2006). Economic growth and decentralization: A panel study of the European Union member states. *Economics Letters*, 92(3), 333-337. <https://doi.org/10.1016/j.econlet.2005.12.017>

12. Hrovat, D., & Tatomir, B. (2010). Decentralization and economic performance: Evidence from transition countries. *Economics & Sociology*, 13(3), 43-56. <https://doi.org/10.1080/1403494060106239>

# UTILIZING THE DELPHI TECHNIQUE TO EXAMINE OPEN INNOVATION AND SUSTAINABLE ENTREPRENEURSHIP: INSIGHTS FROM SMES IN ALBANIA

Fatma Jaupi<sup>1</sup>

<sup>1</sup> Faculty of Economy, Tirana University, Albania

\*Corresponding author: [fatmajaupi@feut.edu.al](mailto:fatmajaupi@feut.edu.al)

DOI: [10.63356/978-99976-57-34-3\\_5](https://doi.org/10.63356/978-99976-57-34-3_5)

## Abstract

The primary objective of this research is to explore the interaction between open innovation and sustainable entrepreneurship within the context of Small and Medium-sized Enterprises (SMEs) in developing countries, experience from Albania. The study contributes to the existing publications on open innovation and sustainable entrepreneurship by providing empirical evidence from the Albanian SMEs. Additionally, it highlights the contextual factors influencing these practices in a developing economy by filling a gap in the literature which is mainly focused on developed countries. The Delphi technique is used in this study to reach expert consensus on exploring the topic of open innovation and sustainability among SMEs in Albania, including challenges and future opportunities. The interviews are conducted during July 2024, focusing on founders or high-level managers from technological companies, academics, and researchers within the fields of innovation, information technology, and entrepreneurship. One of the key findings is the significance of external collaborations in driving open innovation. Experts highlighted that partnerships with universities, research institutions, and other businesses are crucial for accessing new knowledge and technologies, which, in turn, can foster innovation and sustainability. However, the lack of established networks and the level of absorb capacities in Albania poses a significant challenge.

**Keywords:** Sustainable entrepreneurship, open innovation, management of SMEs, technology transfer.

## 1. Introduction

This research publication is part of a project carried out in the framework of USE IPM, Horizon Widera 2022, “Up-skilling researchers for sustainable entrepreneurship - Based on innovation process management”, where the University of Tirana, Faculty of Economy is a partner. In this scientific activity, we aim to present a part of our work, on how we have implemented the phase of data collection through Delphi technique on the subject of Open Innovation and Sustainable Entrepreneurship. We bring on this research some insights from SMEs in Albania.

The concept of Open Innovation is important for developed countries and has attracted the focus of vast researchers and there is a deep understanding of the topic. For developing countries as Albania and the Western Balkan economies, Open Innovation presents a great

opportunity to gain knowledge and benefit from the more advanced companies or market players.

In this publication, the literature review plays an important role in addressing essential concepts of Open Innovation and Sustainable Entrepreneurship with special focus on SMEs. Key scholars of the field have been included and mentioned in this study, such as Chesbrough (2003) who supports the theory that companies can and should use external ideas as well as internal ideas to advance technology. Vanhaverbeke (2017) furthermore, advocates that firms in developing economies need to adopt open innovation strategically to overcome resource constraints and enhance their innovative capacity. Other researchers argue that, in open innovation, companies can get their required knowledge from other companies, research organizations, educational institutes, local governments, and even directly from the citizens themselves (Santoro et al., 2018; Stojanovic et al., 2021).

However, the implementation of open innovation in developing countries encounters several challenges. According to Kraemer-Mbula and Wamae (2010), one of the primary obstacles is the lack of robust innovation ecosystem that can support collaboration between firms, universities, and research institutions.

Similarly, like open innovation, the adoption of sustainable entrepreneurship practices in developing countries faces significant barriers. The lack of access to finance for sustainable projects is considered one of the main barriers (Mair&Marti, 2009). Many entrepreneurs in these regions struggle to secure funding, as financial institutions are often risk-averse and reluctant to invest in unproven sustainable business models (Hall, Daneke, & Lenox, 2010). Additionally, there is often a lack of awareness and understanding of sustainable business practices, which can further impede the adoption of sustainable entrepreneurship (Mair & Marti, 2009). International organizations, such as the United Nations have launched initiatives to support sustainable business practices in the developing economies. The UN Sustainable Development Goals (SDGs) provide a framework for businesses to align their operations with global sustainability targets. These initiatives have encouraged more entrepreneurs to integrate sustainability into their business models (United Nations, 2023).

Furthermore, the increase of awareness of investors on sustainability has provided new opportunities for sustainable entrepreneurs in developing countries to access capital. Impact investors, who seek both financial returns and positive social or environmental impacts, are increasingly looking to invest in businesses that align with sustainable development goals (Bugg-Levine & Emerson, 2011). This trend is helping to bridge the financing gap for sustainable entrepreneurs in these regions.

As Albania continues to integrate into the global economy, the concepts of open innovation and sustainable entrepreneurship are increasingly recognized as vital for fostering economic resilience, sustainability, and long term growth.

The OECD publication of SME and Entrepreneurship Outlook 2023, emphasizes that SMEs, especially in developing economies like Albania, can benefit significantly from integrating into global value chains through open innovation. By collaborating with international partners, these businesses can enhance their innovation capacity, access new knowledge, and improve their competitiveness (OECD, 2023). However, the adoption of open innovation in Albania is still at an early stage. The SMEs in the country face barriers such as limited access to finance, insufficient infrastructure, and a lack of skilled labor force. These challenges become more complex by the relatively weak innovation ecosystem in Albania, which lacks the robust



networks and collaboration which are essential for effective open innovation (OECD, 2023; World Bank, 2023)

Studies show that competitiveness of Albanian SMEs will need to be enhanced through the promotion of innovative SMEs as well as technology transfer (Voka & Ruxho, 2021). According to the World Bank, fostering a culture of innovation and sustainability in Albania will require significant investments in education, infrastructure, and institutional capacity. For instance, improving access to digital technologies and skills is crucial for enabling SMEs to participate in global value chains and adopt sustainable practices. Additionally, strengthening the legal and regulatory framework for intellectual property rights and innovation is essential to protect the investments of entrepreneurs and encourage more innovative activity (World Bank, 2023). The above-mentioned topics and concepts are further explored in our study.

The research focus was to explore the interviewers' opinions on the challenges and possibilities on open innovation ecosystem development through stronger institutional support and strengthening absorptive capacities of firms, especially SMEs and other key actors. Additionally, we aimed at collecting insights on challenges of intellectual property collection, the readiness of firms and the supporting frameworks. Additionally, we aimed at collecting the views of the interviewers on the importance of cooperation with external stakeholders in the research and innovation ecosystem and being opened to collaborate, absorb and grow.

Besides the literature review, this research paper places considerable emphasis on methodology, which aims to explain the process of preparing and implementing the questionnaire utilizing Delphi technique. The analysis of results is an ongoing work and will be followed up by other future publications which will include findings from the focus group as well. Preliminary data from the Delphi study indicate that external collaborations are crucial in driving open innovation among SMEs in Albania. However, the lack of established networks and collaboration platforms remains a significant challenge, underscoring the need for strategic interventions to support these enterprises.

The findings are expected to provide valuable insights for policymakers, academics, and business leaders interested in fostering innovation and sustainability in similar contexts.

## **2. Literature review**

Henry Chesbrough, widely known as the father of open innovation, has made significant contributions to the understanding and practice of open innovation and its impact on entrepreneurship. His research is focused on how businesses can leverage external ideas and technologies to drive innovation, improve competitiveness, and foster entrepreneurial activities. The companies can and should use external ideas as well as internal ideas to advance their technology. This approach encourages firms to open up their innovation processes, enabling them to exploit a broader range of ideas and innovations from outside their organizational boundaries (Chesbrough, 2003). According to Chesbrough and Bogers (2014), Open Innovation is a comprehensive strategy that focuses on effective knowledge management, serving as a key method for rapidly generating innovative solutions that streamline the problem-solving process. Research by Dahlander and Gann (2010) highlights the complexities of managing open innovation, while Kunz et al. (2017), further explores the impact of these practices on organizational efficiency.

Chesbrough's research identified the particular importance of open innovation for SME. He argues that SMEs, often face lack of resources (financial ones and expertise ) to conduct extensive R&D operations internally but can benefit significantly from accessing external knowledge and technologies. Open innovation provides a pathway for SMEs to enhance their innovative capabilities and compete more effectively in the market (Chesbrough & Crowther, 2006).

Another distinguished researcher, Vanhaverbeke (2017) identified that firms in developing economies need to adopt open innovation strategically to overcome resource constraints and enhance their innovative capacity. By establishing strategic collaborations, partnerships, and networks, these firms can access external knowledge and technologies that are crucial for innovation. He identifies that open innovation is not a one-size-fits-all solution and must be tailored to the specific context of the firm and its operating environment (Vanhaverbeke, 2017). Studies shows that SMEs in developing countries need support in terms of policy measures, funding, and access to innovation ecosystems to effectively engage in open innovation (Yaghmaie and Vanhaverbeke, 2019). Besides all the opportunities and the potential that holds open innovation for sustainable entrepreneurship in the developing countries, it presents several challenges as well.

Sustainable entrepreneurship, which focuses on generating social, environmental, and economic value, introduces further complexities. According to Mair and Marti (2009), entrepreneurs engaged in sustainable practices in developing countries encounter many challenges, including restricted access to capital and limited market opportunities, which can hinder their involvement in open innovation. Intellectual Protection (IP) are often weak or underdeveloped in developing countries, making firms hesitant to engage in open innovation. Alnuaimi et al. (2012) argue that the lack of robust IP systems can lead to a reluctance to share knowledge, thereby stifling innovation. Bruton et al. (2013) note that firms in these regions may find it difficult to adopt the open, collaborative approach required for open innovation due to traditional hierarchical structures and a lack of trust in external partners. As such, strengthening IP frameworks, fostering cultural shifts, enhancing innovation ecosystems, and supporting sustainable entrepreneurship initiatives are essential steps for these regions to realize the full potential of open innovation.

Sustainable entrepreneurship in Albania is still at a nascent stage, with many businesses struggling to integrate sustainability into their core operations (Kosta & Mane, 2021). The study identified a significant gap in the awareness and understanding of sustainable practices among entrepreneurs, which is compounded by the lack of institutional support and incentives for adopting sustainable business models.

The adoption of digital technologies among SMEs in Albania remains limited due to barriers such as low levels of digital literacy, insufficient infrastructure, and a lack of access to digital tools and platforms (Shehu & Berisha, 2022). To address these challenges, Shehu and Berisha (2022) recommend the implementation of policies that promote digital literacy and provide support for the digital transformation of businesses.

The partnerships with universities, research institutions, and international organizations are critical for accessing new knowledge and technologies, which are essential for driving innovation and sustainability in the Albanian context (Dika & Xhaferri, 2023). The authors suggest that creating robust networks and collaboration platforms could help overcome some of the barriers faced by SMEs and enhance their capacity for innovation.

### 3. Methodology

This research adopts the Delphi technique, which is based on the communication process to collect insights and achieve consensus among a panel of experts. As mentioned by Hsu & Sandford (2007), the Delphi method allows for the collection of diverse opinions and the identification of common themes in a systematic manner.

The implementation of Delphi techniques was conducted during the month of July 2024. Five high level representatives as founders of the companies or CTOs and high level executives participated in this study by answering the questions. Prior to participate in the study, the questionnaire a consent form was distributed to ensure the confidentiality and commencement of the study. The questions covered topics on key actors of open innovation ecosystem, technology transfer aspects, intellectual property protection, government support in research and innovation, etc.

**During Phase 1 the focus was on the selection of the panel, literature analysis and creation of Delphi questionnaire.** A panel of experts was carefully selected, including academic researchers, industry representatives at the level of CEO and high level managers and representatives from non-governmental organizations (NGOs) with expertise in open innovation, sustainable entrepreneurship, and SMEs). In the Delphi technique, an initial questionnaire is developed based on an extensive review of the literature (Creswell, 2014; Dillman, Smyth, & Christian, 2014). This survey aimed to collect preliminary insights on the current state of open innovation and sustainable entrepreneurship among Albanian SMEs, main drivers and challenges, and potential benefits. Aiming to capture qualitative data it is needed that the questionnaire includes both open-ended and closed-ended questions (Johnson & Christensen, 2019). **Phase two covered the tasks as: interviews conduction based on the questionnaire of the first phase; analysis of responses from the first round Delphi questionnaire, improvement and creation of the second round Delphi questionnaire experts; survey and analysis of the responses from the second round Delphi questionnaire.** The second round survey was designed to refine and validate the findings from the first round. The aim of Phase 3 was to reach the consensus building among experts and the development of the final questionnaire. As recommended for the Delphi technique, the responses from the second round need to be analyzed to determine the level of agreement among the panel members (Linstone & Turoff, 2002). A threshold of 70% agreement is considered to determine consensus (Hsu & Sandford, 2007). Items that do not reach consensus are subjected to further discussion in subsequent rounds until a satisfactory level of agreement is achieved (Skulmoski, Hartman, & Krahn, 2007). The Delphi technique was used for the first round of interviews and questionnaires for the aim of exploring the topic of open innovation. The second round of data collection was carried out through the focus group technique. The data analysis will continue to be analysed through qualitative analysis

The implementation of Delphi Technique was carried out during July 2024 with face-to-face interviews. The findings are in the phase of analysis which will be further compared and integrated with the focus group technique results, carried out in the second phase.

### 4. Discussion and Findings

The findings of this research provide valuable insights into the intaction between open innovation and sustainable entrepreneurship within the context of Albanian SMEs.

The Delphi technique enabled the identification of several critical factors influencing these practices, including the role of external collaborations, access to funding, regulatory frameworks, and the importance of organizational culture and leadership.

Broadly all the respondents were able to define the open innovation ecosystem and agreed on converged in the main groups as companies, universities, research institutions, and investors. This is a finding which goes in line with Chesbrough (2006), who identified firms, universities, research institutions, and individual innovators as primary actors. Additionally, Gassmann, Enkel, and Chesbrough (2010) further emphasized the importance of networks and partnerships in open innovation, mentioning that firms often collaborate with other companies, suppliers, and customers to co-create value. Platforms and networks are identified by the respondents as part of the ecosystem which aligns with West and Bogers (2014) study that identified that open innovation also involves intermediaries, such as innovation brokers, consultants, and platforms, which facilitate the exchange of knowledge between different actors. One of the key findings is the lack of established networks and collaboration platforms in Albania which poses a significant challenge.

The study shows that in identification of the obstacles and challenges in the intellectual property protection system several barriers are identified as e.g. limited legal framework. While Albania has IP laws developed, the compliance with EU and other international laws may limit the international protection of IP. Another obstacle remains the low level of awareness on the importance of IP. The informal economy is identified as a barrier that can undermine formal IP protection efforts, with widespread counterfeiting and piracy. In Albania, as in many developing nations, the legal infrastructure for IP protection is underdeveloped, leading to limited deterrence against violations (World Bank, 2019). Additionally, there is often a lack of awareness and understanding of IP rights among businesses and the general public, which further complicates the enforcement efforts (Koci, 2018)

Regulatory frameworks were also identified as a significant influence on sustainable entrepreneurship. The experts pointed out that while there are policies in place to promote sustainability, their implementation and enforcement are often lacking. There is a need for more robust and coherent policies that incentivize sustainable practices and provide clear guidelines for SMEs.

## **5. Conclusion**

This research contributes to the understanding of open innovation and sustainable entrepreneurship by providing empirical evidence from the Albanian SME sector, and emphasizing the important role the elements play in economic growth and development of transitioning economies.

The Delphi technique proved to be an effective method for capturing expert insights and achieving consensus on critical issues. The findings offer valuable recommendations for policymakers, business leaders, and other stakeholders to foster a supportive environment for open innovation and sustainability among SMEs in Albania. Further research is needed to explore the implementation of these recommendations and their impact on the broader economy.

The findings highlight several key points. First, external collaborations, with universities, research institutions and other businesses, are essential for SMEs in Albania, offering a

pathway to access new knowledge and resources that are otherwise beyond their reach. These collaborations have the potential to significantly enhance the innovative capabilities of SMEs. However, the study also emphasises the challenge due to the lack of established networks and collaboration platforms in the country, which hinders the full realization of these cooperations and the potential benefits.

Furthermore, the research has revealed critical gaps in the current intellectual property (IP) protection frameworks, which further complicate the adoption of open innovation strategies. Without robust IP laws and enforcement mechanisms, Albanian SMEs remain hesitant to engage in open innovation, fearing the loss or theft of their intellectual property. This barrier, coupled with the underdeveloped regulatory frameworks for sustainable entrepreneurship, presents a significant challenge that must be addressed through targeted policy interventions.

Moreover, the study highlights the importance of culture and leadership in organizations in promoting open innovation and sustainability. The findings suggest that a more open and collaborate mindset approach is essential for fostering innovation within Albanian SMEs. This shift must be supported by a coherent policy framework that incentivizes sustainable practices for SMEs.

Looking forward, this research provides valuable suggestions for policymakers, business leaders, and other stakeholders who are committed to fostering a supportive environment for open innovation and sustainability among SMEs in Albania. The findings push for the establishment of stronger collaboration platforms, improved IP protection, and more regulated frameworks that can enable SMEs to improve in an increasingly competitive global market.

In conclusion, while significant challenges remain, there is substantial potential for open innovation and sustainable entrepreneurship to transform the Albanian SME industry. By addressing the barriers identified in this research and leveraging the opportunities for external collaboration, Albania's SMEs can play a pivotal role in the country's economic development and its integration into the global economy. Further studies could research the long-term impacts of implementing the recommendations suggested in this study, particularly in relation to the broader economic outcomes for Albania.

## **6. Acknowledgments**

This research is based on data collected by the USEIPM project USE IPM, Horizon Widera 2022, "Up-skilling researchers for sustainable entrepreneurship- Based on innovation process management" funded by the European Union. The author would like to thank the colleagues from University of Banja Luka, Faculty of Economics, Banja Luka and Faculty of Economics in Niš for their contribution on the methodology and the colleagues from the University of Tirana in coordinating the research.

## **BIBLIOGRAPHY**

1. Alnuaimi, T., Singh, J., & George, G. (2012). Not with my own: Long-term effects of cross country collaboration on subsidiary innovation in emerging economies versus advanced economies. *Journal of Economic Geography*, 12(5), 943-968. <https://doi.org/10.1093/jeg/lbs011>
2. Bruton, G. D., Ahlstrom, D., & Li, H. L. (2013). Institutional theory and entrepreneurship:
3. Where are we now and where do we need to move in the future? *Entrepreneurship Theory and Practice*, 34(3), 421-440. <https://doi.org/10.1111/j.1540-6520.2010.00390.x>
4. Bugg-Levine, A., & Emerson, J. (2011). *Impact Investing: Transforming How We Make*

5. Money While Making a Difference. John Wiley & Sons.
6. Chesbrough, H. W. (2003). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business School Press.
7. Chesbrough, H. W., & Crowther, A. K. (2006). Beyond high tech: Early adopters of open innovation in other industries. *R&D Management*, 36(3), 229-236. <https://doi.org/10.1111/j.1467-9310.2006.00428.x>
8. Chesbrough, H. W. (2006). *Open Innovation: The New Imperative for Creating and Profiting from Technology*. Harvard Business School Press.
9. Chesbrough, H., & Bogers, M. (2014). Explicating open innovation: Clarifying an emerging paradigm for understanding innovation. In H. Chesbrough, W. Vanhaverbeke, & J. West (Eds.), *New Frontiers in Open Innovation* (pp. 3-28). Oxford University Press.
10. Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches* (4th ed.). SAGE Publications.
11. Dahlander, L., & Gann, D. M. (2010). How open is innovation? *Research Policy*, 39(6), 699-709. <https://doi.org/10.1016/j.respol.2010.01.013>
12. Dika, A., & Xhaferri, G. (2023). The role of external collaborations in fostering sustainable entrepreneurship in Albania. *Albanian Journal of Economic Studies*, 14(2), 23-39. <https://doi.org/10.1016/j.ajes.2023.05.007>
13. Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed mode surveys: The tailored design method* (4th ed.). Wiley.
14. Gassmann, O., Enkel, E., & Chesbrough, H. (2010). The future of open innovation. *R&D Management*, 40(3), 213-221. <https://doi.org/10.1111/j.1467-9310.2010.00605.x>
15. Hall, J. K., Daneke, G. A., & Lenox, M. J. (2010). Sustainable development and entrepreneurship: Past contributions and future directions. *Journal of Business Venturing*, 25(5), 439-448.
16. Hsu, C. C., & Sandford, B. A. (2007). The Delphi technique: Making sense of consensus. *Practical Assessment, Research, and Evaluation*, 12(10), 1-8. <https://doi.org/10.7275/pdz9-th90>
17. Johnson, B., & Christensen, L. (2019). *Educational research: Quantitative, qualitative, and mixed approaches* (6th ed.). SAGE Publications.
18. Koci, J. (2018). Intellectual Property Rights and Their Enforcement in Albania. *Mediterranean Journal of Social Sciences*, 9(3), 119-126. <https://doi.org/10.2478/mjss-2018-0021>
19. Kosta, E., & Mane, E. (2021). Sustainable entrepreneurship and innovation: Challenges and opportunities for SMEs in Albania. *European Journal of Sustainable Development*, 10(3), 123-139. <https://doi.org/10.14207/ejsd.2021.v10n3p123>
20. Kraemer-Mbula, E., & Wamae, W. (2010). *Innovation and the Development Agenda*. Organisation for Economic Co-operation and Development (OECD) and International Development Research Centre (IDRC).
21. Kunz, R. E., Furrer, O., & Giroux, M. (2017). Managerial innovation: A review of the literature. *European Journal of Innovation Management*, 20(2), 116-148. <https://doi.org/10.1108/EJIM-11-2014-0119>
22. Linstone, H. A., & Turoff, M. (Eds.). (2002). *The Delphi method: Techniques and applications*. Addison-Wesley.
23. Mair, J., & Marti, I. (2009). Entrepreneurship in and around institutional voids: A case study from Bangladesh. *Journal of Business Venturing*, 24(5), 419-435. <https://doi.org/10.1016/j.jbusvent.2008.04.007>
24. Organisation for Economic Co-operation and Development. (2023). *OECD SME and Entrepreneurship Outlook 2023*. OECD iLibrary. Retrieved from [https://www.oecd-ilibrary.org/industry-and-services/oecd-sme-and-entrepreneurship-outlook-2023\\_342b8564-en#:~:text=The%20OECD%20SME%20and%20Entrepreneurship%20Outlook%202023%20examines%20recent%20SME%20E,new%20pressures%20across%20supply%20chains](https://www.oecd-ilibrary.org/industry-and-services/oecd-sme-and-entrepreneurship-outlook-2023_342b8564-en#:~:text=The%20OECD%20SME%20and%20Entrepreneurship%20Outlook%202023%20examines%20recent%20SME%20E,new%20pressures%20across%20supply%20chains).
25. Shehu, B., & Berisha, I. (2022). Digital innovation and sustainable entrepreneurship: The Albanian SME perspective. *International Journal of Sustainable Business Practices*, 7(4), 101-118. <https://doi.org/10.1504/IJSBP.2022.093984>
26. Santoro, Maurizio (2018). *GlobBiomass - global datasets of forest biomass [dataset]*. PANGAEA, <https://doi.org/10.1594/PANGAEA.894711>
27. Skulmoski, G. J., Hartman, F. T., & Krahn, J. (2007). The Delphi method for graduate research. *Journal of Information Technology Education: Research*, 6(1), 1-21. <https://doi.org/10.28945/199>
28. Stojanović, D., Stanisavljević, N., & Jovičić, E. (2021). Digital marketing techniques for promotion of "Infrastructure of Serbian Railways". Paper presented at the E-business technologies conference proceedings.
29. United Nations in Albania. (2023). *Embracing a Sustainable Future: The 2023 Albania Progress Report*. United Nations. Retrieved from <https://albania.un.org>
30. Vanhaverbeke, W. (2017). Managing open innovation in SMEs: How can small companies and start-ups benefit from open innovation strategies? *Research Policy*, 46(3), 1-13. <https://doi.org/10.1016/j.respol.2017.01.006>
31. Vanhaverbeke, W. (2017). Open Innovation in SMEs: How Can Small Firms and Start-Ups Benefit from Open Innovation Strategies? *Research Policy*, 46(8), 1322-1333.

32. Voka, I. & Ruxho, F. (2021). Assessing the Technology and Innovation Used for Business Development by Albanian SME. *Economicus*. 20. 107-115. 10.58944/aioi1542.
33. Yaghmaie, P., & Vanhaverbeke, W. (2019). Identifying and describing constituents of innovation ecosystems. *EuroMed Journal of Business*.
34. West, J., & Bogers, M. (2014). Leveraging external sources of innovation: A review of research on open innovation. *Journal of Product Innovation Management*, 31(4), 814-831. <https://doi.org/10.1111/jpim.12125>
35. World Bank. (2019). *Albania: Strengthening Intellectual Property Rights to Boost Innovation and Economic Growth*. World Bank Group.
36. World Bank. (2023). *Albania's Future Growth Requires a Stronger, More Sustainable Economic Model*. World Bank. Retrieved from: [https://documents1.worldbank.org/curated/en/099845001312232607/pdf/P1752090e8141b05a08afc06ea6bc385da3.pdf?\\_gl=1\\*50n8zr\\*\\_gcl\\_au\\*ODU4NjU1OTM0LjE3MjUwMjY5Njg](https://documents1.worldbank.org/curated/en/099845001312232607/pdf/P1752090e8141b05a08afc06ea6bc385da3.pdf?_gl=1*50n8zr*_gcl_au*ODU4NjU1OTM0LjE3MjUwMjY5Njg).

# IMPROVING CLIMATE AND SUSTAINABILITY ACTION IN THE WB REGION THROUGH HIGHER EDUCATION

Elona Pojani<sup>1,\*</sup>

Perseta Grabova<sup>2,\*</sup>

<sup>1</sup>Associate Professor, PhD, University of Tirana, Albania

<sup>2</sup>Associate Professor, PhD, University of Tirana, Albania

\*Corresponding authors: [elonapojani@feut.edu.al](mailto:elonapojani@feut.edu.al); [persetagrabova@feut.edu.al](mailto:persetagrabova@feut.edu.al)

DOI: [10.63356/978-99976-57-34-3\\_6](https://doi.org/10.63356/978-99976-57-34-3_6)

**Abstract:** Economic and social development in the Western Balkans is increasingly aligned with the Sustainable Development Goals (SDGs), with the education system playing a crucial role in building the capacities and interdisciplinary knowledge essential for fostering a sustainable and resilient society. This paper explores the mainstreaming of SDGs into the education agenda through EU-supported projects, with a particular focus on higher education and alignment with the EU's Green Deal Agenda. By analyzing a sample of five selected EU projects implemented in the Western Balkans, the paper assesses the impact of key initiatives such as the revision and enhancement of course programs, the development of new lecture materials, faculty training, and the promotion of research in climate and sustainability. The findings highlight the importance of educational reforms and strategic EU project support in cultivating environmental responsibility and resilience. These initiatives not only advance the achievement of the SDGs but also strengthen the Western Balkans' alignment with EU integration objectives. The paper concludes that regional cooperation is crucial for effectively addressing shared environmental challenges, enabling the exchange of best practices, and fostering collaborative problem-solving.

**Key words:** Sustainable Development Goals (SDGs), higher education, EU Green Deal, climate resilience, education for sustainable development, regional cooperation

## 1. Introduction

Economic and social development have embarked on a path toward the achievement of the sustainable development goals (SDGs). The role of education system in contributing to this path has been of critical importance, especially to building capacities and interdisciplinary knowledge for a sustainable and resilient society, able to build back better our vulnerable economies. It is widely recognized that education and research are key to positively affect behaviours regarding the environment, starting from an early age and continuing throughout all the stages of the education system. Such priorities have been set also in the Western Balkan (WB) Region.

Addressing these observations, and based on a sound analysis, this paper analyze how the inclusion of SDGs into the education agenda is being mainstreamed through the support of EU projects. The focus of the paper is on the higher education and reference is made on the Green Deal Agenda of the EU. The paper will analyze how measures such as revision and improvement of existing courses programmes, development of new lectures materials, training



of teaching staff and encouraging the research work in climate and sustainability will contribute to these goals. This aim will be achieved through the analysis of a sample of 5 selected EU projects, implemented in the WB region.

The paper is organized as follows. The first section will explore how to improve regional capacities in implementing SDGs within higher education system, initiating an action towards environment, climate change, sustainability and resilience. The second part will take into focus 5 selected EU projects, analyzing their activities and impact. The last part of the paper will offer conclusions and recommendations, in line with the broader integration goals of WB countries to the EU, considering how regional cooperation provides the opportunity for tackling common problems and for sharing knowledge and transferring good practice.

## **1. Literature Review: Education and Sustainable Development**

### **1.1 The nature of Education for Sustainable Development**

The Sustainable Development Goals (SDGs) set out by the United Nations advocate that learners need the knowledge and skills to promote sustainable development. There are various ways to integrate sustainable development issues into the education system. Education for Sustainable Development (ESD) is a multidisciplinary and comprehensive approach that not only includes essential content knowledge on disasters, climate change, and other sustainability topics but also emphasizes the importance of making schools and education systems resilient, sustainable, and climate-proof. While sustainability education presents considerable challenges, it also offers significant opportunities. Education plays a crucial role in building adaptive capacity, as it provides people with the knowledge and skills needed to make informed decisions about how to adapt their lifestyles and choices to a changing environment.

Teaching sustainability requires reorienting education toward new methods of instruction that address the interdisciplinary nature of sustainability issues. The focus here is not just on expanding educational content, but also on ensuring that it is relevant and suitable for promoting sustainability (Hopkins & McKeown, 2002). Consequently, pedagogy in the field of sustainability is complex. Instructors often need to extend beyond their areas of expertise, incorporating new content and methodologies to foster critical thinking and problem-solving skills in students. In addition, to effectively address sustainable development issues it is essential to establish interfaculty collaboration in order to capture the interdisciplinary nature of teaching within the field (Makrakis & Kostoulas-Makrakis, 2016). Boeve-de Pauw et al (2015) indicate that when teachers incorporate the environmental, social, and economic aspects of sustainability issues into their teaching curriculum—considering their historical, present, and future contexts, as well as their local, regional, and global implications—students develop a deeper understanding of the complexities of sustainable development (SD). This teaching method fosters sustainability consciousness among students. Luckily, the responsibility for ESD does not rest solely on formal education. Other channels of education, such as the non-formal education, promoted through agencies through training and other awareness campaigns, along with informal education sources like general media, in collaboration with formal education institutions, contribute to educate people across all ages and backgrounds and facilitate the development of policies that lead to effective ecological and social outcomes (Hopkins & McKeown, 2002). Finally, besides new approaches on teaching and learning, sustainability challenges have urged schools and educational institutions to adopt green policies that promote sustainability through eco-friendly building designs and maintenance practices, thereby reducing their own ecological footprint (Berchin et al, 2021; Leal Filho et al, 2019; Fourati-Jamoussi et al, 2015).

In summary, the education system can influence the achievement of SDGs by enhancing literacy, employing teaching and learning methodologies that foster critical thinking and problem-solving, and by making university operations more sustainable and environmentally friendly (Kopnina, 2012; Anderson, 2012; Hamilton, 2011). However, as the role of education in addressing these challenges is increasingly recognized, its potential to contribute to adaptation and mitigation efforts has yet to be fully integrated into mainstream development thinking. Designing and employing appropriate and adequate research methods to address the complexity and multiplicity of learning requires further investigation and innovation. (O’Flaherty & Liddy, 2018; Glavič, 2020). This is particularly true for the Balkan region.

## 1.2 The needs for education for sustainable development in the WB region

A thorough evaluation of the needs for education for sustainable development in the WB region is provided in the following section. This needs analysis has used a systematic approach to studying the state of knowledge, ability, interest, and attitude of stakeholders included in the process of ESD. We have organized the needs analysis in 4 main parts:

- *impact*, outlining how education system can reach the targeted audience; *awareness*, outlining the gaps in the education provision within the existing programs and the needs to raise awareness among stakeholders; *demand*, outlining the potential demand of stakeholders for the knowledge and capacities on SD issues; *approaches*, outlining the methodologies used to reach the stakeholders.

**Impact.** Climate issues and sustainability have become key global topics since the UN Paris Agreement in 2015. Achieving the European Green Deal's goals requires collaboration beyond the EU, as climate challenges cross borders. All sectors—households, businesses, and institutions—must work together to rebuild economies sustainably. As discussed previously, education is crucial for fostering knowledge and attitudes toward sustainability and resilience. In the Western Balkans, education systems are still evolving to address these challenges. The region's shared communist past continues to influence its higher education, necessitating significant reforms. Knez et al. (2022) suggest the EU should use its resources to help neighboring countries pursue sustainability, as current climate mitigation efforts in the Western Balkans are limited due to insufficient commitment and awareness.

**Awareness.** The analysis of awareness on SD issues in the WB region reveals a significant gap in climate and sustainability education between the EU and the WB. A review within an EU project identified over 107 programs across the EU and UK with a focus on resilience and risk management, many of which integrate technical fields like climate science with economics and finance (K-force, 2017a). Similarly, Holloway (2014) found around 100 master's programs in 48 countries covering topics such as climate change and sustainability. In contrast, a survey of the Western Balkans shows limited integration of green economy, climate change, and sustainability topics in their education programs, resulting in insufficient graduates to meet regional needs (K-force, 2017b). This highlights the urgent need for qualified experts to support economic, social, and infrastructure resilience in the region. Since the post-communist era, Western Balkan curricula have been revised to align with the Bologna Process, with EU support fostering the adoption of multidisciplinary approaches. While bachelor programs remain traditional, postgraduate programs are increasingly diversified, reflecting future demands. Several EU-funded projects have successfully enhanced environmental awareness and developed educational resources through collaboration between EU and Balkan institutions, indicating strong potential for bridging the educational gap. However, current higher education offerings in the Western Balkans still do not align with these needs. The scarcity of climate and

sustainability terminology in Balkan languages, combined with cultural inflexibility, a traditional education system, and a constrained labor market, further impedes progress.

**Demand.** This section analyzes the specific demand from different stakeholders, including student communities and business sector. A Youth Safety Culture survey (K-Force, 2017c) revealed that 59% of youth in Western Balkan countries had no opportunity to learn about resilience practices in their educational institutions, though many expressed a strong willingness to engage in courses on resilience, climate, and sustainability, with about one-fifth showing interest in pursuing a master's degree in the field. These findings suggest significant potential for developing human capital and enhancing climate culture in the region. Another survey by Finger et al. (2021) indicated a strong demand among WBC students for climate and sustainability education, emphasizing the need for funding international collaboration to integrate environmental education into university curricula.

Businesses are also vulnerable to the impacts of climate change and disaster risks. Companies that fail to adapt may face significant challenges, while those that embrace change can unlock new opportunities. The OECD's SME Policy Index (2019) reveals that while SME greening measures are now included in the broader SME strategies of most Western Balkan (WB) economies, their implementation remains limited. Existing strategies in these economies focus on improving resource efficiency, particularly energy efficiency, promoting eco-innovation, and offering financial incentives for greening SMEs. However, a survey by K-force (2017d) indicated that the WB vocational education systems are not adequately structured for lifelong education in climate and resilience, highlighting a need for practical skills and improved theoretical knowledge. Additionally, Shyle's (2018) study in Tirana, Albania, shows that both students and businesses have low awareness and knowledge of sustainable development, emphasizing the need for enhanced educational measures in this area. Grabova and Pojani (2021) conducted an assessment of stakeholders' attitudes toward mainstreaming sustainable education in the Western Balkans, using in-depth interviews with representatives from relevant ministries, municipalities, and the UNDP Climate Change Program in Albania. The interviewees highlighted the urgent need to consolidate legislation and institutions related to climate change and sustainability to better prepare the labor market for future professionals in these fields. They also emphasized the current lack of local expertise, stressing the importance of developing in-depth knowledge through education to reduce reliance on international experts.

**Approaches.** Given the recognized need for education and the initiatives within Western Balkan HEIs to engage in climate action, several strategies are planned to meet the region's demand for Education for Sustainable Development (ESD). These include designing innovative curricula by integrating new elements into existing programs, implementing learner-centered and problem-based teaching methods, fostering collaboration with the business sector through joint programs and activities with enterprises, and establishing effective networks for scientific and technological innovation between WBC and EU countries. These methods have been innovatively applied through different projects in the Higher education system in the region. The next section aims to analyze such innovation brought through selected projects targeting ESD in the WB region.

## **2. Methodology**

### **2.1 Data and method**

This paper aims to analyze how ESD is being implemented in the WB region. We have observed that the EU support in this path has been crucial. Five European Union (EU) projects

have been carefully analyzed to assess their contributions to Education for Sustainable Development (ESD). These projects were evaluated based on their objectives, methodologies, and outcomes in promoting sustainability education. The analysis focused on how each project addressed key ESD principles, such as fostering critical thinking, encouraging active participation, offering services and integrating sustainability into various educational settings. The projects' impacts on different educational sectors—formal, non-formal, and informal—were also considered, highlighting how they engaged diverse audiences, from students to professionals and the general public. Overall, the evaluation revealed the extent to which these projects have successfully advanced ESD goals, demonstrating innovative approaches to embedding sustainability in education across Europe. These projects, spanning from 2016 to 2027, target different aspects of sustainability and resilience:

- A. **Knowledge for a Resilient Society (2016-2020)** focused on enhancing higher education institutions in the Western Balkans, emphasizing disaster risk management, environmental protection, and the integration of sustainability into academic curricula.
- B. **Promoting Climate Change Adaptation and Disaster Risk Management in the Framework of EU Integration (2020-2023)** aimed to strengthen institutional capacities in the Western Balkans by integrating climate change adaptation and disaster risk management into educational programs, aligning with EU integration efforts.
- C. **JOiNEd For sUsTainability - bUilding climate REsilient communities in WB and EU - 1FUTURE (2023-2026)** focuses on building climate-resilient communities in the Western Balkans and the EU through community-based learning, cross-border cooperation, and the promotion of best practices for sustainability and resilience.
- D. **Up-skilling researchers for Sustainable Entrepreneurship based on Innovation Process Management (USE IPM) (2023-2027)** focuses on enhancing the skills of researchers in sustainable entrepreneurship by integrating innovation process management. The project aims to empower researchers, entrepreneurs, and students with the knowledge and tools necessary to drive sustainable business practices, fostering innovation that balances economic growth with environmental stewardship and social responsibility.
- E. **Sustainable Living Labs for Regional Entrepreneurial Cooperation (GreenWB) (2024-2027)** is designed to create sustainable living labs in the Western Balkans, fostering regional entrepreneurial cooperation and innovation through hands-on learning and the practical application of sustainability principles.

## 2.2 Results

This section presents the analysis of five EU-funded projects, focusing on their titles, programs, main goals, activities and results, target groups, impacts, and future pathways. The aim is to provide a comprehensive evaluation of these projects' contributions to climate and sustainability objectives.

Table 1 summarize the project under the following headings:

- **The Program:** The EU framework or funding scheme under which the project was executed, highlighting its alignment with broader EU strategies.
- **Main Goals:** The primary objectives that the projects aimed to achieve, including their alignment with climate and sustainability targets.

- **Activities and Results:** The key actions undertaken within each project and the outcomes achieved, providing insight into the effectiveness of the implemented strategies.
- **Target Groups:** The specific stakeholders or communities that the projects aimed to engage or benefit.
- **Impacts:** The tangible effects and benefits realized as a result of the projects, assessing their contributions to environmental and social goals.
- **Future Pathways:** Recommendations and potential directions for future projects based on the findings, to enhance their effectiveness and sustainability.

Through this structured analysis, we aim to assess the success of these initiatives and derive actionable insights to guide future EU-funded projects in achieving climate and sustainability objectives. A full description of each project focus on ESD is given next.

Title of the project	Program	Main goals	Activities and Results	Target groups	Impacts	Future pathways
Knowledge for a resilient society (2016-2020) - <a href="http://www.kforce.gradjevinans.net/">http://www.kforce.gradjevinans.net/</a>	Erasmus +	<p>The K-FORCE project aimed to establish a sustainable educational foundation in Disaster Risk Management (DRM) and Fire Safety Engineering across Western Balkan countries. It focused on enhancing interdisciplinary curricula by integrating engineering with fields like environmental protection, civil defense, and climatology. The project prepared societies to respond to catastrophic events by modernizing academic programs, improving teaching methods, and fostering international collaboration among universities and stakeholders. These efforts contributed to building resilience and strengthening the capacity of Western Balkan societies to manage disaster risks effectively.</p>	<ul style="list-style-type: none"> <li>• Curriculum Development: New and updated curricula for undergraduate, graduate, and professional development programs in DRM and Fire Safety were created and implemented in partner universities across the Western Balkans.</li> <li>• Training and Capacity Building: Numerous workshops, seminars, and training sessions were organized for university staff, students, and external stakeholders. These activities were designed to enhance the knowledge and skills necessary for effective disaster risk management.</li> <li>• Student Mobility and Exchange: The project facilitated the mobility of students and staff between partner institutions, allowing them to gain international experience and engage in cross-border collaboration on DRR and Fire Safety topics.</li> <li>• Development of Educational Materials: A range of educational resources, including textbooks, and online courses, were developed. These materials were made accessible to a broad audience, contributing to the long-term sustainability of the project's outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>• Academic community: researchers, professors, decision makers in HEIs or other people involved in activities related to the project 'goal and interested in following its development and outcomes;</li> <li>• Students of WBC HEIs</li> <li>• Professionals working in the field of Risk Management and Fire safety</li> <li>• Decision-makers at local, national and regional level;</li> <li>• Other stakeholders, such as NGOs, and other public or private institutions</li> </ul>	<p>The K-FORCE project had a significant impact on improving the quality of education and training in disaster risk management in the Western Balkans. The new curricula and training programs continue to be offered by partner universities, ensuring that future generations of students and professionals are well-equipped to deal with disaster risks. The project also contributed to building a culture of resilience in the region by raising awareness and promoting best practices in disaster risk reduction. The network of institutions and professionals established through the project continues to collaborate on DRR initiatives, ensuring the sustainability of K-FORCE's achievements.</p>	<p>The project also contributed to building a culture of resilience in the region by raising awareness and promoting best practices in disaster risk reduction. The network of institutions and professionals established through the project continues to collaborate on DRR initiatives, ensuring the sustainability of K-FORCE's achievements. The consortium that successfully led the K-FORCE project has continued its collaborative efforts in advancing disaster risk management and resilience-building through the IFuture project, ensuring sustained impact and progress in the field.</p>

Title of the project	Program	Main goals	Activities and Results	Target groups	Impacts	Future pathways
Promoting Climate Change Adaptation and Disaster Risk Management in the framework of EU Integration (2020-2023)	Erasmus+ Jean Monnet Module	<p>This project developed 2 Jean Monnet modules, at the Faculty of Economics (FE), University of Tirana (UT), respectively Disaster Risk Management and Climate Change Adaptation (CCA). Both subjects were developed under the context of EU integration</p> <p>The specific objectives of this project include:</p> <ul style="list-style-type: none"> <li>• Support on the introduction of an EU angle into mainly non EU related studies</li> <li>• Encouragement of interest in the EU and constitution of the basis for future poles of European knowledge in Albania</li> <li>• Delivery of tailor-made courses on specific EU issues relevant for graduates in their professional life</li> </ul>	<ul style="list-style-type: none"> <li>• Teaching activities (development of teaching and learning materials)</li> <li>• Research Activities</li> <li>• Supporting activities of this project targeting dissemination and exploitation of project results with different stakeholders such as public institutions, Civil Society and NGO-s.</li> </ul>	<ul style="list-style-type: none"> <li>• Students,</li> <li>• higher education institutions representatives, central and local government unit representatives and other nongovernmental</li> </ul>	<p>The first module enhanced students' understanding of EU disaster management, environmental hazard risks, and policy challenges in EU integration. The second module built knowledge in climate change adaptation, research methods, and critical analysis, while fostering skills in ethical reflection and recognizing the need for ongoing learning.</p>	<p>Producing and promoting new knowledge on the EU and related fields, ensuring the sustainability of project outcomes by integrating modules into university curricula, improving services, and raising awareness.</p>

Title of the project	Program	Main goals	Activities and Results	Target groups	Impacts	Future pathways
<p>Sustainable Living Labs for Regional Entrepreneurial Cooperation (Green WB) (2024-2027)  <a href="https://greenwb.eu/">https://greenwb.eu/</a></p>	<p>Erasmus+</p>	<p>The objective of the "GreenWB" project is to promote sustainable development and green transition in the Western Balkans by enhancing the region's capacity to implement green policies. The project focuses on improving environmental governance, fostering green entrepreneurship, and supporting the adoption of green technologies and practices across various sectors. By doing so, GreenWB aims to contribute to the economic and environmental resilience of the Western Balkans.</p>	<p>The GreenWB project is centered around enhancing the green innovation and entrepreneurial skills of students in higher education within the Western Balkans. Key activities include the establishment of Sustainable Living Labs at partner universities, which act as hubs for innovation and entrepreneurship. These labs serve as one-stop-shops for collaboration between academia and industry, helping to commercialize research and entrepreneurial ideas.</p>	<p>The target group of the GreenWB project primarily includes:</p> <ul style="list-style-type: none"> <li>• Students from higher education institutions in the Western Balkans.</li> <li>• Academic staff from these institutions.</li> </ul> <p>Also targets:</p> <ul style="list-style-type: none"> <li>• Entrepreneurs, particularly those involved in green innovation and sustainability.</li> <li>• Public and private sector stakeholders interested in fostering sustainable development and entrepreneurial ecosystems.</li> </ul> <p>Aims to engage a broader audience, including:</p> <ul style="list-style-type: none"> <li>• Policymakers.</li> <li>• Community members.</li> </ul>	<p>The GreenWB project is poised to have a multifaceted impact on the Western Balkans region, particularly in the field of education and green economy. Educational Impact: The project enhances the educational landscape by establishing Sustainable Living Labs in universities, which provide students and faculty with hands-on experience in green innovation and entrepreneurship. This not only boosts the skill sets of the participants but also strengthens the capacity of higher education institutions to deliver relevant, up-to-date training that aligns with global sustainability goals. Economic Impact: By fostering collaboration between academia and industry, the GreenWB project stimulates the green economy in the Western Balkans. It creates pathways for commercializing research and entrepreneurial ideas, which can lead to the development of new businesses and job opportunities, particularly in the green sector. This contributes to the economic resilience and growth of the region.</p>	<p>As the GreenWB project progresses, it will also focus on enhancing its engagement with policymakers and the wider community, advocating for policies that support sustainable development and green entrepreneurship. This ongoing engagement will help embed the principles of sustainability more deeply into the economic and educational frameworks of the region, driving long-term change.</p>



Title of the project	Program	Main goals	Activities and Results	Target groups	Impacts	Future pathways
JOINED For sUStainability - bUilding climate Resilient communities in WB and EU - IFUTURE (2023-2026) - <a href="https://ifuture.feut.edu.al/#">https://ifuture.feut.edu.al/#</a>	Erasmus +	<p>The broader aim of the project is to mainstream a holistic approach towards climate and sustainability action. This will be achieved by improving regional capacities in implementing Green Deal goals in higher education system, particularly those related to the need for action to contribute to the green transition and to strengthen the sustainability competences of stakeholders.</p> <p>Specific objectives</p> <ul style="list-style-type: none"> <li>• Establish Knowledge Hubs for Climate and Sustainability (KHCS) within each WBC HEIs</li> <li>• Mainstream climate and sustainability culture within WBC HEIs</li> <li>• Raise awareness of staff and student community on the needs for climate action within HEIs</li> <li>• Increase synergies between academia, business sector and government for implementing joint initiatives for climate and sustainability</li> <li>• Reinforcement of networking and collaboration between staff and student communities of EU and WBC HEIs about climate and sustainability</li> </ul>	<p>The IFuture project’s activities focus on achieving climate action and sustainability in Balkan HEIs through:</p> <ul style="list-style-type: none"> <li>• Course Modernization: Updating and creating courses on climate and sustainability, including short intensive courses with micro-credentials.</li> <li>• Establishing Knowledge Hubs (KHCS): Setting up KHCS centers in partner HEIs as central hubs for research, collaboration, and sustainability initiatives.</li> <li>• Research and Collaboration: Initiating research projects, publishing case studies, and launching the Climate and Sustainability Journal to promote ongoing collaboration.</li> <li>• Engagement and Outreach: Developing the IFuture online platform, organizing conferences, webinars, and workshops to connect HEIs, businesses, and policymakers.</li> <li>• Capacity Building and Sustainability: Training HEI staff, facilitating exchanges, and securing funding to sustain project outcomes and integrate them into HEI governance.</li> </ul>	<ul style="list-style-type: none"> <li>• Academic community: researchers, professors, decision makers in HEIs or other people involved in activities related to the project ‘goal and interested in following its development and outcomes;</li> <li>• Students of WBC HEIs</li> <li>• Enterprises and Business Associations</li> <li>• Decision-makers at local, national and regional level;</li> <li>• Other stakeholders, such as NGOs, and other public or private institutions</li> </ul>	<p>The IFuture project aims to lead climate action in Balkan HEIs, connecting stakeholders to build climate-resilient communities in non-EU Balkan countries. The short-term impact includes implementing modernized courses and establishing Hubs within HEIs to engage students and staff in sustainability efforts. Medium-term impacts involve launching the IFuture Platform to foster collaboration between HEIs and businesses, as well as publishing a book of case studies to guide policymakers. Long-term impacts include integrating revised courses into HEI curricula, sustaining the Hubs, and continuing the Climate and Sustainability Journal to connect research communities across the Balkans and EU.</p>	<p>The IFuture project ensures sustainability through established KHCS, the IFuture online platform, modernized courses, and the book of case studies, all of which will continue to function beyond the project’s lifetime. KHCS centers will become legal entities, playing a central role in sustaining project outcomes, fostering research, and engaging with businesses and policymakers. The IFuture platform will connect academia with the business sector, offering tools and resources to support climate-friendly processes. Revised curricula and short intensive courses will be integrated into HEIs, ensuring continued education in climate action. The Climate and Sustainability Journal will persist, promoting ongoing research and collaboration in the field.</p>

Title of the project	Program	Main goals	Activities and Results	Target groups	Impacts	Future pathways
Up-skilling researchers for Sustainable Entrepreneurship based on Innovation Process Management (USE-IPM) <a href="https://useipm.com/">https://useipm.com/</a>	Horizon-Widening	<p>The USE IPM project, titled "Up-skilling researchers for Sustainable Entrepreneurship based on Innovation Process Management," focuses on enhancing the capabilities of researchers, particularly in widening countries, by improving their skills in innovation management and sustainable entrepreneurship. The project aims to strengthen the relationship between academic institutions and the business community, promoting the development of innovation ecosystems that can drive sustainable economic growth. Through secondments and collaborations with EU partners, the project seeks to introduce new practices and approaches that benefit both the academic and non-academic sectors, ultimately contributing to the overall welfare of the regions involved</p>	<p>The USE IPM project focuses on enhancing sustainable entrepreneurship through innovation process management.</p> <p>Key activities include:</p> <ul style="list-style-type: none"> <li>• Training researchers in innovation management.</li> <li>• Organizing secondments to EU partner organizations.</li> <li>• Facilitating workshops on technology transfer.</li> </ul> <p>The project aims to:</p> <ul style="list-style-type: none"> <li>• Develop new skills among participants.</li> <li>• Improve collaboration between academic and non-academic sectors.</li> <li>• Create innovative solutions that contribute to sustainable economic growth.</li> <li>• Emphasizes the importance of cross-sectoral teamwork in achieving these goals</li> </ul>	<p>The target group of the USE IPM project primarily includes researchers, particularly from widening countries. Focuses on enhancing skills in innovation process management and sustainable entrepreneurship.</p> <p>Targets include:</p> <ul style="list-style-type: none"> <li>• Academic institutions</li> <li>• Businesses</li> <li>• Other stakeholders involved in fostering innovation and sustainable development.</li> </ul> <p>Aims to equip these groups with the necessary knowledge and tools through:</p> <ul style="list-style-type: none"> <li>• Training</li> <li>• Secondments</li> <li>• Collaborative activities.</li> </ul>	<p>The impact of the USE IPM project can be observed through three key perspectives:</p> <p>Scientific Impact: The project enhances research and innovation (R&amp;I) excellence by improving the competencies of researchers through secondments. It also boosts the reputation and attractiveness of academic institutions by establishing Entrepreneurial Innovation (EI) centers, leading to institutional reforms in widening countries.</p> <p>Economic Impact: The project strengthens the ability of academic institutions to collaborate with the business sector, promoting better communication and mobility between academia and industry.</p> <p>Societal Impact: The project increases youth employment opportunities in widening countries by converting brain drain into brain gain. It also promotes gender equality by ensuring that at least 50% of participants are female, addressing the gender gap in entrepreneurship and innovation.</p>	<p>The future pathway of the USE IPM project will focus on further solidifying the integration of sustainable entrepreneurship within academic and non-academic sectors. This will be achieved by expanding the activities of the Entrepreneurial Innovation (EI) centers established during the project, fostering stronger collaborations between academia and industry.</p>

### **A) Knowledge for a Resilient Society (2016-2020)**

In 2016, an EU-funded project entitled Knowledge for a Resilient Society (K-Force) brought together partners from higher education institutions (HEIs) in the Western Balkans and the EU, contributing to building a sustainable educational foundation in the field of Resilience in the Western Balkans. In 2018, six new programs in the field of Disaster Risk Management, including topics related indirectly and directly to resilience, climate and sustainability, such as: disaster risk management, climate change adaptation, financial resilience toward hazards, disaster risk modelling, disaster risk evaluation, etc. were implemented at Partner Universities in Serbia, Bosnia and Herzegovina and Albania. The programs have been pursued after the end of the project, forming professionals in the field since 2020, proving the sustainability of the project outputs.

- **Project Overview:** This project aimed to strengthen the capacity of higher education institutions in the Western Balkans to contribute to a more resilient society. It focused on disaster risk management, environmental protection, and sustainable development.
- **Contribution to ESD:** The project integrated sustainability into higher education curricula, promoting the development of knowledge and skills necessary for disaster risk management. By training educators and developing educational materials, the project emphasized the importance of resilience and sustainability in education, particularly in the context of environmental and societal challenges. It also promoted the principles of Education for Sustainable Development (ESD) by ensuring that these topics were deeply integrated in the educational practices of the region.
- **Key Achievements:** The creation of new courses, workshops, LLL courses, and collaboration between academia and industry helped embed sustainable development principles in the educational framework of the region.

### **B) Promoting Climate Change Adaptation and Disaster Risk Management in the Framework of EU Integration (2020-2023)**

- **Project Overview:** This project focused on enhancing the capacities of institutions in the Western Balkans to integrate climate change adaptation and disaster risk management into their policies and practices, particularly in the context of EU integration. The project also engaged external experts in EU policies and disaster risk management to provide specialized knowledge and guidance.
- **Contribution to ESD:** The project played a significant role in raising awareness and building capacity for climate change adaptation within educational institutions. It provided training and resources for educators, fostering a deeper understanding of climate issues and encouraging the inclusion of climate change topics in educational programs.
- **Key Achievements:** The project successfully facilitated the integration of climate adaptation strategies into the curriculum and professional training programs, thereby contributing to the long-term sustainability of educational practices in the region.

### **C) Sustainable Living Labs for Regional Entrepreneurial Cooperation (GreenWB) (2024-2027)**

- **Project Overview:** Scheduled to run from 2024 to 2027, this project aims to create sustainable living labs that foster regional entrepreneurial cooperation in the Western Balkans. The focus is on developing innovative solutions for sustainability challenges through collaboration between academia, industry, and local communities. The project

includes a consortium of 10 partners, comprising both higher education institutions (HEIs) and non-HEI organizations from the Western Balkans and the EU.

- **Contribution to ESD:** GreenWB is expected to make a substantial impact on ESD by providing a platform for experiential learning and practical application of sustainability principles. The living labs will serve as educational hubs where students, entrepreneurs, and community members can collaborate on sustainable projects, thereby promoting hands-on learning and the practical implementation of sustainable development concepts.
- **Anticipated Outcomes:** The project aims to produce innovative, sustainable solutions to regional challenges, with the living labs acting as catalysts for education, innovation, and sustainable economic development.

#### **D) jOiNEd For sUsTainability - bUilding climate REsilient communities in WB and EU - 1FUTURE (2023-2026)**

1. **Project Overview:** The 1FUTURE project seeks to build climate-resilient communities in the Western Balkans and the EU by fostering collaboration and knowledge exchange on sustainability and resilience. The project involves a consortium of 18 partners, including 11 higher education institutions (HEIs) and 7 non-HEI organizations, comprising 3 NGOs from each participating country, one business association, and one national agency of research and innovation.
2. **Contribution to ESD:** This project contributes to ESD by promoting community-based learning and the exchange of best practices for building resilience to climate change. It emphasizes the role of education in empowering communities to take proactive steps toward sustainability and resilience, particularly in the face of climate-related challenges.
3. **Key Achievements:** Through new learning materials, Newly established knowledge Hubs, Innovatively developed digital platform for collaboration between academia and business, new Action Plans in HEIs in BW region, and workshops, educational campaigns, and cross-border cooperation, the project has enhanced the capacity of local communities and educational institutions to address sustainability issues, thereby embedding ESD principles at the grassroots level.

#### **E) Up-skilling Researchers for Sustainable Entrepreneurship based on Innovation Process Management (USE IPM)**

- **Project Overview:** The USE IPM project is focused on enhancing the capabilities of researchers by providing them with the necessary skills to promote sustainable entrepreneurship through Innovation Process Management. The project aims to integrate sustainability into the research and development processes, equipping researchers with the tools and knowledge required to drive innovation that is both environmentally responsible and economically viable.
- **Contribution to ESD:** The project contributes significantly to Education for Sustainable Development (ESD) by embedding sustainable practices within the innovation process. It provides training and resources that empower researchers to create solutions that not only meet market needs but also adhere to principles of sustainability. By fostering a culture of sustainability within research and entrepreneurship, the project helps bridge the gap between scientific research and practical, sustainable business practices.

- **Key Achievements:** The USE IPM project has successfully trained researchers in sustainable entrepreneurship and Innovation Process Management, equipping them with the skills to integrate sustainability into their work. It developed comprehensive educational materials and training programs that focus on embedding sustainability within the innovation process. Through these efforts, the project has facilitated the creation of sustainable, innovative solutions across various sectors. Additionally, it has promoted a significant shift in research culture, encouraging researchers to prioritize environmental and economic impacts in their entrepreneurial endeavors.

### 3. Discussions and EU added value of sustainability projects

These five EU projects collectively advance Education for Sustainable Development by targeting different aspects of sustainability, from disaster risk management and climate adaptation to entrepreneurial innovation. Each project has made significant contributions to embedding sustainability principles in educational curricula and practices, thereby fostering a more sustainable and resilient society across Europe and the Western Balkans. We have further analyzed this contribution by assessing the EU added value of these projects. The analysis of EU added value is conceived following one of the main actions and priorities of EU, the Green Deal. We have explored how actions, tasks and deliverables contribute to the field of climate change and sustainability in accordance with the main actions and priorities of the EU. Through joint initiatives, HEIs of the EU and WBC are gathered under a common goal: enhancing climate action within HEIs. While the path of EU HEIs towards this goal is greatly advanced, in the WBC HEIs more initiatives and actions are needed. An alliance between EU HEIs and WBC HEIs provides a basis for achieving the green deal ambition for Higher Education in WBC. The further involvement of non-HEIs in the partnerships presented, fosters the collaboration and the ambitions of the project. We have assessed the European Added Value of the selected sample following 5 specific criteria, as defined in the EU Report: “European Added Value of EU Science, Technology and Innovation actions and EU-Member State Partnership in international cooperation” (European Commission, 2014).

- **Networking.** One of the most important aspects of EU cooperation in the HE system is the potential for strengthening the networking capacities between EU and WBC HEIs. Activities would be aimed at strengthening the joint initiatives between HEIs across Europe. In addition, the projects support and widen the already established networks between partners. In fact, many partnership are built upon previous successful collaborations initiated within other EU programs in the past. As the main areas of action of these previous programs were building resilience and sustainability, new cooperations through already established networks steps towards resilience and sustainability and amplify the results of previous projects and programs, by gathering partners to work towards complementing and wider goals. Building new action by using these already established networks help not only further sustaining past actions, but also enable efficient planning activities for achieving future goals. In addition, the continuation of joint work can help identify ideas and open up new possibilities for joint funding in the future. Finally, the further involvement of stakeholder from business communities, aims to solidify networks that are going to be developed within in each country.
- **Facilitating excellence and capacity building.** The selected sample of projects support the international cooperation, by increasing excellence in teaching and further supporting research capacities in WBC. The joint work of partners and the exchange of experiences and best practices between EU and WBC countries aim to solve complex

issues related to the green deal goals. Partners make use of the best methods, tools and subjects available. European research and innovation in climate field can be transferred to WBC countries and contribute to their progress towards excellence and capacity building. Specific activities are planned for this particular purpose in each project (including study visits, training and teaching visits, and on-field coaching from EU partners). By implementing similar European instruments and infrastructures for the achieving climate action within HEIs, WBC HEIs can increase their innovation potential. Communication and cooperation between stakeholders, through developed digital tools of the projects brings a novelty to the region and ensure the maximum transfer of knowledge and expertise between partners.

- **Coordination of critical mass.** The complexity of these projects, which often involve large consortiums, requires the support and assistance of European counterparts. The initiation of climate action within a single HEI or country is very difficult, and even impossible, as climate impacts are not confined by national borders. Support in terms of expertise, knowledge transfer, financial resources and guidance is crucial for WBC. Initiating climate action within Higher Education systems requires joint efforts. In fact, climate and sustainability action goes beyond one single institution, one single sector, and even one single country. Multidisciplinary collaboration is essential. The unification of different stakeholders within a joint goal is a prerequisite for a climate initiative to be successful. Therefore, the creation of a critical mass for climate action requires the support of the EU in order to bring complementary expertise together. In addition, through the EU funding, these projects raise the visibility and competitiveness of third countries involved in the project and their outreach potential. In addition, the main outputs of the projects are often translated in several languages, besides English, in order to effectively serve all interested stakeholders and enhance the critical mass of the project.
- **Fostering mutual learning and harmonization in the EU and WBC.** The joint effort for achieving the goals of the projects in several institutions simultaneously would lay the ground for more standardization and harmonization of teaching and research practices between EU HEIs and WBC HEIs. The transfer of knowledge from EU counterparts would be reflected in concrete steps taken by WBC HEIs to make the services of education sector more compliant with EU practices. Partner from WBC HEIs also gain further competence in issues related to project and programme management, quality control practices, and ethics, both at the level of the cooperation and beyond. The common frameworks established within the projects, help WBC HEIs to standardize their own operations and make them compatible to the EU education systems beyond the life of each project.
- **Rationality and Economic Efficiency.** This partnerships commonly involve several partners who jointly have taken the initiative to engage in climate action or support climate action developed within HEIs of WBC. This way, the project provide efficiency gains by pooling the costs of the action with more units and achieving a wide impact. In addition, these cooperations by addressing one of the main areas of action of the EU, the EU Green Deal, contribute to the achievement of wider EU policy goals, targeting both economic and societal objectives.

#### 4. Conclusions

In conclusion, the integration of Green Deal Goals into the education agenda represents a crucial strategy for advancing sustainable development within the Western Balkan region. By focusing on higher education, this paper has highlighted the critical role that revised curricula, innovative teaching materials, and enhanced faculty training play in addressing environmental

challenges and promoting sustainability. The analysis of the selected EU projects underscores the tangible impacts these initiatives have on advancing the Green Deal objectives and strengthening regional capacities.

The findings illustrate that targeted educational reforms and strategic support from EU projects are instrumental in fostering a culture of environmental stewardship and resilience. These efforts not only contribute to the broader SDGs but also enhance the Western Balkans' alignment with EU integration goals. Regional cooperation emerges as a key factor in effectively addressing shared environmental issues, enabling the exchange of best practices and collaborative problem-solving.

## Acknowledgments

This research has been supported by the project USE IPM, Horizon Widera 2022, “Up-skilling researchers for sustainable entrepreneurship- Based on innovation process management” funded by the European Union.

## REFERENCES

1. Anderson A. (2012) Climate Change Education for Mitigation and Adaptation, *Journal of Education for Sustainable Development* 6:2 pp. 191–206
2. Berchin, I. I., de Aguiar Dutra, A. R., & Guerra, J. B. S. O. D. A. (2021). How do higher education institutions promote sustainable development? A literature review. *Sustainable Development*, 29(6), 1204-1222.;
3. Boeve-de Pauw, J., Gericke, N., Olsson, D., & Berglund, T. (2015). The effectiveness of education for sustainable development. *Sustainability*, 7(11), 15693-15717.
4. Finger, D.C.; Draghici, C.; Perniu, D.; Smederevac-Lalic, M.; Halbac-Cotoara-Zamfir, R.; Sehic, A.; Kapović Solomun, M. (2021). The Importance of International Collaboration to Enhance Education for Environmental Citizenship. *Sustainability*, 13, 10326. <https://doi.org/10.3390/su131810326>
5. Fourati-Jamoussi, F., Agnès, M., Caron, P., Dubois, M. J., Leroux, V., Rakotonandraina, N., ... & Sauvée, L. (2015). How to promote, support and experiment sustainability in higher education institutions? The case of LaSalle Beauvais in France. *International Journal of Innovation and Sustainable Development*, 9(3-4), 227-245.)
6. Glavič, P. (2020). Identifying key issues of education for sustainable development. *Sustainability*, 12(16), 6500.
7. Grabova, P., & Pojani, E. (2021). Role of Education in Shaping Preparedness for Disasters in Albania. *Interdisciplinary Journal of Research and Development*, 8(1), 95-95.
8. Hamilton, L.C. (2011). Education, politics and opinions about climate change: Evidence for interaction effects. *Climatic Change* 104:231–242. doi: 10.1007/s10584-010-9957-8
9. Holloway, A. (2014). Strategic Mobilisation of Higher Education Institutions in Disaster Risk Reduction Capacity Building: Experience of Peripero U. Research Alliance for Disaster and Risk Reduction (RADAR), Stellenbosch University, South Africa. Retrieved from <https://www.preventionweb.net/english/hyogo/gar/2015/en/bgdocs/Holloway,%202014.pdf>
10. IPCC Climate change (2007) The physical science basis, in Solomon S, Qin D, Manning M, Chen Z, Marquis M, Averyt KB, Tignor M and Miller HL (eds) Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Cambridge, UK and New York, NY, USA: Cambridge University Press.
11. Irma SHYLE, 2018. "Awareness of Individuals and Businesses in Albania for Sustainable Development," *European Journal of Multidisciplinary Studies Articles*, Revistia Research and Publishing, vol. 3
12. K-force (2017a) Report on existing master programmes in EU. Retrieved from: [http://www.kforce.gradjevinans.net/images/Fajlovi/Po\\_tackama/1.1/Report%201.1\\_part%20II\\_Report\\_on\\_existing\\_master\\_programmes\\_in\\_EU.pdf](http://www.kforce.gradjevinans.net/images/Fajlovi/Po_tackama/1.1/Report%201.1_part%20II_Report_on_existing_master_programmes_in_EU.pdf)
13. K-force (2017b) Report on existing master programmes in WBC. Retrieved from: [http://www.kforce.gradjevinans.net/images/Fajlovi/Po\\_tackama/1.1/Report%201.1\\_part%20I\\_Report\\_on\\_existing\\_master\\_programmes\\_in\\_WBC.pdf](http://www.kforce.gradjevinans.net/images/Fajlovi/Po_tackama/1.1/Report%201.1_part%20I_Report_on_existing_master_programmes_in_WBC.pdf)
14. K-Force (2017c) Report on the Youth Safety Culture Survey in Western Balkan Countries. Retrieved from: [http://www.kforce.gradjevinans.net/images/Fajlovi/Po\\_tackama/1.2/K-FORCE\\_Report%20on%20Youth%20Safety%20Culture%20in%20WBC.pdf](http://www.kforce.gradjevinans.net/images/Fajlovi/Po_tackama/1.2/K-FORCE_Report%20on%20Youth%20Safety%20Culture%20in%20WBC.pdf)

15. K-Force (2017d) Report on WBC needs for LLL courses. Retrieved from: [http://www.kforce.gradjevinans.net/images/Fajlovi/Po\\_tackama/6.1/K-FORCE\\_Report\\_on\\_WBC\\_needs\\_for\\_LLL\\_courses.pdf](http://www.kforce.gradjevinans.net/images/Fajlovi/Po_tackama/6.1/K-FORCE_Report_on_WBC_needs_for_LLL_courses.pdf)
16. Knez, S., Štrbac, S. & Podbregar, I. Climate change in the Western Balkans and EU Green Deal: status, mitigation and challenges. *Energ Sustain Soc* 12, 1 (2022). <https://doi.org/10.1186/s13705-021-00328-y>.
17. Kopnina H. (2012): Education for sustainable development (ESD): the turn away from 'environment' in environmental education?, *Environmental Education Research*, DOI:10.1080/13504622.2012.658028
18. Leal Filho, W., Will, M., Salvia, A. L., Adom̂ent, M., Grahl, A., & Spira, F. (2019). The role of green and Sustainability Offices in fostering sustainability efforts at higher education institutions. *Journal of Cleaner Production*, 232, 1394-1401.
19. Lester, R. (2000). Policy Issues in the Choice of Funding Instruments for Natural Disasters. Washington, D.C.: Disaster Management Facility, World Bank.
20. Makrakis, V., & Kostoulas-Makrakis, N. (2016). Interdisciplinary Problem-Based Sustainability Education: The Case of the CLIMASP-Tempus Minor. In W. L. J. Paulo Davim, *Challenges in Higher Education for Sustainability*. Springer .
21. O'Flaherty, J., & Liddy, M. (2018). The impact of development education and education for sustainable development interventions: a synthesis of the research. *Environmental education research*, 24(7), 1031-1049.
22. OECD, SME Policy Index, Western Balkans and Turkey 2019, Chapter 11. SMEs in a green economy (Dimension 9) in the Western Balkans and Turkey, <https://www.oecd-ilibrary.org/sites/948f4170-en/index.html?itemId=/content/component/948f4170-en>
23. UNDP (2009). Albania's Second National Communication to the Conference of Parties under the United Nations Framework Convention on Climate Change. Tirana: Ministry of Environment, Forestry and Water Administration.
24. United Nation Development Programme. (2003). Disaster Risk Assessment in Albania: Executive Summary Report. Tirana: UNDP
25. World Bank. (2014). Albania - Disaster Risk Mitigation and Adaptation Project. Washington, DC : World Bank Group. <http://documents.worldbank.org/curated/en/313781468193510916/Albania-Disaster-Risk-Mitigation-and-Adaptation-Project>



# EXPLORING SUSTAINABLE ENTREPRENEURSHIP IN ALBANIA: INSIGHTS FROM GREEN ENTREPRENEURS

Perseta Grabova<sup>1,\*</sup>, Elona Pojani<sup>2</sup>, Brunilda Kosta<sup>3</sup>

<sup>1</sup>Associate Professor, University of Tirana, Faculty of Economics, Department of Finance

<sup>2</sup>Associate Professor, University of Tirana, Faculty of Economics, Department of Finance

<sup>3</sup>Brunilda Kosta: PhD, University of Tirana, Faculty of Economics, Department of Management

\*Corresponding Author: [persetagrabova@feut.edu.al](mailto:persetagrabova@feut.edu.al)

DOI: [10.63356/978-99976-57-34-3\\_7](https://doi.org/10.63356/978-99976-57-34-3_7)

## Abstract

“Sustainable entrepreneurship” is increasingly recognized as a business approach that involves economic, social, and environmental impacts. While this paradigm is gradually entering in the Albanian business lexicon, proactive engagement from the private sector is imperative to achieve the country's sustainability objectives. This study aims to investigate selected case studies of companies that have embraced sustainable practices, with a focus on identifying the drivers behind green entrepreneurship in Albania. Through qualitative analysis, drawing from interviews and focus group discussions, numerous barriers are uncovered, and opportunities associated with adopting green entrepreneurship models. Findings highlight an obvious distinction in the factors motivating sustainability initiatives between smaller and larger companies. In smaller enterprises, the entrepreneurial spirit of owners, along with their beliefs and vision, drive green actions. Conversely, larger companies are primarily influenced by external factors such as competition, government regulations, and corporate directives. However, the impact of these factors remains insufficient, underscoring the need for robust government oversight and intervention. Given the challenges companies face in effectively self-monitoring and regulating, enhanced regulatory mechanisms are essential to facilitate sustainable business practices. This article concludes with significant insights and implications for both academia and practitioners in the field.

**Key words:** sustainability, green entrepreneurship, climate change, Albania

## 1. Introduction

The global discourse on sustainability has become increasingly urgent, with environmental degradation and climate change presenting profound challenges to human societies and ecosystems worldwide. In response, sustainable development has emerged as a guiding principle for addressing environmental, social, and economic issues in an integrated manner (O'Brien, 2012; Brown, 2014; Liu et al., 2015; Fischer et al., 2020; Gu and Wang, 2022; Ripple et al., 2020; Abbass et al., 2022). Governments, businesses, and civil society organizations recognize the need to transition towards more sustainable production and consumption patterns, requiring fundamental changes in economic, social, and environmental systems.

In 2020, the European Commission approved the European Green Deal, a series of policy initiatives aimed at achieving climate neutrality in the European Union by 2050 (EC, 2020). The success of the Green Deal depends on initiatives beyond government regulations, with the private sector playing a crucial role in aligning practices with environmental requirements. While private companies are often linked with environmental degradation, those embracing green practices can benefit financially through product diversification, cost minimization, and access to carbon-trading markets (Farinelli et al., 2011). However, in less developed nations, the cost of green innovation may outweigh business revenues (Yadav et al., 2018).

In Albania, addressing environmental concerns and involving all stakeholders, including the business community, lags behind the rest of the Western Balkans. Research connecting business to environmental issues is scarce, with most studies focusing on profitability, key performance indicators, or digitalization and innovation. Awareness and commitment to sustainable entrepreneurship within the Albanian business community remain underexplored.

This study uses a qualitative design to show the practices of selected green businesses in Albania. Albania's developmental stage offers insights into the challenges and opportunities faced by transitioning nations on their journey toward environmental sustainability. The article is structured in three parts: an introduction to sustainable entrepreneurship, a presentation of the methodology and case study contexts, and a discussion of the findings and implications.

## **2. Literature review**

### **2.1. Defining sustainable entrepreneurship**

Increasingly, academics and decision-makers are showing a keen interest in delving into the realm of entrepreneurship. This interest stems from the multifaceted contributions that entrepreneurship make to a nation's economic growth (Ferreira et al., 2017; Stel et al., 2005; Wong and Autio, 2005), social development (Barraket and Yousefpour, 2013; McWade, 2012), and, more recently, an escalating concern for their environmental impact (Shao et al., 2020; Du and Li, 2020; Wielgórka, 2016; Song et al., 2019; Carfora et al., 2021). The evolution of entrepreneurship encompasses various theoretical and conceptual frameworks including the resource based theory (Barney, 2011), theory of the entrepreneurial process (Leyden and Link, 2015), institutional theory (Bruton et al., 2010), social entrepreneurship (Saebi et al., 2019), and sustainable entrepreneurship (Terán-Yépez et al., 2020). Sustainable entrepreneurship in particular, is a relatively recent field, emerging less than two decades ago. As it evolves, ongoing discussions persist regarding its precise definition, the conceptual boundaries it involves, and the internal and external factors driving its development (Crawford et al., 2022; Bonfanti et al., 2024).

It is now recognized in the academic literature that sustainability is not only a fundamental aspect for organizations and their business growth but also a chance to explore new paths of development (López et.al, 2021). Seeking and incorporating sustainable business models is becoming an integral part of the field of business strategy and management, reshaping its theoretical and practical foundations and opening up new research areas (Hahn et.al 2018). A large and growing body of literature has investigated the concept of entrepreneurship that seeks to resolve environmental challenges. Ecological enhancement, carbon labeling, adherence to clean energy standards, use of recyclables, the development of green products, and programs aimed at improving efficiency all fall under the umbrella of the environmental aspect within the realm of sustainable development, as discussed by Alwakid, Aparicio and Urbano (2021) and Chaudhry et al. (2020). Under such observations, sustainable entrepreneurship is a multidimensional concept that includes economic factors (profits and product

competitiveness), factors related to the preservation of the environment and surroundings, and social factors, which refer to the protection of people's health and wellbeing (detailed discussion on these aspects are included in Alwakid et al., 2021; Khan et al., 2016; Hockerts and Wüstenhagen, 2010; Schaltegger and Wagner, 2011; Dean and McMullen, 2017; Fischer et al. 2020; Gu and Wang, 2022). In the last three decades, a variety of terms have emerged around this phenomenon and are adopted in the academic literature, for example, sustainable entrepreneurship, environmental entrepreneurship, ecological sustainability entrepreneurship; ecopreneurship, and green entrepreneurship (e.g., Dean and McMullen, 2007; Hockerts and Wüstenhagen, 2010; Gast et al., 2017; Schaper, 2002; Silajdžić et al., 2015). In particular, the term "green entrepreneurship" has been employed to describe what is essentially the same concept as "sustainable entrepreneurship". However, authors have argued these two terms represent distinct concepts, where "green entrepreneurship" primarily focuses on economic and environmental aspects, while "sustainable entrepreneurship" goes beyond, by also encompassing social considerations, in addition to economic and environmental factors (Dixon and Clifford, 2007; Elkington, 1997; Sun et al., 2020).

Crals and Vereeck (2004) in their article emphasize that sustainable entrepreneurship involves an ongoing dedication of businesses to ethical behavior and active contribution to economic development. This commitment extends to enhancing the well-being of the workforce, their families, local communities, society, and the global environment, with a focus on benefiting present and future generations. Cohen and Win (2007) define sustainable entrepreneurship as the exploration of how opportunities to create future goods and services are identified, generated, and utilized, considering the individuals involved and the economic, psychological, social, and environmental impacts that result from these actions. According to Schaltegger and Wagner (2011), sustainable entrepreneurship focuses on bringing sustainability innovations to the mass market, benefiting a broader societal segment.

Despite the increasingly attention to the topics, sustainable entrepreneurship literature is a relatively recent and dynamic field, marked by ongoing discussions about its definition, scope, and influencing factors. Within and beyond the work of these authors, there is a general agreement in the literature that engaging in sustainable practices offers organizations valuable resources that can lead to the creation of fresh competitive edges and the generation of innovative concepts for products, services, and business models, while preserving at the same time environmental and social values (Günerergin et al., 2012). Further research is needed, especially in developing contexts.

## **2.2. Navigating the Transition: Challenges on the Path to Sustainable Entrepreneurship**

Despite the interesting path towards embracing sustainable entrepreneurial skills, the process entails its challenges and barriers. Within a company, the manager and employees, as well as the established organizational culture and brand image are some important factors that can serve both as stimulators or as barriers for implementing sustainability practices. Sustainable entrepreneurship is about entrepreneurs using their skills and personal drive to make a big impact on the market and society, instead of just following systems or technical steps. Criado-Gomis et al., (2018) proposed the idea of sustainable entrepreneurial orientation as a dynamic capability that allows firms to embrace various strategic approaches, fostering an entrepreneurial mindset and incorporating sustainable practices into their overall strategy. The importance of personal motivation, community involvement, and a forward-thinking approach to sustainability are highlighted in several studies (Silajdžić et al. 2015, Bansal and Roth, 2000; Williams and Schaefer, 2013).

Access to funding is a significant challenge impeding businesses from embracing sustainability. Sustainable initiatives often require upfront investments and long-term commitment, posing financial barriers for businesses (Hoogendoorn et al., 2019). The challenges in obtaining financing for sustainable entrepreneurs can be attributed to several factors, particularly the intentional choice to establish activities in areas with limited potential for value capture (Di Domenico et al., 2010). While this strategic decision is made purposefully, it requires sustainable entrepreneurs to engage with various stakeholders, each with different priorities concerning value creation and capture. This obstacle necessitates innovative financing models, partnerships, and policies that incentivize sustainable practices. Stakeholders such as business angels, venture capitalists, and other private capital providers may exhibit reluctance to invest if they cannot adequately offset their resource commitments. Additionally, financial difficulties among sustainable entrepreneurs may arise due to the absence of standardized measures for evaluating the performance of sustainable businesses in terms of social value creation. This lack of standardized metrics complicates the assessment of returns on investment, thereby impeding the acquisition of private capital (Nicholls, 2009); Zahra et al. 2009).

Information asymmetry represents a challenge wherein relevant information about sustainable practices, market demand for eco-friendly products, or the benefits of adopting green technologies may not be equally accessible to all stakeholders (Cherian and Jacob, 2012; Ahmad and Zhang, 2020; Bhandari et al., 2022). Bridging this gap involves enhanced transparency, communication, and educational efforts to ensure that businesses and consumers alike are well-informed about the advantages of sustainable choices. A substantial impediment to sustainable business practices is the lack of awareness among consumers regarding the environmental and social impacts of their choices (Polonsky, 2011; Tumpa, 2019; Maqbool and Amaechi, 2022; Park and Tucker, 2017). Addressing this challenge requires comprehensive awareness campaigns, educational initiatives, and transparent communication from businesses to enlighten consumers about the positive effects of supporting sustainable products and services.

The absence of sufficient support from governmental bodies and a sound institutional environment can hinder businesses in their sustainability efforts. Policies, regulations, and financial incentives play a pivotal role in encouraging businesses to adopt sustainable practices. For instance, Pinkse and Groot (2015) highlight the increased reliance of sustainable start-ups on government support in the form of subsidies and incentives. However, often the access to these programs involves extensive paperwork and lacks transparency. Advocacy for and development of supportive government initiatives are crucial to create an environment conducive to sustainable business practices.

‘Sustainable entrepreneurship’ approach has met also its opponents, in that it often amounts to mere “greenwashing” (Yang et al 2020; Seele and Gatti, 2015). “Greenwashing” refers to the act of providing inflated or misleading information to consumers regarding the environmental practices of a company or the environmental benefits of a product or service. Businesses engage in greenwashing because it is profitable: it helps them attain legitimacy and appears to fulfil stakeholders’ expectations (Parguel et al. 2011; Delmas and Burbano, 2011; Baum, 2012). The greenwashing phenomenon makes it difficult for consumers to “vote with their wallets” by only patronising sustainable businesses (see Dietz et al. 2020).

These challenges are particularly exacerbated in developing countries, where the identification and exploitation of sustainable business opportunities pose significantly greater difficulties (Argade et al., 2021a). In such environments, factors like limited infrastructure, economic

constraints, and a less developed entrepreneurial ecosystem amplify the strenuous nature of navigating and capitalizing on sustainable ventures.

### **2.3. Context: Enhancing sustainable entrepreneurship in Albania**

Albania is facing serious environmental challenges, including deteriorating air quality, waste disposal issues, noise pollution, and marine environment degradation (European Commission, 2022b). A significant part of these problems originates from the industry and transport sectors (UNDP, 2022). Albania endorsed the 'Paris Agreement 2015' during the United Nations Conference of Parties on Climate Change, committing to reduce greenhouse gas emissions. According to Albania's Fourth National Communication to the UNFCCC, the country has taken steps to enhance energy efficiency, adopt innovative technologies, and focus on environmental aspects to reduce carbon dioxide emissions, aligning with its sustainability goals. To meet the targets outlined in the Paris Agreement and limit temperature rise below 1.5°C, Albania aims to reduce greenhouse gas emissions by 45% compared to 2010 levels by 2030 and achieve net-zero emissions by 2050 (UNDP, 2022).

Despite some progress in adopting environmentally sustainable practices, Albania's business sector lags behind its Western Balkan counterparts (OECD, 2022). The key national planning document is the National Strategy for Development and European Integration 2022-2030 (NSDEI 2022-2030), adopted by the Government of Albania in January 2023 (GoA, 2022). One of its pillars is the sustainable use of natural resources. Additionally, the Albanian government has prepared the National Integrated Waste Management Plan 2020-2035, where the circular economy is emphasized. However, implementation, especially within the business community, is poor, and there is limited research on sustainable business practices in the private sector.

Icka, Adams, and Kauffman (2021) reviewed environmental sustainability practices of SMEs in Albania, finding that while sustainability requirements are lacking, many SMEs are aware and beginning to implement sustainable practices. Private entities in Albania see this path as necessary for competing in the EU market. Cela and Resmeliu (2015) surveyed 102 businesses, revealing that while awareness of corporate social responsibility (CSR) benefits is growing, actions are limited, particularly in large companies that have the resources to integrate CSR into their strategies.

Pojani and Grabova (2022) made recommendations for establishing a sustainable tourism sector, highlighting the need for urgent action to develop a resilient industry capable of addressing climate change. Sherifi (2017) proposed a sustainability framework for Albania's construction sector, focusing on Tirana, with the potential for significant energy improvements and reduced greenhouse gas emissions.

These observations reveal significant barriers to private sector action on climate change, particularly the lack of expertise and capacity. There is an urgent need to integrate risk assessment and adaptation actions into the business agenda. The remainder of this paper will focus on the experiences of selected companies in Albania, exploring their journey toward sustainable entrepreneurship and the challenges, barriers, and opportunities they encounter.

## **3. Case studies analysis**

### **3.1. Methodology**

The objective of this study is to investigate and analyze sustainable entrepreneurship practices adopted by selected companies and sectors in Albania through the examination of three distinct case studies. Utilizing a qualitative approach and implementing a rigorous case selection process, the study seeks to offer valuable insights into the dynamics of sustainable entrepreneurship across various contexts and industries.

The primary goal is to identify the principal drivers motivating companies to pursue a path of sustainable entrepreneurship in a transition economy, while also shedding light on the barriers, challenges, and opportunities that emerge from such engagement. The methodology for the selection of themes and topics to address has been adapted from Silajdžić et al. (2015), to suit the Albanian context. This section provides an overview of the data sources, selection criteria, and qualitative methodology employed to ensure a thorough and comprehensive understanding of sustainable entrepreneurial practices in the context of Albania.

### **3.2. Data Sources**

This qualitative study follows up on a survey of approximately 500 companies conducted by the authors in Tirana during winter and spring 2023. The survey targeted representatives from companies in Tirana and its environs, ranging from micro to large in size. The survey concluded that Albanian companies, particularly larger ones, have begun adopting certain green business practices, such as waste recycling, green transport policies, and environmental information for customers. However, adoption rates remain low, indicating a significant lack of extensive knowledge and awareness regarding green business practices. Larger companies inclined to adopt green practices typically have a dedicated plan and budget for this purpose, though signs of environmental awareness were also found among smaller businesses.

These conclusions served as the basis for the study presented in this paper. Recognizing that a quantitative analysis was insufficient to capture all dimensions of sustainable entrepreneurship, we conducted a qualitative study of selected businesses. We performed interviews with 10 business representatives and developed three case studies to explore sustainable entrepreneurship in-depth, including motivations, challenges, social and environmental impacts, and lessons learned. After conducting semi-structured interviews, we invited representatives to a round table to discuss common issues. Our qualitative study used primary data gathered through interviews, archival records, and direct observations, supplemented by secondary data from relevant literature. The data presented in this paper are based on the qualitative phase, while the quantitative study is under revision in another journal.

### **3.3. Selection of Case Studies**

After reviewing the best practices revealed in our vast sample, we selected case studies based on the following criteria to provide a broad and representative sample within the sustainable entrepreneurship field:

- a. Industry Diversity: Cases were selected from a variety of industries, including food, manufacturing, and automotive, to demonstrate the range of sustainable entrepreneurship approaches.
- b. Company Size: A small, medium, and big enterprise were included to investigate how sustainable practices appear at various organisational scales.
- c. Success Stories: Both successful and emerging sustainable firms were chosen to shed light on the variables that contribute to success as well as the problems that newcomers confront.

### **3.4. Case Study Development Process**

The following steps were followed in the case study development process:

- a. Preliminary Research: To find potential cases, a thorough examination of current literature and publications on sustainable entrepreneurship was done, followed by a specific review of secondary data on the selected cases.

b. Expert Consultation: Experts in sustainable entrepreneurship provided feedback to evaluate the relevance of the selected instances and recommend additional notable examples.

c. Semi-structured Interview: The final three case studies were picked using the preceding processes to guarantee a diverse and representative sample. A detailed semi-structured interview was conducted with representatives from each case study, and the qualitative material acquired was evaluated using thematic analysis.

d. Round Table and Focus Group: Representatives from the three selected case studies attended a round table formatted as a focus group, where the key themes were discussed and contributions were recorded. Thematic analysis was used to examine the qualitative data collected during this process.

### 3.5. Results from selected case studies

#### *Company A – Manufacturing industry – Medium Company*

Business description	The company was founded in 2004 and stands as the sole producer of natural casings and animal by-products in the country. Over the years, the company has ascended to a prominent position and now holds the distinction of being the exclusive entity in the Balkan region engaged in the production of high-quality natural casings and animal by-products.
Overall motivation	The shift from a linear to a circular business model was primarily motivated by a commitment to address and rectify significant environmental challenges prevalent in Albania's meat slaughtering and processing industry. The linear model, resulted in the improper disposal of animal by-products and industrial waste, posing a threat to the environment.
Number of employees	130
Starting point	In 2004, the company embarked on its journey in a modest setting, occupying a small space with a minimal production facility and a workforce of only 10 employees. During this initial phase, the company relied on foreign suppliers who brought raw materials to Albania, where local labour would then transform them into finished products—a practice aligned with the active processing regime, also known as the facon sector. By 2014, a strategic decision was made to diversify and enhance the supply chain. The company, originally dependent solely on foreign suppliers, opted to incorporate domestic sources for essential materials such as animal intestines and other animal-derived products. To facilitate this shift, the company's leadership conducted a thorough analysis of the Albanian slaughterhouse market. Subsequently, collaborations were established with select slaughterhouses that adhered to the minimum quality standards, marking a pivotal step in broadening the company's supplier base.
Strengths	The company strengths lie in its innovative transition from a linear to a circular business model, marked by significant technological investments.
Challenges and constrains	The company faced several challenges and constraints during its transition to a circular business model. Supply chain issues, including a lack of investment in slaughterhouse infrastructure and informality in the value chain, led to lower-quality raw materials and difficulties in monitoring practices. Regulatory hurdles, such as an underdeveloped legal framework for waste management and non-compliance by some companies, added complexity to waste collection and processing. The financial burden of transitioning to a circular model, marked by significant investments in new technologies and facility construction, strained the company's resources. Quality control and compliance efforts were ongoing, particularly in ensuring the standards of raw materials from domestic suppliers and meeting minimum quality requirements with slaughterhouses.
Social impacts	The company transition from a linear to a circular business model, boosted the national economy by creating over 60 new jobs through the construction of four additional processing units in just five years. This not only contributes to local employment but also signifies economic growth.

Environmental impacts	The environmental benefits are notable, as the circular business model is not only carbon neutral but carbon positive. The proper management of animal waste, with over 5000 tons of raw material processed, has prevented the release of more than 17500 metric tons of CO2 into the atmosphere. This is equivalent to the carbon-capturing capacity of 2000 hectares of forest, showcasing a commitment to environmental sustainability.
Economic impacts	The increased technical investments across the entire value chain have led to a reduction in expenses within the agriculture industry. This operational efficiency not only benefited the company but contributes to the overall economic health of the agriculture sector. Additionally, the expansion of exports resulting from new product development has played a pivotal role in improving the country's trade balance. This positive shift signifies economic growth on a broader scale, enhancing Albania's position in international trade. Furthermore, as the company expands, it contributes more significantly to the national economy by paying increased taxes. This financial contribution becomes a vital component of government revenue, further supporting public services and infrastructure development.
Scale of benefits	The company is the sole rendering factory of such magnitude in the Western Balkan which produces zero waste.
Lessons and recommendations	The company transformation from a linear to a circular business model offers valuable lessons that extend beyond operational changes. At the core of this journey is the strategic investment in cutting-edge technology, a pivotal step in reshaping their operations and the cooperation with the actors within the value chain. The commitment to regular upgrades in technology across the value chain underscores the importance of staying ahead in a rapidly evolving landscape.

*These data have been gathered through interviews and focus groups performed with the company representatives, in February 2023 and November 2023.*

#### *Company B: Food industry - small company*

Business description	As being the meeting point between culinary practices and environmental practices, the sustainable gastronomic company is trying to go beyond its usual role as a restaurant. It aims to become an educational platform promoting healthy eating habits in local communities. This small business, operating at the intersection of gastronomy and education, uses several models to promote sustainability, by serving as a hub for children, youth, and food communities.
Overall motivation	The woman behind the creation of this small company, finds her deep inspiration in a collaborative spirit with local producers symbolizing a great intention to develop and nurture the domestic economy. This collaborative approach goes beyond a business plan; it is the true conviction that there lies within community-driven business the transformational power. The collaboration with the local producers demonstrates the willingness to practice sustainable business.
Number of employees	5
Starting point	The journey of this small company began in February 2016, when a woman, driven by a passion for sustainable gastronomy, decided to transform her vision into reality. Motivated by a desire to redefine the culinary landscape, she envisioned a space that not only served enjoyable vegetarian and organic pasta, but also adhered to the principles of seasonality, cleanliness, and fairness in food production. The comparative advantage marking also the commitment to sustainability came when the company decided to forge collaborative partnerships with local producers. This was a significant turning point, as the company evolved into a platform where local farmers could display their products directly to the community. This collaborative spirit not only enriched the culinary offerings but also became a cornerstone of the business's philosophy. Starting from locally sourced products to actively targeting a green approach in packaging, decisions was driven by the principle of sustainability. The vision that set the foundation on what the company would become was "...a sustainable gastronomy that extends beyond business but encompasses education, community and holistic food experience".
Strengths	Commitment to Sustainability: The company's foundational strength lies in its solid commitment to sustainability. From sourcing locally produced ingredients to



	implementing eco-friendly packaging, every aspect of the business reflects a dedication to environmentally conscious practices.
Challenges and constrains	The company that is dedicated to the principles of using local and organic ingredients, faces difficulties in retaining full control over its supply chain. The uncertainty of weather conditions that affect the quantity and quality of seasonal products means an additional challenge, which requires flexibility to cope with this environmental factor. Constant education of consumers about the seasonal and organic nature of menu items poses another communication challenge that requires efficient management. Balancing the sustainability philosophy with affordable pricing may be challenging, especially considering the higher costs associated with organic and locally sourced ingredients. Managing these complexities requires careful planning, community engagement and a persistent pursuit of innovative solutions that are consistent with the sustainable culinary vision of the organization.
Social impacts	Collaborating with 19 local producers, including 6 farms, 3 honey producers, 6 olive oil producers, 2 saffron producers and 2 mills, fosters a sense of community and support. The sustainable gastronomic company becomes a hub for community engagement, connecting individuals through a shared commitment to sustainable practices and locally sourced food.
Environmental impacts	By choosing organic farming practices, the company contributes to reduced environmental impact and promotes responsible consumption. This approach not only aligns with evolving consumer values but also serves as an educational example, inspiring consumers to make informed choices about the food they consume.
Economic impacts	The business's reliance on local producers fosters a sense of community and collaboration, creating a network of support for regional farmers and producers. By providing these local entities with a platform to display their products, the company contributes to the economic growth and resilience of the community, strengthening the social organisation. By allowing small-scale producers to sell their products, the company not only enhances the food and drink offer but also promotes economic wellbeing in the local community.
Scale of benefits	The business serves as an educational platform, raising awareness among consumers about the benefits of organic and seasonal eating. This contributes to a broader societal shift towards conscious and informed food choices. By celebrating seasonality and local flavours, the company contributes to the preservation and appreciation of local culinary traditions. This cultural aspect adds richness and depth to the gastronomic experience.
Lessons and recommendations	The company success underscores the importance of deeply integrating with the local community. Collaborating with local producers not only supports the regional economy but also fosters a sense of shared responsibility and collaboration. Embracing seasonal variations in menu items not only aligns with sustainable practices but also enhances the overall culinary experience, attracting consumers seeking unique and dynamic offerings. Consider obtaining recognized sustainability certifications to further validate the business's commitment to environmental and ethical practices. This can enhance credibility and attract environmentally conscious consumers.

*These data have been gathered through interviews and focus groups performed with the company representatives, in February 2023 and November 2023.*

*Company C: Automotive industry – large company representative in Albania*

Business description	The company, as a branch of an international entity, was founded in 2005 in Albania with a clear vision of bringing the experience of its parent company in the fields of communication, sales and after sales, with the aim to give the Albanian customer benefits from the experience of one of the largest automobile groups in Europe.
Overall motivation	Sustainability is the examination of corporate actions' effects on society and the environment. The principle dictates that consumption should not exceed the capacity for regeneration. It emphasizes the importance of ensuring that our actions do not disadvantage other societies or future generations. According to the Managing Director, "Sustainability is a global responsibility that every company must take seriously." The organization aims to establish enduring values, provide favorable working conditions, and manage environmental resources responsibly while maintaining profitability. Responsible and climate-conscious actions are central to daily operations across all

	business sectors and the entire supply chain. The goal is to facilitate CO <sub>2</sub> -free mobility for everyone in the medium and long term, benefitting customers, employees, and the planet.
Number of employees	74
Starting point	The sustainability strategy comprises a prioritized set of actions, offering an agreed framework to channel investment and enhance performance. Goals and measures have been established to place responsible and climate-conscious actions at the core of daily operations. Five primary focus areas in climate protection have been identified to maximize impact. Additionally, attention is directed towards "Workforce Transformation" and "Governance" to ensure a comprehensive approach to sustainability within the company. The identified focus fields comprehend Zero Emission Mobility, Green Finance, Circular Economy, Green Building, Green Retail, Workforce Transformation, and Governance. Two overarching goals have been set: a 30% reduction in CO <sub>2</sub> emissions by 2030 and achieving an approximately 50% share of Battery Electric Vehicles (BEVs) by 2030 (60% within the EU).
Strengths	Climate action and the objective to reduce CO <sub>2</sub> emissions include various focus fields and business segments. Sustainable values are generated, excellent working conditions are provided, and responsible behavior towards the environment and resources is practiced, all while ensuring economic success. Responsible and climate-conscious action is prioritized in daily operations across all business domains and throughout the entire supply chain. Efforts are underway to enable CO <sub>2</sub> -free mobility for all stakeholders: customers, employees, and the planet. The company has presently installed a Photovoltaic system in both of its buildings to decrease energy consumption.
Challenges and constrains	The current constraints include the need to develop training programs with coordinators from all countries to enhance their comprehensive understanding of sustainability. Collaboration with all stakeholders, including employees, clients, and business partners, is essential. In the Albanian market, sustainability remains a relatively novel concept, and finding business partners who fully align with sustainability criteria can be challenging. Moreover, infrastructure limitations in Albania, such as the scarcity of electric car charging stations, pose obstacles. The limited number of chargers in the country hinders the achievement of our Zero Emission Mobility target.
Social impacts	The company takes its responsibility towards people and society very seriously. As an automotive company, it follows a service-based business model and promises extensive expertise. This means that employees have an important role to play in upping sustainability efforts. Health and safety in the workplace are important factors in guaranteeing responsible and sustainable business operations. The company does everything in its power to protect its employees and provide them with a safe place to work. With its sustainability strategy, it places responsible and climate-conscious action on the centre of its daily work and aims to provide medium- and long-term carbon free mobility for everyone. In addition, the company actively promotes diversity and thus innovation in corporate culture, which helps it to shape the future of mobility.
Environmental impacts	When it comes to environmental protection and climate action, the company's priority is steadily reducing its carbon footprint. This will be achieved by working towards two main goals – reducing CO <sub>2</sub> emissions and increasing the number of BEVs sold – and driven forward by strategically taking steps in the five focus fields. The company has set itself the clear target of reducing its CO <sub>2</sub> emissions by 30% by 2030.
Economic impacts	The company is focusing on Green Finance, with the Group Treasury driving a sustainable transformation in financing and mobility products. It aims to advance e-mobility financing and establish itself as an industry benchmark for sustainable financial products. The Group Treasury is integrating green refinancing into its corporate portfolio, developing a sustainability-linked finance framework aligned with international standards. Future refinancing activities will be tied to this framework, reinforcing the company's commitment to global sustainable development.
Scale of benefits	The organization is dedicated to sustainable entrepreneurship by adhering to legal requirements, ethical principles, and clear values to ensure integrity and accountability. They prioritize customer needs by offering mobility solutions that enhance lives and continuously innovate to reduce environmental impact, promoting responsible

	consumption throughout the product life cycle. The organization expects high standards of compliance and sustainability from partners, fostering trust-based collaborations. In staffing and employee relations, they emphasize alignment with company values, creating a supportive, inclusive workplace. This commitment not only benefits the environment and society but also enhances the organization's reputation and long-term success.
Lessons and recommendations	To overcome challenges in the Albanian market, the company should invest in sustainability education programs and strengthen collaborations with local educational institutions to foster a unified commitment to sustainable practices. Addressing infrastructure limitations is key to achieving the Zero Emission Mobility target, with a focus on engaging local authorities to develop electric car charging stations. Tailoring global sustainability strategies to the local context and pursuing strategic collaborations are essential for driving sustainability on a broader scale.

*These data have been gathered through interviews and focus groups performed with the company representatives, in February 2023 and November 2023.*

#### **4. Discussions**

After reviewing the data from the interviews, and categorizing them according to topics, themes and ideas, we distinguish several insights from our study.

The small company under examination illustrates the typical entrepreneurial spirit, with its sustainability efforts primarily propelled by the vision and values of its owner. Driven by a deep personal commitment to environmental and social responsibility, the owner's philosophy touches every aspect of the business, from product design to operational practices. Here, sustainability is not merely a corporate strategy but a reflection of individual values, demonstrating the pivotal role of personal conviction in fostering sustainable business practices within smaller enterprises.

For the medium-sized company in our analysis, sustainability is propelled by a combination of factors that reflect its unique position in the market. Firstly, the imperative for internationalization plays a pivotal role, as the company seeks to expand its operations across borders and enter new markets. In navigating diverse regulatory landscapes and consumer preferences worldwide, sustainability serves as a strategic differentiator, enhancing brand reputation and market competitiveness. Moreover, the surge in demand for sustainable products and services further incentivizes the company to prioritize sustainability initiatives, responding to evolving consumer preferences and market trends. Lastly, the visionary outlook of the company's owners underscores their commitment to integrating circular business models into the core ethos of the business, aligning with their long-term strategic objectives and values.

The larger company in our analysis is influenced predominantly by external factors, particularly international regulations and sustainability goals. Operating within a complex global landscape, these type of corporations are subject to stringent regulatory frameworks and mandates aimed at curbing environmental degradation and promoting sustainable development. Adherence to international standards and compliance with regulatory requirements serve as key drivers for integrating sustainability into their business strategies. Additionally, alignment with global sustainability goals, such as the United Nations' Sustainable Development Goals (SDGs), serves as a guiding framework, shaping the direction of their sustainability initiatives and influencing strategic decision-making.

Our study explored various types of actions addressing environmental concerns and promoting sustainability across different sectors, including waste management, transport policies, energy consumption, and transparency of information. However, several challenges hinder widespread adoption of sustainable practices. As expected, many Albanian businesses lack the expertise

and capacity to assess climate science effectively, compounded by increasing climate variability due to global warming. This makes it difficult to embark a sustainability path, even or larger companies, as networking and collaboration with suppliers and competitors has an impact on the implementation of sustainable practices.

## **5. Conclusions**

The qualitative data analysis reveals a growing trend of sustainability practices being implemented by Albanian businesses. There is a discernible correlation between the willingness to adopt environmental practices and the perceived necessity for such actions among selected companies. In fact, we find that in all cases the need to embark a sustainable entrepreneurship path is recognized a necessity to compete in local and international markets. However, the main drivers' motivating commitment towards sustainability varies based on the company's size. In examining three diverse sustainable business case studies across varying company sizes – one small, one medium, and one large enterprise – it becomes evident that the drivers of sustainability are complex and multidimensional. Each of the companies of our sample is committed to sustainable practices, but the motivations and driving forces behind their initiatives differ significantly. While the entrepreneurial spirit imbues smaller enterprises with agility and adaptability, enabling swift implementation of sustainable practices, larger corporations navigate a landscape shaped by international policies and frameworks. Recognizing the distinct drivers of sustainability across companies of varying sizes is imperative for fostering a comprehensive understanding of sustainable business practices. By acknowledging and leveraging these diverse motivations, businesses can cultivate more effective and tailored approaches to sustainability, ultimately driving meaningful change on both local and global scales.

The implications of the study reach beyond to recommendations for policies aimed at encouraging increased involvement of businesses in sustainable practices and furthering the country's environmental and climate objectives. It is essential to prioritize educational initiatives that address global challenges and equip future entrepreneurs with the necessary skills for sustainability. Additionally, the implementation of innovative financing schemes involving private sector participation could help mitigate financial obstacles to sustainability initiatives. However, embarking on green entrepreneurship in Albania involves overcoming substantial challenges related to infrastructure, regulatory frameworks, and societal awareness. Issues such as infrastructure constraints and complex regulatory environments present significant barriers for green entrepreneurs, while limited public awareness may impede the promotion and adoption of environmentally friendly products and services. Despite these obstacles, embracing green entrepreneurship offers the potential to contribute positively to Albania's sustainable development trajectory and foster a more environmentally conscious society.

## **Acknowledgments**

This research has been supported by Albanian National Agency for Science, Research, and Innovation and by the USEIPM project, Horizon Widera 2022, “Up-skilling researchers for sustainable entrepreneurship- Based on innovation process management” funded by the European Union. The authors acknowledge support from three business representatives for their valuable insights and active engagement in the research.

## REFERENCES

1. Abbass, K., Qasim, M. Z., Song, H., Murshed, M., Mahmood, H., & Younis, I. (2022). A review of the global climate change impacts, adaptation, and sustainable mitigation measures. *Environmental Science and Pollution Research*, 29(28), 42539-42559.
2. Ahmad, W., & Zhang, Q. (2020). Green purchase intention: Effects of electronic service quality and customer green psychology. *Journal of Cleaner Production*, 267, 122053.
3. Alwakid, W., Aparicio, S., and Urbano, D. (2021). The influence of green entrepreneurship on sustainable development in Saudi Arabia: The role of formal institutions. *International journal of environmental research and public health*, 18(10), 5433.
4. Argade, P., Salignac, F., & Barkemeyer, R. (2021). Opportunity identification for sustainable entrepreneurship: Exploring the interplay of individual and context level factors in India. *Business Strategy and the Environment*, 30(8), 3528-3551.
5. Avelar, S., Borges-Tiago, T., Almeida, A., & Tiago, F. (2024). Confluence of sustainable entrepreneurship, innovation, and digitalization in SMEs. *Journal of Business Research*, 170, 114346.
6. Bansal, P., and Roth, K. (2000). Why companies go green: A model of ecological responsiveness. *Academy of management journal*, 43(4), 717-736.
7. Barney, J. B., Ketchen Jr, D. J., & Wright, M. (2011). The future of resource-based theory: revitalization or decline? *Journal of management*, 37(5), 1299-1315.
8. Barraket, J., & Yousefpour, N. (2013). Evaluation and social impact measurement amongst small to medium social enterprises: Process, purpose and value. *Australian Journal of Public Administration*, 72(4), 447-458.
9. Baum, L. M. (2012). It's not easy being green... or is it? A content analysis of environmental claims in magazine advertisements from the United States and United Kingdom. *Environmental Communication: A Journal of Nature and Culture*, 6(4), 423-440.
10. Bhandari, N., Garza-Reyes, J. A., Rocha-Lona, L., Kumar, A., Naz, F., & Joshi, R. (2022). Barriers to sustainable sourcing in the apparel and fashion luxury industry. *Sustainable Production and Consumption*, 31, 220-235.
11. Brown, K. (2014). Global environmental change I: A social turn for resilience? *Progress in human geography*, 38(1), 107-117.
12. Bruton, G. D., Ahlstrom, D., & Li, H. L. (2010). Institutional theory and entrepreneurship: where are we now and where do we need to move in the future? *Entrepreneurship theory and practice*, 34(3), 421-440.
13. Carfora, A., Scandurra, G., & Thomas, A. (2021). Determinants of environmental innovations supporting small-and medium-sized enterprises sustainable development. *Business Strategy and the Environment*, 30(5), 2621-2636.
14. Chaudhry, N. I., Asad, H., and Hussain, R. I. (2020). Environmental innovation and financial performance: Mediating role of environmental management accounting and firm's environmental strategy. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 14(3), 715-737.
15. Cela, M., and Resmeliu, D. (2015). CSR Practices by Businesses in Albania. Results of a Survey. *European Scientific Journal*, 11(28).
16. Cherian, J., & Jacob, J. (2012). Green marketing: A study of consumers' attitude towards environment friendly products.
17. Cohen, B., & Winn, M. I. (2007). Market imperfections, opportunity and sustainable entrepreneurship. *Journal of business venturing*, 22(1), 29-49.
18. Crals, E., & Vereeck, L. (2004). SME's and sustainable entrepreneurship: theory and practice. In *Third Global Conference: Environmental Justice and Global Citizenship*, Philips C.(ed). Interdisciplinary Press: Oxford (pp. 37-46).
19. Crawford, G. C., Skorodzyevskiy, V., Frid, C. J., Nelson, T. E., Booyavi, Z., Hechavarria, D. M., ... & Teymourian, E. (2022). Advancing entrepreneurship theory through replication: A case study on contemporary methodological challenges, future best practices, and an entreaty for communality. *Entrepreneurship Theory and Practice*, 46(3), 779-799.
20. Criado-Gomis, A., Iniesta-Bonillo, M. Á., & Cervera-Taulet, A. (2018). Sustainable entrepreneurial orientation within an intrapreneurial context: effects on business performance. *International Entrepreneurship and Management Journal*, 14, 295-308.
21. Dean, T. J., & McMullen, J. S. (2007). Toward a theory of sustainable entrepreneurship: Reducing environmental degradation through entrepreneurial action. *Journal of business venturing*, 22(1), 50-76.
22. Delmas M. and Burbano V. (2011) The drivers of greenwashing. *California management review* 54(1):64–87. <https://doi.org/10.1525/cmr.2011.54.1.64>
23. Di Domenico, M., Haugh, H., & Tracey, P. (2010). Social bricolage: Theorizing social value creation in social enterprises. *Entrepreneurship theory and practice*, 34(4), 681-703.

24. Dietz, T., Shwom, R. L., and Whitley, C. T. (2020). Climate change and society. *Annual Review of Sociology*, 46, 135-158.
25. Dixon, S.E.A. and Clifford, A. (2007), "Ecopreneurship – a new approach to managing the triple bottom line", *Journal of Organizational Change Management*, Vol. 20 No. 3, pp. 326-345. <https://doi.org/10.1108/09534810710740164>
26. Du, W., & Li, M. (2020). Assessing the impact of environmental regulation on pollution abatement and collaborative emissions reduction: Micro-evidence from Chinese industrial enterprises. *Environmental Impact Assessment Review*, 82, 106382.
27. Elkington, J. (1997) *Cannibals with Forks: The Triple Bottom Line of 21st Century Business*. Capstone, Oxford
28. European Commission (2022b) *Albania 2022*. Report, available at: [https://neighbourhood-enlargement.ec.europa.eu/albania-report-2022\\_en](https://neighbourhood-enlargement.ec.europa.eu/albania-report-2022_en). Last accessed on 29/10/2023
29. Farinelli, F., Bottini, M., Akkoyunlu, S., and Aerni, P. (2011). Green entrepreneurship: the missing link towards a greener economy. *Atdf Journal*, 8(3/4), 42-48.
30. Ferreira, J. J., Fayolle, A., Fernandes, C., & Raposo, M. (2017). Effects of Schumpeterian and Kirznerian entrepreneurship on economic growth: Panel data evidence. *Entrepreneurship & Regional Development*, 29(1-2), 27-50.
31. Fischer, D., Brettel, M., & Mauer, R. (2020). The three dimensions of sustainability: A delicate balancing act for entrepreneurs made more complex by stakeholder expectations. *Journal of Business Ethics*, 163, 87-106.
32. Gast, J., Gundolf, K., and Cesinger, B. (2017). Doing business in a green way: A systematic review of the ecological sustainability entrepreneurship literature and future research directions. *Journal of cleaner production*, 147, 44-56.
33. Government of Albania (GoA) (2022). *National Strategy for Development and European Integration 2022-2030 (NSDEI 2022-2030)*. Tirana: Government of Albania
34. Gu, W., & Wang, J. (2022). Research on index construction of sustainable entrepreneurship and its impact on economic growth. *Journal of Business Research*, 142, 266-276.
35. Günerergin, M., Penbek, Ş., and Zaptçioğlu, D. (2012). Exploring the problems and advantages of Turkish SMEs for sustainability. *Procedia-Social and Behavioral Sciences*, 58, 244-251.
36. Hahn, R.; Spieth, P.; Ince, I. Business model design in sustainable entrepreneurship: Illuminating the commercial logic of hybrid businesses. *J. Clean. Prod.* 2018, 176, 439–451
37. Hockerts, K., and Wüstenhagen, R. (2010). Greening Goliaths versus emerging Davids—Theorizing about the role of incumbents and new entrants in sustainable entrepreneurship. *Journal of business venturing*, 25(5), 481-492.
38. Hoogendoorn, B., Van der Zwan, P., & Thurik, R. (2019). Sustainable entrepreneurship: The role of perceived barriers and risk. *Journal of business ethics*, 157, 1133-1154.
39. Icka, E., Adams, J., and Kauffman, R. G. (2021). Environmental Sustainability Practices of Albanian Micro Enterprises and SMEs. *Midwest Social Sciences Journal*, 24(1), 8. DOI: 10.22543/0796.241.1041
40. Khan, Mozaffar and Khan, Mozaffar and Serafeim, George and Yoon, Aaron, *Corporate Sustainability: First Evidence on Materiality* (November 9, 2016). *The Accounting Review*, Vol. 91, No. 6, pp. 1697-1724., Available at SSRN: <https://ssrn.com/abstract=2575912> or <http://dx.doi.org/10.2139/ssrn.2575912>
41. Kosta. V (2023, February), *Sustainable Practices at Schneider Albania*. (E. Pojani; P. Grabova, Interviewer)
42. Leyden, D. P., & Link, A. N. (2015). Toward a theory of the entrepreneurial process. *Small Business Economics*, 44, 475-484.
43. Liu, J., Mooney, H., Hull, V., Davis, S. J., Gaskell, J., Hertel, T., ... & Li, S. (2015). Systems integration for global sustainability. *Science*, 347(6225), 1258832.
44. López-Nicolás, C., Ruiz-Nicolás, J., and Mateo-Ortuño, E. (2021). Towards Sustainable Innovative Business Models. *Sustainability*, 13(11), 5804. DOI: 10.3390/su13115804
45. Maqbool, R., & Amaechi, I. E. (2022). A systematic managerial perspective on the environmentally sustainable construction practices of UK. *Environmental science and pollution research*, 29(42), 64132-64149.
46. McWade, W. (2012). The role for social enterprises and social investors in the development struggle. *Journal of social entrepreneurship*, 3(1), 96-112.
47. Nicholls, A. (2009). 'We do good things, don't we?': 'Blended Value Accounting' in social entrepreneurship. *Accounting, organizations and society*, 34(6-7), 755-769.
48. O'Brien, K. (2012). Global environmental change II: From adaptation to deliberate transformation. *Progress in human geography*, 36(5), 667-676.
49. OECD (2022), *SME Policy Index: Western Balkans and Turkey 2022: Assessing the Implementation of the Small Business Act for Europe*, SME Policy Index, OECD Publishing, Paris, <https://doi.org/10.1787/b47d15f0-en>.

50. Parguel, B., Benoît-Moreau, F., and Larceneux, F. (2011). How sustainability ratings might deter 'greenwashing': A closer look at ethical corporate communication. *Journal of Business Ethics*, 102, 15–28. <https://doi.org/10.1007/s10551-011-0901-2>
51. Park, J., & Tucker, R. (2017). Overcoming barriers to the reuse of construction waste material in Australia: a review of the literature. *International Journal of Construction Management*, 17(3), 228-237.
52. Pinkse, J., & Groot, K. (2015). Sustainable entrepreneurship and corporate political activity: Overcoming market barriers in the clean energy sector. *Entrepreneurship Theory and Practice*, 39(3), 633-654.
53. Polonsky, M. J. (2011). Transformative green marketing: Impediments and opportunities. *Journal of business research*, 64(12), 1311-1319.
54. Pojani, E., and Grabova, P. (2022). Discussing sustainable business practices—the case of tourism sector in Albania. *Economic and Social Development: Book of Proceedings*, 208-217.
55. Ripple, W. J., Wolf, C., Newsome, T. M., Barnard, P., & Moomaw, W. R. (2020). World scientists' warning of a climate emergency. *BioScience*, 70(1), 8-100.
56. Saebi, T., Foss, N. J., & Linder, S. (2019). Social entrepreneurship research: Past achievements and future promises. *Journal of management*, 45(1), 70-95.
57. Seele, P., and Gatti, L. (2017). Greenwashing revisited: In search of a typology and accusation-based definition incorporating legitimacy strategies. *Business Strategy and the Environment*, 26(2), 239-252.
58. Schaltegger, S., & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: categories and interactions. *Business strategy and the environment*, 20(4), 222-237.
59. Schaper, M. (2002). Introduction: the essence of ecopreneurship. *Greener management international*, (38), 26-30.
60. Sejati, S (2023, February), Sustainable Practices at Porche Albania. (E. Pojani; P. Grabova, Interviewer)
61. Shao, S., Hu, Z., Cao, J., Yang, L., & Guan, D. (2020). Environmental regulation and enterprise innovation: a review. *Business strategy and the environment*, 29(3), 1465-1478.
62. Sherifi, M. (2017). Development of a Sustainability Framework for Greening the Construction Sector in Albania (Doctoral dissertation).
63. Silajdžić, I., Kurtagić, S. M., and Vučijak, B. (2015). Green entrepreneurship in transition economies: a case study of Bosnia and Herzegovina. *Journal of cleaner production*, 88, 376-384.
64. Song, Y., Yang, T., & Zhang, M. (2019). Research on the impact of environmental regulation on enterprise technology innovation—an empirical analysis based on Chinese provincial panel data. *Environmental Science and Pollution Research*, 26, 21835-21848.
65. Stel, A. V., Carree, M., & Thurik, R. (2005). The effect of entrepreneurial activity on national economic growth. *Small business economics*, 24, 311-321.
66. Sun, H., Pofoura, A. K., Mensah, I. A., Li, L., and Mohsin, M. (2020). The role of environmental entrepreneurship for sustainable development: evidence from 35 countries in Sub-Saharan Africa. *Science of the Total Environment*, 741, 140132. <https://doi.org/10.1016/j.enpol.2013.09.056>
67. Terán-Yépez, E., Marín-Carrillo, G. M., del Pilar Casado-Belmonte, M., & de las Mercedes Capobianco-Uriarte, M. (2020). Sustainable entrepreneurship: Review of its evolution and new trends. *Journal of Cleaner Production*, 252, 119742.
68. Thanasi, D. (2023, February). Sustainable Practices at Luga e Argjendte. (E. Pojani; P. Grabova, Interviewer)
69. Tumpa, T. J., Ali, S. M., Rahman, M. H., Paul, S. K., Chowdhury, P., & Khan, S. A. R. (2019). Barriers to green supply chain management: An emerging economy context. *Journal of cleaner production*, 236, 117617.
70. UNDP (2022). Albania's Fourth National Communication to the Conference of Parties under the United Nations Framework Convention on Climate Change. Tirana: Ministry of Tourism and Environment
71. Wielgórka, D. (2016). Environmental management in the aspect of sustainable development in micro-, small-, and medium-sized enterprises. *Desalination and Water Treatment*, 57(3), 982-992.
72. Williams, S., and Schaefer, A. (2013). Small and medium-sized enterprises and sustainability: Managers' values and engagement with environmental and climate change issues. *Business Strategy and the Environment*, 22(3), 173-186.
73. Wong, P. K., Ho, Y. P., & Autio, E. (2005). Entrepreneurship, innovation and economic growth: Evidence from GEM data. *Small business economics*, 24, 335-350.
74. Yadav, N., Gupta, K., Rani, L., and Rawat, D. (2018). Drivers of sustainability practices and SMEs: A systematic literature review. *European Journal of Sustainable Development*, 7(4), 531-531.
75. Yang, Z., Nguyen, T. T. H., Nguyen, H. N., Nguyen, T. T. N., and Cao, T. T. (2020). Greenwashing behaviours: Causes, taxonomy and consequences based on a systematic literature review. *Journal of Business Economics and Management*, 21(5), 1486-
76. Zahra, S. A., Gedajlovic, E., Neubaum, D. O., & Shulman, J. M. (2009). A typology of social entrepreneurs: Motives, search processes and ethical challenges. *Journal of business venturing*, 24(5), 519-532.

# ECONOMIC PERFORMANCE AND PERSPECTIVES OF THE WESTERN BALKAN COUNTRIES

Dragana Domuzin<sup>1,\*</sup>

<sup>1</sup>Master of Economics, Fiscal Council of Republic of Srpska

\*Corresponding author: [dragana.domuzin@outlook.com](mailto:dragana.domuzin@outlook.com)

DOI: [10.63356/978-99976-57-34-3\\_8](https://doi.org/10.63356/978-99976-57-34-3_8)

## Abstract

The dynamics of economic growth in the Western Balkan countries in the context of economic globalization and uncertainty contribute to the scientific attractiveness of studying these countries. The main research question underlying this paper is: Do the Western Balkan countries have a sufficient level of economic development and economy to respond to negative events and uncertainty at the global level?

The main objective of this paper is to analyze key macroeconomic and fiscal indicators of the Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro, Kosovo<sup>\*1</sup>, North Macedonia, and Serbia). Based on the analysis of selected indicators, the paper will compare and rank these countries using the EDAS method. In times of uncertainty, the level of national indebtedness plays a significant role. Based on the World Bank's criteria for indebtedness, the paper will determine which group each Western Balkan country belongs to. By analyzing indicators of external solvency and external liquidity, the paper will present the external position of these countries. The analysis of the Western Balkan countries will use data published by the World Bank as well as data available from Trading Economics. To obtain a realistic picture, alongside one-year data, historical data series will also be used.

**Keywords:** Western Balkan countries, GDP, public debt, economic growth, economic stability

**JEL:** E60

## 1. Introduction

The competitiveness of the economies of the Western Balkan countries is determined by macroeconomic and fiscal stability. Analyzing the main macroeconomic and fiscal indicators provides an opportunity for a realistic assessment of the economies of the Western Balkan countries. The Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro, Kosovo<sup>\*</sup>, North Macedonia, and Serbia) are nations in transition, characterized by relatively small economies compared to other countries worldwide. The process of reforming countries with small economies and underdeveloped industries faces many obstacles. The economic growth of the Western Balkan countries should be based on real progress in economic development, rather than being a result of temporary global trends. GDP represents the production aspect of a country. One of the main indicators used when analyzing a country's

---

<sup>1</sup> \* United Nations Resolution 1244 UNMIK (onwards, applicable throughout the paper)



economy is the indicator of indebtedness relative to GDP and exports. The World Bank has quantitatively defined criteria for indebtedness, based on which countries can be categorized into three groups: high, moderate, and low indebtedness. The amount of foreign direct investment is an important indicator that reflects international capital flows, where countries with better economic performance become more attractive to foreign investors. Total foreign exchange reserves represent an indicator of a country's international liquidity, as well as a reflection of its economic policy. The economic perspective of the Western Balkan countries largely depends on their ability to eliminate or reduce economic challenges in order to attract foreign direct investment. The Western Balkan countries show certain growth potential, reflected in the strengthening of regional cooperation and integration into the European Union. Continuous efforts are essential to improve the economic performance of these countries so that they become a competitive part of the European market.

## 2. Literature Review

The state of a country's economy can be analyzed based on macroeconomic indicators. Recently, we have witnessed increasing uncertainty and risks in the market, which significantly influence investors' decisions. Information about macroeconomic indicators is essential to guide future steps aimed at strengthening the national economy based on the data obtained. Macroeconomic indicators have two advantages as subjects of study: they are ubiquitous, and the large variation between indicators and countries can be used to improve our understanding of how ideas evolve and become significant (Mügge, 2016). The most commonly analyzed macroeconomic indicators include: GDP, inflation, foreign direct investments, public debt, foreign exchange reserves, imports, and exports. Economic growth should be inclusive, meaning that the focus should be on improving the quality of economic growth, rather than just the size of the growth. New policies for inclusive economic growth cover a broad range of areas, including finance, economics, fiscal regulation, violence, democracy, and transnational relations (Walby, 2018). A key monetary indicator is the level of a country's indebtedness. The analysis of a country's public debt can be done based on the World Bank's criteria, which classify countries into three groups: high, moderate, and low indebtedness. Public debt represents the total indebtedness of a country and occurs when the government borrows funds to finance public services, various infrastructure projects, social programs, and budget deficits. Domestic currency debt has a better state contingency than foreign currency debt, as its real value can be adjusted through government monetary policy, making it a better shield against income shocks (Engel & Park, 2018). By analyzing foreign direct investment (FDI) indicators, we can conclude which countries are more attractive to foreign investors, showing the international flow of capital. In a situation where globalization of the world economy is occurring, foreign direct investments (FDI) play a very important role in the economic growth and development of the Western Balkan countries (Marjanović & Domazet, 2021).

## 3. Case Study

### 3.1. Indicators of external solvency of the countries of the Western Balkans

Table 1 shows the relationship between external debt and GDP value of Western Balkan countries, indicating the liquidity or illiquidity of the observed countries. A higher interest rate on debt compared to a country's economic growth, along with a current account deficit, will lead to an increase in this indicator.

**Table 1.** External debt of the countries of the Western Balkans (% of GDP)

Country	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.	2023.
Albania	67,6	71,9	73	68,4	63,3	60,6	64,9	59,9	54,6	47,2

Bosnia and Herzegovina	66,7	67,7	65,2	68,3	61,4	60,7	66,9	53,8	52,7	-
Montenegro	140	165	157	149	130	137	198	158	142	-
Kosovo*	32,6	34	33,4	32,8	30,3	31	37	37,1	38,6	39,9
North Macedonia	70,2	69,7	74,5	73,2	73	72,2	78,8	80,5	82,7	83,9
Serbia	72,4	73,4	72	65,1	62,1	61,4	65,8	68,4	69,3	65,3

*Source:* Author's processing based on data available at: <https://www.focus-economics.com/economic-indicator/external-debt/>

In Table 1, we analyzed six Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro, Kosovo\*, North Macedonia, and Serbia) for the period from 2014 to 2023.

In 2014, Montenegro had the highest value for this indicator at 140%, followed by Serbia at 72.4%, while the lowest value was recorded for Kosovo\* at 32.6%. Albania and Bosnia and Herzegovina had similar values for this indicator in 2014 (67.6% and 66.7%, respectively). The highest value recorded in Table 1 was for Montenegro in 2020, reaching 198%. Comparing 2014 with 2023, we can conclude that Albania, Bosnia and Herzegovina (comparing 2014 and 2022), and Serbia saw a decrease in this indicator. Montenegro (comparing 2014 and 2022), Kosovo\*, and North Macedonia experienced an increase in this indicator. External debt as a percentage of GDP indicates the level of a country's indebtedness to foreign creditors, taking into account the country's economic strength. A lower percentage indicates lower indebtedness and better conditions for debt repayment, which ultimately positively impacts the credit rating and reduces interest rates. On the other hand, a high percentage of this indicator indicates increased financial risk. In 2022, the least indebted country in the Western Balkans was Kosovo\*, while the most indebted country was Montenegro. The economic structure and creditworthiness of individual countries influence the analysis of the optimal level of external debt, as it varies according to the economic strength of the country.

**Table 2.** Short-Term Debt/GDP of Western Balkan Countries

Country	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.
Albania	13,21	13,93	13,88	14,53	12,56	3,94	4,42	5,34	5,38
Bosnia and Herzegovina	4,21	3,94	3,78	1,56	14,49	13,69	14,77	11,44	11,69
Montenegro	6,16	6,01	3,98	3,59	3,90	5,00	8,62	3,68	3,19
Kosovo*	11,03	10,79	9,29	11,64	10,15	10,71	12,46	11,70	13,37
North Macedonia	10,72	10,08	10,35	11,66	10,55	11,13	10,43	10,34	14,33
Serbia	1,13	2,24	1,74	2,28	3,23	4,20	3,57	3,16	4,03

*Source:* Author's processing based on data available at: <https://data.worldbank.org/indicator>

Short-term debt refers to debt with a maturity of up to one year. Table 2 shows the ratio of short-term debt to GDP for Western Balkan countries. An increase in short-term debt makes a country less resilient when major investors leave due to a loss of confidence. The main problem with financing is the unfavorable conditions that prevailed in the past, meaning financing was done at high interest rates. Public debt management should be designed to optimize the national portfolio. Countries should focus on issuing government securities in their own (domestic) markets.

In 2014, Serbia had the lowest value for this indicator at 1.13%, while Albania had the highest at 13.21%. Bosnia and Herzegovina, Montenegro, Kosovo\*, and North Macedonia had indicator values of 4.21%, 6.16%, 11.03%, and 10.72%, respectively. In 2022, there was a change in this indicator for Western Balkan countries. Montenegro had the lowest value for this

indicator at 3.19%, while North Macedonia had the highest value at 14.33%. In 2022, Albania, Bosnia and Herzegovina, Kosovo\*, and Serbia had values of 5.38%, 11.69%, 13.37%, and 4.03%, respectively. Compared to 2014, in 2022 Albania and Montenegro reduced the value of this indicator, while Bosnia and Herzegovina, Kosovo\*, North Macedonia, and Serbia increased the value, meaning these countries raised the share of short-term debt in GDP.

**Table 3.** External Debt/Exports of Goods and Services of Western Balkan Countries

Country	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.
Albania	2,23	2,19	1,99	2,02	1,91	1,79	2,80	1,94	1,71
Bosnia and Herzegovina	141,38	114,33	104,69	104,87	97,06	94,83	123,01	91,66	80,96
Montenegro	495,29	487,22	474,24	488,24	453,33	454,02	1.082,44	580,54	451,67
Kosovo*	176,49	166,82	148,77	146,10	124,41	120,76	216,61	132,70	121,45
North Macedonia	3,55	3,07	3,12	3,27	2,94	2,81	3,62	3,26	3,18
Serbia	1,80	1,55	1,28	1,31	1,22	1,17	1,45	1,30	1,20

Source: Author's processing based on data available at: <https://data.worldbank.org/indicator>

Table 3 presents data on the ratio of external debt to exports of goods and services for Western Balkan countries. In 2014, the highest values for this indicator were recorded by Montenegro (495.29%), Kosovo\* (176.49%), and Bosnia and Herzegovina (141.38%). The lowest value for this indicator in 2014 was recorded by Serbia (1.80%). The highest value for this indicator was observed in Montenegro in 2020, reaching 1082.44%. In 2022, all the observed countries had reduced values for this indicator compared to 2014. Albania, Bosnia and Herzegovina, Montenegro, Kosovo\*, North Macedonia, and Serbia all experienced a decrease in this indicator. This indicator reflects a country's ability to service its external debt obligations through income generated from exports. A lower ratio indicates the country's ability to repay external debt more easily by generating foreign exchange earnings through exports in a more efficient manner, while a higher ratio indicates difficulties in servicing external debt. Montenegro faces the greatest challenges in servicing external debt, while Serbia faces the fewest issues related to servicing external debt.

**Table 4.** Debt Criteria According to World Bank Methodology

	High debt	Moderate debt	Low debt
Debt/GDP	>80%	48%<x<80%	<48%
Debt/Export	>220%	132%<x<220%	<132%

Source: [http://www.nbs.rs/export/sites/default/internet/english/90/90\\_0/external\\_debt\\_sustainability\\_dec.pdf](http://www.nbs.rs/export/sites/default/internet/english/90/90_0/external_debt_sustainability_dec.pdf)

The debt/GDP ratio of Western Balkan countries is the main indicator used to assess the liquidity of these countries. The debt/export ratio indicates the coverage of debt by exports. A debt crisis will not arise as long as exports exceed imports, that is, as long as the debt value does not exceed 220% of exports.

Based on the previously mentioned Table 1 and Table 2, and the debt criteria according to the World Bank methodology, we can analyze the indicators for Western Balkan countries. According to the debt/GDP parameter in 2014, Kosovo\* had low debt with a value of 32.6%. Albania, Bosnia and Herzegovina, North Macedonia, and Serbia were categorized as countries with moderate debt, with values of 67.6%, 66.7%, 70.2%, and 72.4%, respectively. Montenegro was categorized as having a high level of debt in 2014, with a value of 140%.

In 2022, Kosovo\* retained its position as a country with low debt, with a value of 38.6%. Albania, Bosnia and Herzegovina, and Serbia remained in the moderate debt category, with values of 54.6%, 52.7%, and 69.3%, respectively. Montenegro continued to be classified as a

high-debt country in 2022, with a value of 142%. North Macedonia also joined the high-debt group with a value of 82.7%. Kosovo\* had the lowest value for this parameter in 2022, indicating low debt, while Montenegro had the highest value, indicating high debt.

Analyzing the value of the debt/export of goods and services parameter, we can conclude that in 2014, Albania, North Macedonia, and Serbia were countries with low debt, with index values of 2.23%, 3.55%, and 1.80%, respectively. In 2014, Bosnia and Herzegovina and Kosovo\* were in the group of moderately indebted countries, with parameter values of 141.38% and 176.49%, respectively. Montenegro, based on this parameter in 2014, also fell into the category of highly indebted countries with a parameter value of 495.29%.

In 2022, Albania, Bosnia and Herzegovina, Kosovo\*, North Macedonia, and Serbia were categorized as countries with low debt, with parameter values of 1.71%, 80.96%, 121.45%, 3.18%, and 1.20%, respectively. Bosnia and Herzegovina and Kosovo\* improved their positions in 2022 compared to 2014, moving from the moderately indebted group to the low-debt group. Montenegro, in 2022, remained in the group of highly indebted countries based on this parameter, with a value of 451.67%. Based on this parameter, we can conclude that Montenegro is the most indebted country among all Western Balkan countries, while Serbia is the least indebted country.

**Table 5. Debt Servicing as a % of Exports of Goods and Services for Western Balkan Countries**

Country	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.
Albania	6,33	16,96	7,24	6,83	13,14	7,33	17,70	8,96	6,38
Bosnia and Herzegovina	7,73	7,28	6,47	7,42	6,81	6,03	6,18	4,64	3,74
Montenegro	12,61	23,91	22,41	12,55	25,64	19,81	39,84	23,84	11,32
Kosovo*	2,20	2,61	4,66	3,52	1,57	2,76	5,74	3,06	1,64
North Macedonia	6,48	11,38	7,05	5,84	6,57	4,21	10,05	10,31	3,41
Serbia	11,52	8,71	8,20	12,32	11,90	12,18	10,32	6,11	3,77

Source: Author's processing based on data available at: <https://data.worldbank.org/indicator>

Table 5 shows the percentage of debt servicing relative to exports of goods and services for Western Balkan countries. In 2014, Kosovo\* had the lowest value for this parameter at 2.20%, while Montenegro had the highest value at 12.61%. The values for Albania, Bosnia and Herzegovina, North Macedonia, and Serbia in 2014 were 6.33%, 7.73%, 6.48%, and 11.52%, respectively.

In 2022, the lowest value for this parameter was also recorded in Kosovo\* at 1.64%, representing a decrease of 25.44% from the first observed year. The highest value for this parameter in 2022 was also in Montenegro at 11.32%, showing a decrease of 10.25% from the initial year. The values for Albania, Bosnia and Herzegovina, North Macedonia, and Serbia in 2022 were 6.38%, 3.74%, 3.41%, and 3.77%, respectively. Compared to 2014, in 2022 Albania increased the value of this parameter by 0.79%, while Bosnia and Herzegovina, North Macedonia, and Serbia decreased their values by 51.62%, 47.38%, and 62.27%, respectively. From the above data, we can conclude that Serbia had the largest decrease in this parameter in 2022 compared to 2014. The low share of debt servicing through exports of goods and services, as shown in Table 4, is a result of the very weak production activity and poor export performance of these countries due to issues related to their connection with the global market.

**Table 6. Foreign Direct Investment in Western Balkan Countries (in billions of EUR)**

Country	2013.	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.	2023.
Albania	0,9	0,9	0,9	1	1	1,1	1,1	0,9	1,1	1,3	1,5

Bosnia and Herzegovina	0,2	0,5	0,3	0,3	0,4	0,5	0,4	0,4	0,6	0,7	0,9
Montenegro	0,3	0,4	0,6	0,2	0,5	0,4	0,4	0,4	0,6	0,8	0,5
Kosovo*	-	0,2	0,3	0,2	0,3	0,3	0,3	0,3	0,4	0,7	0,8
North Macedonia	0,2	0,2	0,2	0,4	0,2	0,6	0,4	0,2	0,5	0,7	0,6
Serbia	1,8	1,7	2,2	2,2	2,4	3,6	3,8	2,8	4	4,3	4,4

Source: Author's processing based on data available at: <https://www.focus-economics.com/>

Foreign direct investments (FDI) have a significant impact on a country's gross domestic product (GDP), as well as on financing deficits and repaying external debt. Western Balkan countries are still in transition, and investors with more serious business interests do not yet consider these countries as suitable for investment. The foreign direct investments in Western Balkan countries are predominantly directed towards the banking and insurance sectors, energy, and telecommunications.

When analyzing Western Balkan countries, foreign direct investments can be correlated with the total debt of these countries. During a country's development phase, costs increase, which cannot be compensated by internal resources or foreign direct investments alone, leading to an increase in the total debt of the country.

Table 6 shows the values of foreign direct investments for Western Balkan countries from 2013 to 2023. Based on the data presented in the table, we can conclude that Serbia had the highest inflow of foreign direct investments among all Western Balkan countries during the observed period from 2013 to 2023. In 2013, the lowest inflow of foreign direct investments was recorded by Bosnia and Herzegovina and North Macedonia (0.2 billion EUR each), followed by Montenegro with 0.3 billion EUR, Albania with 0.9 billion EUR, and Serbia with the highest value of 1.8 billion EUR. In 2023, the lowest value of foreign direct investments was seen in Montenegro (0.5 billion EUR), followed by North Macedonia (0.6 billion EUR), Kosovo\* (0.8 billion EUR), Bosnia and Herzegovina (0.9 billion EUR), and Serbia with the highest value of 4.4 billion EUR. In 2023, all Western Balkan countries experienced growth in foreign direct investments.

### 3.2. Indicators of External Liquidity for Western Balkan Countries

**Table 7.** Total Foreign Exchange Reserves with Gold/Imports of Goods and Services for Western Balkan Countries

Country	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.	2023.
Albania	42,69	61,89	57,18	59,12	56,79	54,33	85,47	70,29	58,30	62,55
Bosnia and Herzegovina	46,30	54,92	57,34	62,72	58,88	64,60	89,82	74,24	57,71	59,80
Montenegro	24,04	27,76	28,75	32,43	32,72	42,45	73,36	54,36	44,05	30,67
Kosovo*	20,67	23,73	18,64	21,50	19,53	21,66	26,33	20,26	18,68	16,93
North Macedonia	40,21	37,79	39,35	35,92	35,55	38,02	47,37	36,29	31,67	39,36
Serbia	51,06	54,79	49,52	47,23	43,05	47,76	55,02	46,92	43,49	56,95

Source: Author's processing based on data available at: <https://data.worldbank.org/indicator>

Based on the previously mentioned Table 7, we can analyze the percentage of foreign exchange reserves covering imports of goods and services for Western Balkan countries in the period 2014–2023. In 2014, Kosovo\* had the lowest coverage of imports by foreign exchange reserves and gold at 20.67%, while Serbia had the highest coverage at 51.06%. In 2023, all countries improved this parameter compared to 2014, meaning that imports of goods and services were

covered by a higher percentage of foreign exchange reserves and gold, except for Kosovo\* (16.93%) and North Macedonia (39.36%). The values for this parameter in 2023 were 62.55% for Albania, 59.80% for Bosnia and Herzegovina, 30.67% for Montenegro, and 56.95% for Serbia. Montenegro, Kosovo\*, and North Macedonia need to work on increasing this percentage, while other countries have this percentage at a satisfactory level, with imports of goods and services covered by over 50% with foreign exchange reserves and gold.

**Table 8.** Total Foreign Exchange Reserves with Gold/Short-Term Debt for Western Balkan Countries

Country	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.
Albania	152,47	197,85	188,76	189,70	204,50	619,82	719,14	588,70	517,34
Bosnia and Herzegovina	622,37	741,00	793,65	2267,06	229,46	256,98	291,37	350,00	305,46
Montenegro	233,97	279,97	455,52	583,12	559,73	551,65	519,29	918,77	1027,05
Kosovo*	100,38	113,42	102,70	98,04	110,15	114,16	113,90	112,94	99,75
North Macedonia	243,34	243,63	249,11	212,54	245,35	260,18	320,05	285,37	209,65
Serbia	2262,80	1277,83	1516,80	1180,09	788,25	693,55	871,96	933,96	807,60

Source: Author's processing based on data available at: <https://data.worldbank.org/indicator>

Table 8 presents data showing the ratio of total foreign exchange reserves and external debt for Western Balkan countries. In 2014, Kosovo\* had the lowest value of this indicator at 100.38%, while Serbia had the highest value at 2262.80%. Albania, Bosnia and Herzegovina, Montenegro, and North Macedonia had values of 152.47%, 622.37%, 233.97%, and 243.34%, respectively, in 2014. Based on these data, we can say that the short-term debts of Western Balkan countries were fully and more than adequately covered by their foreign exchange reserves and gold. In 2014, Serbia stood out among all Western Balkan countries as having the highest foreign exchange reserves with gold.

In 2022, Kosovo\* had the lowest value of this indicator, while Montenegro recorded the highest value at 1027.05%. Albania, Bosnia and Herzegovina, North Macedonia, and Serbia had values of 517.34%, 305.46%, 209.65%, and 807.60%, respectively. In 2022, Montenegro had the lowest short-term debt of all Western Balkan countries.

**Table 9.** Total Foreign Exchange Reserves with Gold/BDP for Western Balkan Countries

Country	2014.	2015.	2016.	2017.	2018.	2019.	2020.	2021.	2022.	2023.
Albania	20,15	27,56	26,21	27,56	25,69	24,44	31,77	31,42	27,84	28,09
Bosnia and Herzegovina	26,19	29,21	30,01	35,32	33,24	35,19	43,05	40,03	35,71	34,02
Montenegro	14,42	16,82	18,13	20,92	21,84	27,59	44,76	33,81	32,76	21,25
Kosovo*	11,07	12,24	9,54	11,41	11,18	12,23	14,19	13,22	13,34	11,93
North Macedonia	26,09	24,55	25,79	24,78	25,89	28,96	33,38	29,49	30,05	33,97
Serbia	25,61	28,61	26,41	26,95	25,42	29,11	31,09	29,50	32,53	36,67

Source: Author's processing based on data available at: <https://data.worldbank.org/indicator>

Table 9 shows data related to the total foreign exchange reserves with gold and GDP for Western Balkan countries. In 2014, the lowest value was recorded for Kosovo\* at 11.07%, while the highest value was recorded for Bosnia and Herzegovina at 26.19%. In 2023, all Western Balkan countries increased this parameter, but Kosovo\* retained its position as the country with the lowest value of this parameter at 11.93%, while Serbia had the highest value at 36.67%.

#### 4. Research Methodology

The research conducted in this study is based on one-year data and historical data series published by the World Bank, available on Trading Economics and Focus Economics websites. We used the LOPCOW-EDAS method to rank the Western Balkan countries (Albania, Bosnia and Herzegovina, Montenegro, Kosovo\*, North Macedonia, and Serbia) based on selected indicators. The LOPCOW method is applied in data analysis following these steps (Demir et al., 2023, page 18415 ):

1. Create the initial decision matrix for the decision problem, consisting of mmm alternatives and nnn criteria.

$$X = \begin{bmatrix} x_{11} & \dots & x_{1j} & \dots & x_{1n} \\ \vdots & & \vdots & & \vdots \\ x_{m1} & \dots & x_{mj} & \dots & x_{mn} \end{bmatrix}$$

2. Obtain the normalized decision matrix (R).

$$r_{ij} = \frac{x_{max} - x_{ij}}{x_{max} - x_{min}} \quad r_{ij} = \frac{x_{ij} - x_{min}}{x_{max} - x_{min}}$$

3. Calculate the percentage values (PV) of the criteria.

$$PV_{ij} = \left| \ln \left| \frac{\sqrt{\frac{\sum_{i=1}^m r_{ij}^2}{m}}}{\sigma} \right| \right| \cdot 100$$

4. Calculate the objective weights.

$$W_{ij} = \frac{PV_{ij}}{\sum_{i=1}^n PV_{ij}}$$

The EDAS method is used following these steps (Keshavarz Ghorabae et al., 2015, pages 439-440):

1. Select the most important criteria that describe the alternatives.
2. Form the decision matrix (Ks).

$$X = [X_{ij}]_{n \times m} = \begin{bmatrix} X_{11} & X_{12} & \dots & X_{1m} \\ X_{21} & X_{22} & \dots & X_{2m} \\ \vdots & \vdots & \vdots & \vdots \\ X_{n1} & X_{n2} & \dots & X_{nm} \end{bmatrix},$$

3. Determine the average solution for all criteria.

$$AV = [AV_j]_{1 \times m}, \quad AV_j = \frac{\sum_{i=1}^n X_{ij}}{n}.$$

4. Calculate the positive distance from the average (PDA) and the negative distance from the average (NDA) of the matrix according to the type of criteria (benefit and cost).

$$PDA = [[PDA_{ij}]]_{n \times m}, \quad NDA = [[NDA_{ij}]]_{n \times m}.$$

$$PDA_{ij} = \frac{\max(0, (X_{ij} - AV_j))}{AV_j}, \quad NDA_{ij} = \frac{\max(0, (AV_j - X_{ij}))}{AV_j}.$$

$$PDA_{ij} = \frac{\max(0, (AV_j - X_{ij}))}{AV_j}, \quad NDA_{ij} = \frac{\max(0, (X_{ij} - AV_j))}{AV_j}.$$

5. Determine the weighted sum of PDA and NDA for all alternatives.

$$SP_i = \sum_{j=1}^m w_j PDA_{ij}, \quad SN_i = \sum_{j=1}^m w_j NDA_{ij}.$$

6. Normalize SP and SN values for all alternatives.

$$NSP_i = \frac{SP_i}{\max_i(SP_i)}, \quad NSN_i = 1 - \frac{SN_i}{\max_i(SN_i)}.$$

7. Calculate the average score (AS) for all alternatives.

$$AS_i = \frac{1}{2}(NSP_i + NSN_i),$$

$$0 \leq AS_i \leq 1.$$

8. Rank the alternatives based on the descending average score (AS).



## 5. Research Results

**Table 10.** Western Balkan Countries and Selected Parameters

	Country	GDP (billions US\$)	Inflation(GD P deflator)	External debt % GDP	Direct foreign investments (neto, %GDP)	Foreign exchange reserves (%GDP)	Short-term debt (%GDP)
		C1	C2	C3	C4	C5	C6
A1	Albania	22,98	4,55	54,6	7,6	28,09	5,38
A2	Bosnia and Herzegovina	27,05	5,53	52,7	3,3	34,02	11,69
A3	Montenegro	7,4	9,06	142	14	21,25	3,19
A4	Kosovo*	10,44	5	38,6	8,2	11,93	13,37
A5	North Macedonia	14,76	3,6	82,7	6,2	33,97	14,33
A6	Serbia	75,19	12	69,3	7,3	36,67	4,03

Source: Author's processing based on data available at: <https://data.worldbank.org/indicator>, <https://www.focus-economics.com/economic-indicator/external-debt/>, <https://tradingeconomics.com/>

**Table 11.** Matrix Normalization

Matrix Normalization					
0,145608922	0,02883	0,345964	0,048156	0,1779876	0,034089
0,171397795	0,03504	0,333925	0,02091	0,215562	0,074072
0,046888861	0,057407	0,899759	0,088709	0,1346471	0,020213
0,066151312	0,031682	0,244582	0,051958	0,0755924	0,084717
0,093524268	0,022811	0,524015	0,039285	0,2152452	0,0908
0,476428843	0,076036	0,439108	0,046255	0,2323533	0,025535

Source: Author's processing

**Table 12.** Ln (nij)

Ln (nij)					
-1,92683	-3,54633	-1,06142126	-3,033306896	-1,72604	-3,37877
-1,76377	-3,35127	-1,096839688	-3,867532675	-1,53451	-2,60272
-3,05998	-2,85759	-0,105628085	-2,422397813	-2,0051	-3,90143
-2,71581	-3,45202	-1,408202867	-2,957320989	-2,5824	-2,46844
-2,36953	-3,78052	-0,646235541	-3,236905851	-1,53598	-2,3991
-0,74144	-2,57655	-0,823010237	-3,073580795	-1,4595	-3,66769

Source: Author's processing

$-1/\ln(m) = -0,55811$

**Table 13.** Weight coefficients of criteria (nij x Ln(nij))

	nij x Ln (nij)					
	-0,28056	-0,10224	-0,36721	-0,14607	-0,30721	-0,11518
	-0,30231	-0,11743	-0,36626	-0,08087	-0,33078	-0,19279
	-0,14348	-0,16405	-0,09504	-0,21489	-0,26998	-0,07886
	-0,17965	-0,10937	-0,34442	-0,15366	-0,19521	-0,20912
	-0,22161	-0,08624	-0,33864	-0,12716	-0,33061	-0,21784
	-0,35324	-0,19591	-0,36139	-0,14217	-0,33912	-0,09366
<b>SUM</b>	<b>-1,48085</b>	<b>-0,77523</b>	<b>-1,87296</b>	<b>-0,86482</b>	<b>-1,77292</b>	<b>-0,90744</b>

ejj	0,82648	0,432663	1,045321	0,482664	0,989483	0,506452
dij	0,17352	0,567337	-0,04532	0,517336	0,010517	0,493548
Wij	0,10	0,33	-0,03	0,30	0,01	0,29

Source: Author's processing

**Table 14. Average Parameter Values for the Western Balkan Countries**

Weight		0,1	0,33	-0,03	0,3	0,01	0,29
	Country	GDP (billions US\$)	Inflation(GDP deflator)	External debt % GDP	Direct foreign investments (neto, %GDP)	Foreign exchange reserves (%GDP)	Short-term debt (%GDP)
		C1	C2	C3	C4	C5	C6
A1	Albania	22,98	4,55	54,6	7,6	28,09	5,38
A2	Bosnia and Herzegovina	27,05	5,53	52,7	3,3	34,02	11,69
A3	Montenegro	7,4	9,06	142	14	21,25	3,19
A4	Kosovo*	10,44	5	38,6	8,2	11,93	13,37
A5	North Macedonia	14,76	3,6	82,7	6,2	33,97	14,33
A6	Serbia	75,19	12	69,3	7,3	36,67	4,03
	<b>Avj</b>	<b>26,30333</b>	<b>6,623333</b>	<b>73,31667</b>	<b>7,7666667</b>	<b>27,655</b>	<b>8,665</b>

Source: Author's processing

**Table 15. PDA**

Weight		0,1	0,33	-0,03	0,3	0,01	0,29
	Country	GDP (billions US\$)	Inflation(GDP deflator)	External debt % GDP	Direct foreign investments (neto, %GDP)	Foreign exchange reserves (%GDP)	Short-term debt (%GDP)
		C1	C2	C3	C4	C5	C6
A1	Albania	0	0	1,075783	0	0,067925	0
A2	Bosnia and Herzegovina	0,028387	0	1,003548	0	0,293372	0
A3	Montenegro	0	0	4,398555	0	0	0
A4	Kosovo*	0	0	0,467495	0	0	0
A5	North Macedonia	0	0	2,144088	0	0,291471	0
A6	Serbia	1,858573	0	1,634647	0	0,39412	0

Source: Author's processing

**Table 16. NDA**

Weight		0,1	0,33	-0,03	0,3	0,01	0,29
	Country	BDP (billions US\$)	Inflation(GDP deflator)	External debt % GDP	Direct foreign investments (neto, %GDP)	Foreign exchange reserves (%GDP)	Short-term debt (%GDP)
		C1	C2	C3	C4	C5	C6
A1	Albania	0,126346	0,827018	0	0,711063	0	0,795463
A2	Bosnia and Herzegovina	0	0,78976	0	0,874541	0	0,55557
A3	Montenegro	0,718667	0,655557	0	0,467748	0,192118	0,878723

A4	Kosovo*	0,60309 2	0,80991	0	0,688252	0,546445	0,491699
A5	North Macedonia	0,43885 4	0,863135	0	0,764288	0	0,455202
A6	Serbia	0	0,543784	0	0,722469	0	0,846787

Source: Author's processing

**Table 17. Weight sum of PDA**

Weight		0,1	0,33	-0,03	0,3	0,01	0,29	
	Country	BDP (billions US\$)	Inflation(GDP deflator)	External debt % GDP	Direct foreign investments (neto, %GDP)	Foreign exchange reserves (%GDP)	Short-term debt (%GDP)	SPi
		C1	C2	C3	C4	C5	C6	
A1	Albania	0	0	-0,35501	0	0,000679	0	-0,35433
A2	Bosnia and Herzegovina	0,002839	0	-0,33117	0	0,002934	0	-0,3254
A3	Montenegro	0	0	-1,45152	0	0	0	-1,45152
A4	Kosovo*	0	0	-0,15427	0	0	0	-0,15427
A5	North Macedonia	0	0	-0,70755	0	0,002915	0	-0,70463
A6	Serbia	0,185857	0	-0,53943	0	0,003941	0	-0,34964

Source: Author's processing

**Table 18. Weight sum of NDA**

Weight		0,1	0,33	-0,03	0,3	0,01	0,29	
	Country	BDP (billions US\$)	Inflation(GDP deflator)	External debt % GDP	Direct foreign investments (neto, %GDP)	Foreign exchange reserves (%GDP)	Short-term debt (%GDP)	SNi
		C1	C2	C3	C4	C5	C6	
A1	Albania	0,01263 5	0,272916	0	0,213319	0	0,230684	0,72955 4
A2	Bosnia and Herzegovina	0	0,260621	0	0,262362	0	0,161115	0,68409 8
A3	Montenegro	0,07186 7	0,216334	0	0,140324	0,001921	0,25483	0,68527 6
A4	Kosovo*	0,06030 9	0,26727	0	0,206476	0,005464	0,142593	0,68211 3
A5	North Macedonia	0,04388 5	0,284835	0	0,229287	0	0,132009	0,69001 5
A6	Serbia	0	0,179449	0	0,216741	0	0,245568	0,64175 8

Source: Author's processing

**Table 19. Ranking of Western Balkan Countries Based on Selected Parameters**

	Country	Spi	Sni	NSPi	NSNi	ASi	Rank
A1	Albania	-0,35433	0,729554	2,296811	1,067E-07	1,148405	4
A2	Bosnia and Herzegovina	-0,3254	0,684098	2,10928	0,0623061	1,085793	5
A3	Montenegro	-1,45152	0,685276	9,408979	0,0606924	4,734836	1
A4	Kosovo*	-0,15427	0,682113	1,000021	0,065028	0,532524	6
A5	North Macedonia	-0,70463	0,690015	4,56754	0,0541958	2,310868	2
A6	Serbia	-0,34964	0,641758	2,266384	0,1203424	1,193363	3
	<b>max</b>	<b>-0,15427</b>	<b>0,729554</b>				

Source: Author's processing

## 6. Conclusion

Economic performance of countries can be analyzed using various tools, with significant attention given to multi-criteria approaches to provide a more accurate picture of the selected countries. In this study, we chose criteria that play a significant role in analyzing the economies of Western Balkan countries: GDP, inflation (GDP deflator, annual %), external debt (% of GDP), foreign direct investment (net inflow, % of GDP), foreign exchange reserves (% of GDP), and short-term debt (% of GDP). Based on the empirical research conducted in this study using LOPCOW and EDAS methods, we concluded that Montenegro ranks first according to the parameters used in the analysis. The second position is held by North Macedonia, the third by Serbia, the fourth by Albania, the fifth by Bosnia and Herzegovina, and the sixth by Kosovo\*. One of the strategic directions for Western Balkan countries is towards a knowledge economy, which will enable the creation of additional value. It is essential to implement structural changes in the economy to ensure the competitiveness of the Western Balkan economies. Providing an adequate environment and increasing investor confidence will enable capital inflows. Increasing foreign direct investments plays a significant role in strengthening a country's economy. Borrowing under more favorable conditions and issuing government securities on the domestic market will contribute to improving the economic performance of Western Balkan countries.

## LITERATURE

1. Demir, G., Riaz, M., & Almalki, Y. (2023). *Multi-criteria decision making in evaluation of open government data indicators: An application in G20 countries*. AIMS Mathematics, (8), 18408–18434. <https://doi.org/10.3934/math.2023936>
2. Engel, C., & Park, J. (2018). *Debauchery and original sin: The currency composition of sovereign debt* (No. w24671). National Bureau of Economic Research.
3. Keshavarz Ghorabae, M., Zavadskas, E.K., Olfat, L., Turskis, Z. (2015). Multi-Criteria Inventory Classification Using a New Method of Evaluation Based on Distance from Average Solution (EDAS). Informatica, 26(3), 435–451. <https://doi.org/10.15388/Informatica.2015.57>
4. Marjanović, D., Domazet, I. (2021). *COMPETITIVENESS OF THE WESTERN BALKAN COUNTRIES IN ATTRACTING FDI XI International Symposium Engineering Management and Competitiveness 2021 (EMC 2021)* 18-19th June, Zrenjanin, Serbia.
5. Mügge, D. (2016). *Studying macroeconomic indicators as powerful ideas*. Journal of European Public Policy, 23(3), 410-427
6. Walby, S. (2018). *The concept of inclusive economic growth*. Soundings, 68, 138-156
7. <https://www.focus-economics.com/economic-indicator/external-debt/>  
[http://www.nbs.rs/export/sites/default/internet/english/90/90\\_0/external\\_debt\\_sustainability\\_dec.pdf](http://www.nbs.rs/export/sites/default/internet/english/90/90_0/external_debt_sustainability_dec.pdf)
8. <https://data.worldbank.org/indicator>
9. <https://www.focus-economics.com/>
10. <https://tradingeconomics.com/>

# EFFECTIVENESS OF DIFFERENT GREEN ECONOMIC POLICIES - EVIDENCE FROM HIGH ACHIEVERS

Nikola Vidović<sup>1,\*</sup>

<sup>1</sup>University of Banja Luka, Faculty of Economics

\*Corresponding author: [nikola.vidovic@ef.unibl.org](mailto:nikola.vidovic@ef.unibl.org)

DOI: [10.63356/978-99976-57-34-3\\_9](https://doi.org/10.63356/978-99976-57-34-3_9)

## Abstract

In an attempt to revert climate change and combat its adverse effects, most of the developed countries are aiming to make their economy greener by utilizing a specter of policy measures, including green public finance. These measures include green bonds, environmental taxes, etc., and are aimed at, in the first place, decreasing levels of greenhouse gasses in the atmosphere. Most of the developed countries implemented such measures.

This paper researches the effectiveness of multiple instruments used in Denmark, Norway, and Switzerland, in an attempt to determine the scale and direction of these effects. By utilizing a fixed effects model, I observe how the use of multiple policy instruments such as environmental taxes, environmentally friendly subsidies, green bonds as well as multiple control variables, affect the change in greenhouse gas emissions in selected countries.

I conclude that direct public investment in pollution abatement is the most effective way of decreasing emissions, followed by public investment in environmental protection and the introduction of green bonds. Investments in green research and development do not play such an important role.

**Keywords:** environmental economics, green economic policy, green public finance, green economy, environmental tax

## 1. Introduction

Economic environmental policies are increasingly recognized as a critical component of broader environmental strategies, reflecting the growing urgency to address the environmental consequences of economic activity. Among these policies, fiscal measures stand out as one of the most powerful tools available to governments. These policies are designed not only to mitigate the adverse environmental impacts but also to incentivize sustainable practices across various sectors. As nations strive to balance economic growth with environmental stewardship, the role of fiscal instruments in shaping a greener economy has become more pronounced.

The implementation of fiscal measures aimed at environmental protection encompasses a diverse array of instruments. These include, but are not limited to, green taxes, which are designed to penalize environmentally harmful practices and encourage businesses and individuals to adopt more sustainable behaviors. Support for environmental research and development (R&D) is another key instrument, providing the necessary funding and incentives for innovation in green technologies. Additionally, subsidies and financial incentives for environmentally friendly practices help to lower the barriers to entry for green businesses,

while investments in environmental protection ensure that public goods such as clean air, water, and biodiversity are preserved for future generations.

Europe has long been at the forefront of adopting and refining these fiscal instruments, with a concerted effort that began nearly three decades ago. The continent is often regarded as a global leader in environmental protection, underpinned by a robust regulatory framework that includes a wide range of rules, regulations, and instruments aimed at achieving sustainability. This leadership is particularly evident in some of Europe's wealthiest nations, such as Switzerland, Norway, and Denmark. These countries have not only achieved significant economic success but have also made substantial progress in reducing their environmental impact, providing empirical support for the Environmental Kuznets Curve. This theory posits that environmental degradation initially increases with economic growth, but beyond a certain point, further economic development leads to environmental improvement as societies can afford to invest in cleaner technologies and stricter regulations.

Despite the progress made, there remains considerable debate and uncertainty over which specific fiscal measures are most effective in achieving environmental objectives. This is a crucial question, as the effectiveness of these measures can vary widely depending on a range of factors, including the specific economic and environmental context of each country, the design and implementation of the policies, and the interactions between different policy instruments. Understanding which measures are most effective is essential for optimizing policy design and ensuring that resources are allocated in a manner that maximizes environmental benefits while minimizing economic costs.

The present study aims to contribute to this ongoing debate by focusing on three high-achieving European countries: Switzerland, Norway, and Denmark. These nations have been selected for their exemplary performance in both economic and environmental terms, making them ideal case studies for analyzing the effectiveness of different green economic policies. By constructing a panel dataset and employing a fixed effects model, this research seeks to identify which of the various fiscal policies within the green policy mix are more effective in promoting environmental sustainability. The analysis will consider a range of factors, including the specific design of the policies, the economic context in which they are implemented, and their impact on key environmental indicators such as greenhouse gas emissions, energy efficiency, and biodiversity conservation.

In doing so, this paper seeks to provide a clearer understanding of the relative effectiveness of different fiscal measures in achieving green economic outcomes. The findings are expected to offer valuable insights for policymakers and stakeholders involved in the design and implementation of environmental policies. By identifying the most effective instruments, this research can help guide future policy development, ensuring that efforts to create a green economy are both efficient and effective. Ultimately, this study aims to contribute to the broader goal of creating a sustainable future, where economic growth is harmonized with environmental protection.

## 2. Literature review

Many authors researched the effects of environmental economic policy i.e. the choice of instruments for a policy mix aimed at combating environmental degradation, especially air pollution.

Scholtens (2001) examines the Green Project Facility (GPF) in the Netherlands, a fiscal policy instrument designed to promote environmentally sustainable projects by offering tax incentives for investments in certified green projects. The study finds that while the GPF has positive economic effects, its environmental impact is mixed, as many financed projects would likely have proceeded even without tax incentives. Scholtens' findings emphasize the need for carefully targeted incentives to ensure that green fiscal policies effectively contribute to emission reductions, a lesson that is pertinent to the analysis of green policy instruments in Denmark, Norway, and Switzerland.

Hughes and Urpelainen (2015) develop a political economy model to explain the variation in energy-related climate policies across industrialized democracies, focusing on the influence of industry interests, public opinion, and institutional capacity. The study finds that governments are more likely to adopt regulatory instruments over fiscal policies when they possess strong institutional capacity and public support for environmental policies. This research highlights the importance of institutional strength and public sentiment in shaping effective climate policies, particularly in developed countries, where these factors could determine the success of different green economic policies.

Hojnik and Ruzzier (2016) examine the factors driving process eco-innovation and its impact on company performance in Slovenian firms. The study identifies competitive pressure, managerial environmental concern, and customer demand as primary motivators for adopting process eco-innovation, with economic and regulatory incentives playing a supporting role. The research further reveals that process eco-innovation positively influences company growth, profitability, and competitive advantage. This study underscores the importance of strategic eco-innovation policies in fostering both environmental and economic benefits, particularly in developed countries, where such policies are crucial for achieving sustainable development and reducing greenhouse gas emissions.

Baranzini et al. (2017) provide a comprehensive overview of the role of carbon pricing in climate policy, arguing that it is an essential instrument for achieving environmental goals at a relatively low cost compared to other policy measures. The paper outlines seven key reasons for implementing carbon pricing, including its ability to internalize the external costs of carbon emissions, its dynamic efficiency in promoting innovation, and its capacity to minimize global carbon leakage. This study highlights the effectiveness of carbon pricing as a cornerstone of green economic policies.

Zheng and Shi (2017) examine the Pollution Haven Hypothesis within the context of China's domestic environmental policies, focusing on how different types of environmental regulations impact the relocation of polluting industries across regions. Their study reveals that stringent environmental policies can lead to the relocation of pollution-intensive industries to regions with less strict regulations, while effective legal instruments can mitigate such relocations. This research highlights the differential effects of various policy instruments, emphasizing the importance of understanding the specific impacts of economic versus legal environmental policies in managing industrial emissions. (Stucki et al., 2018) analyze the impact of various policy instruments—such as energy-related taxes, regulations, subsidies, and voluntary agreements—on green product innovation in firms across Austria, Germany, and Switzerland.

The study finds that subsidies and voluntary agreements positively influence green product innovation, while taxes and regulations may have negative impacts unless paired with strong demand-side factors. This nuanced perspective highlights the importance of carefully designing and implementing policy instruments to maximize their effectiveness in promoting green innovation.

Flammer (2019) provides an empirical analysis of the effectiveness of green bonds, focusing on their impact on both financial and environmental performance. The study finds that firms issuing green bonds experience significant improvements in stock market performance and long-term environmental outcomes, particularly when the bonds are certified by independent third parties. Flammer's findings underscore the importance of certification in ensuring that green bond proceeds are used effectively to achieve meaningful environmental benefits, supporting the notion that green bonds can contribute to both economic growth and emission reductions—a key consideration in the policy frameworks of Denmark, Norway, and Switzerland.

(Ganda, 2019) explores the relationship between innovation and technology investments and carbon emissions in OECD countries, using a system-Generalized Method of Moments (GMM) analysis. The study finds that investments in renewable energy and research and development (R&D) significantly reduce carbon emissions, although not all forms of innovation contribute equally to environmental improvements. Ganda's research underscores the complexity of innovation's role in emission reduction, providing valuable insights for evaluating the effectiveness of various green economic policies in reducing greenhouse gas emissions.

Manta (2020) examines the European Union's strategy to mobilize at least €1 trillion in sustainable investments as part of the European Green Deal, highlighting the importance of innovative financial instruments in achieving climate neutrality by 2050. The paper outlines how the European Investment Plan aims to support regions most affected by the transition to a green economy, ensuring that sustainability is integrated into investment decisions across all sectors. This research is crucial for understanding the role of financial instruments, such as green bonds and sustainable procurement, which are integral to green economic policies of European countries.

Gugler et al. (2021) provide a comparative analysis of the effectiveness of carbon pricing versus subsidies for renewable energy in reducing carbon emissions within the power sectors of Germany and Britain. Their findings indicate that even modest carbon pricing can lead to significant emissions reductions, outperforming renewable energy subsidies, which tend to be less effective and more costly. The study highlights the critical role of carbon pricing as a superior tool for achieving emission reductions, particularly in high-income countries, where the efficiency and cost-effectiveness of climate policies are dominant.

Taghizadeh-Hesary (2023) examines the role of fiscal policy instruments in promoting a green economic recovery following the COVID-19 pandemic. The study highlights the importance of carbon taxes, green bonds, and subsidies in mitigating the adverse environmental impacts of recovery efforts. However, the research also notes challenges in mobilizing private sector investments post-pandemic. This analysis underscores the importance of well-designed fiscal policies in aligning economic recovery strategies with long-term environmental goals, a principle that is critical for the success of green economic policies.

Koval et al. (2023) explore the role of fiscal policy in enhancing environmental management practices to support sustainable economic development. The study emphasizes the effectiveness of fiscal instruments such as environmental taxes, subsidies, and public investments in driving sustainable practices across different sectors. This research provides



empirical support for the use of fiscal policies in high-achieving countries, reinforcing the idea that well-designed fiscal instruments are crucial for reducing greenhouse gas emissions while promoting sustainable economic growth.

Gonguet (2021) explore the integration of climate objectives into public financial management (PFM) systems, emphasizing the critical role of "Green PFM" in aligning fiscal policies with environmental sustainability goals. The paper outlines a comprehensive framework for adapting existing PFM practices to support climate-sensitive policies, highlighting the need for fiscal transparency, robust legal frameworks, and strategic coordination across government levels. This research is particularly relevant as it underscores the importance of embedding environmental considerations within fiscal management systems, a principle crucial for ensuring the effectiveness of green economic policies in reducing greenhouse gas emissions.

He (2024) examines the impact of renewable energy consumption and environmental taxes on CO<sub>2</sub> emissions in OECD countries from 1990 to 2022, using the cross-sectional autoregressive distributed lag (CS-ARDL) approach. The study finds that both renewable energy and environmental taxes significantly reduce CO<sub>2</sub> emissions, emphasizing their importance in mitigating climate change and promoting sustainability. This research provides strong empirical support for the effectiveness of fiscal and energy policies, aligning with the current study's focus on evaluating green policy instruments in Denmark, Norway, and Switzerland, and reinforcing the need for continuous investment in renewable energy and robust environmental tax frameworks to achieve sustainable development goals.

Han et al. (2024) investigate the effectiveness of government environmental protection subsidies in promoting green innovation among Chinese microenterprises. The study reveals that such subsidies significantly enhance corporate green innovation, particularly in regions with less developed economies and among non-state-owned enterprises. This research provides valuable insights by highlighting the importance of targeted government interventions in driving green innovation, particularly in the context of developed countries, where effective resource allocation and policy design are crucial for achieving significant reductions in greenhouse gas emissions.

The literature on green economic policies demonstrates a strong consensus on the effectiveness of various fiscal instruments, such as carbon pricing, green bonds, and public investments in driving environmental innovation and reducing greenhouse gas emissions. However, while these studies provide valuable insights into individual policy measures, they often lack a comparative analysis of how these instruments interact and perform collectively within high-achieving countries. My research fills this gap by using a fixed effects model to evaluate the combined effectiveness of multiple green policy instruments in Denmark, Norway, and Switzerland, providing a more comprehensive understanding of the most effective strategies for reducing emissions in developed economies.

### 3. Data and methodology

This study utilizes data sourced from the OECD database, covering the period from 1994 to 2019. The dataset includes time series data from Switzerland, Norway, and Denmark, and has been constructed into a panel to facilitate the analysis. The choice to cut off the data at 2019 was made to avoid potential distortions caused by the COVID-19 pandemic, which could introduce anomalies in the economic and environmental variables under consideration.

The dependent variable in this study is greenhouse gas emissions per capita (metric tons), which serves as a measure of the environmental impact within the selected countries. The independent variables, chosen for their relevance to environmental and economic factors, include:

- **Inventions per Capita (per 1000 people):** This variable captures the rate of innovation within a country, reflecting the potential for technological advancements that may contribute to reducing greenhouse gas emissions.
- **Share of Renewable Energy:** The proportion of energy derived from renewable sources, this variable is crucial for understanding the shift towards sustainable energy production and its impact on emissions.
- **Environmentally Related Tax Revenue (percentage of GDP):** This variable measures the fiscal policies aimed at discouraging environmentally harmful practices through taxation, providing insight into government efforts to reduce emissions.
- **Expenditure on Environment-Related R&D (percentage of GDP):** This captures the investment in research and development focused on environmental protection, indicating a country's commitment to developing sustainable technologies.
- **Expenditure on Pollution Abatement (percentage of GDP):** This variable reflects the financial resources allocated to mitigating pollution, which directly impacts the level of emissions.
- **Dummy Variable for Green Bonds:** This binary variable (1 for yes, 0 for no) indicates whether a country has issued green bonds in a given year, representing a financial commitment to environmentally friendly projects.
- **Share of Industry in Total Value Added:** This variable measures the contribution of the industrial sector to the economy, which is often associated with higher levels of greenhouse gas emissions.

### 4. Methodology

To analyze the relationship between these variables and greenhouse gas emissions per capita, a fixed effects model was employed. This model was chosen to control for time-invariant characteristics of the countries, allowing the analysis to focus on the impact of the independent variables on the dependent variable within each country over time.

To investigate the impact of various factors on greenhouse gas emissions per capita, the following fixed effects econometric model is specified:

$$GHG_{it} = \beta_0 + \beta_1 IPC_{it} + \beta_2 RE_{it} + \beta_3 ETR_{it} + \beta_4 ERD_{it} + \beta_5 EPRD_{it} + \beta_6 EPA_{it} + \beta_7 GB_{it} + \beta_8 SI_{it} + \alpha_i + \delta_t + \epsilon_i$$

Where:

- $GHG_{it}$ : Greenhouse gas emissions per capita (metric tons) in country  $i$  at time  $t$ .
- $\beta_0$ : Intercept term.

- $\beta_1$ – $\beta_8$ : Coefficients measuring the impact of each independent variable on greenhouse gas emissions.
- $IPC_{it}$ : Inventions per capita (per 1000 people) in country  $i$  at time  $t$ .
- $RE_{it}$ : Share of renewable energy in total energy consumption in country  $i$  at time  $t$ .
- $ETR_{it}$ : Environmentally related tax revenue as a percentage of GDP in country  $i$  at time  $t$ .
- $ERD_{it}$ : Expenditure on environment-related R&D as a percentage of GDP in country  $i$  at time  $t$ .
- $EPRD_{it}$ : Expenditure on environmental protection R&D as a percentage of GDP in country  $i$  at time  $t$ .
- $EPA_{it}$ : Expenditure on pollution abatement as a percentage of GDP in country  $i$  at time  $t$ .
- $GB_{it}$ : Dummy variable indicating the presence of green bonds issuance in country  $i$  at time  $t$  (1 if yes, 0 if no).
- $SI_{it}$ : Share of industry in total value added in country  $i$  at time  $t$ .
- $\alpha_i$ : Country-specific fixed effects capturing unobserved heterogeneity that is constant over time.
- $\delta_t$ : Time-specific fixed effects controlling for shocks or trends that affect all countries equally at time  $t$ .
- $\epsilon_{it}$ : Error term capturing all other unobserved factors affecting greenhouse gas emissions.

### Estimation Method:

The model is estimated using the **Fixed Effects (FE) estimator**, which accounts for unobserved time-invariant characteristics within each country that could influence greenhouse gas emissions. This approach helps to control for omitted variable bias by allowing each country to have its own intercept term ( $\alpha_i$ ). Time-fixed effects ( $\delta_t$ ) are included to control for common shocks or global trends affecting all countries in specific years, such as international policy changes or economic cycles.

Fixed effects estimation is appropriate here because it strips out time-invariant, country-specific characteristics by assigning each country its own intercept, effectively removing unchanging attributes from the analysis. In contrast, random effects rely on the assumption that country-specific traits are not correlated with the regressors, which is often untenable in studies of environmental policy. Violations of this assumption lead to biased estimates, making random effects less suitable. Dynamic panel models, while potentially valuable when emissions follow lagged processes, require larger samples and more complex instrumentation, introducing additional risks of bias and instability in a small panel. Therefore, fixed effects present the most straightforward and robust way to capture the within-country impact of evolving policy instruments on greenhouse gas emissions.

### Justification of Variables:

- **Inventions per Capita:** Represents technological advancement and innovation capacity, which are critical for developing and implementing environmentally friendly technologies that can reduce emissions.
- **Share of Renewable Energy:** Indicates the extent to which countries are adopting sustainable energy sources, directly influencing their emission levels.

- **Environmentally Related Tax Revenue:** Reflects government policies aimed at discouraging pollution through economic incentives, potentially leading to reduced emissions.
- **Expenditures on Environmental R&D:** Show commitment to developing new technologies and methods for environmental protection and pollution control.
- **Expenditure on Pollution Abatement:** Measures direct investment in reducing pollution, which should have a negative correlation with emission levels.
- **Green Bonds:** Represents financial instruments dedicated to funding projects with environmental benefits, signaling a country's dedication to sustainability initiatives.
- **Share of Industry:** Accounts for the economic structure of a country, as industries typically have higher emission levels compared to other sectors like services or agriculture.

This econometric model aims to provide comprehensive insights into how different economic, technological, and policy-related factors influence greenhouse gas emissions in Switzerland, Norway, and Denmark over the specified period. The findings are expected to inform policymakers and stakeholders about effective strategies for reducing emissions and promoting sustainable development.

The selection of Switzerland, Norway, and Denmark for this study was driven by several factors beyond mere data availability. These countries are recognized for their advanced environmental policies and technological innovation, making them ideal candidates for exploring the dynamics of public finance and its influence on greenhouse gas emissions. Moreover, the economic structures of these countries, which combine strong industrial sectors with substantial investments in renewable energy and environmental protection, provide a diverse yet comparable context for the analysis. By examining these countries, the study aims to glean insights that could be relevant to other developed economies with similar environmental and economic profiles.

This methodological approach allows for a robust examination of the interplay between public finance instruments and environmental outcomes, contributing to the broader discourse on how policy interventions can effectively mitigate climate change.

## 5. Results and discussion

The results of the fixed effects regression analysis provide significant insights into the relationship between various economic and environmental factors and greenhouse gas emissions per capita in Switzerland, Norway, and Denmark over the period from 1994 to 2019.

**Table 1.** Regression results

Variable	Coeff.	Std. Err.	t-value	P> t	95% Confidence Interval
Inventions per Thousand	-0,0063	0,0073	-0,86	0,392	[-0.0208 to 0.0083]
Share of Renewable Energy (%)	-0,0222	0,0103	-2,17	0,034	[-0.0427 to -0.0017]
Expenditure on Environment-Related R&D (% of GDP)	0,0636	0,6723	0,09	0,925	[-1.2783 to 1.4055]
Expenditure on Environmental Protection R&D (% of GDP)	-9,5598	2,6148	-3,66	0,001	[-14.7790 to -4.3407]
Expenditure on Pollution Abatement (% of GDP)	-12,5233	2,8663	-4,37	0	[-18.2445 to -6.8021]

Has Green Bonds (Dummy: 1 = Yes, 0 = No)	-1,6526	0,4236	-3,9	0	[-2.4980 to -0.8072]
Share of Industry in Total Value Added (%)	0,8743	3,8629	0,23	0,822	[-6.8361 to 8.5847]
Environmentally Related Tax Revenue (% of GDP)	264,9118	29,9566	8,84	0	[205.1181 to 324.7055]
Constant (_cons)	6,5981	2,0243	3,26	0,002	[2.5575 to 10.6386]

## Model Fit and Overall Significance

The regression model shows a strong fit with an R-squared value of 0.8732 within groups, indicating that approximately 87.32% of the variation in greenhouse gas emissions per capita within countries is explained by the model. The between R-squared is 0.8393, suggesting that 83.93% of the variation between countries is also well captured by the model. The overall R-squared value of 0.8454 further supports the robustness of the model across the panel data. The F-statistic of 57.66 ( $p < 0.0000$ ) indicates that the model is statistically significant overall, meaning that the independent variables collectively have a significant impact on greenhouse gas emissions.

## Key Findings

**Inventions per Thousand:** The coefficient for inventions per thousand people is negative (-0.0063) but not statistically significant ( $p = 0.392$ ). This suggests that the rate of innovation, as measured by patents per thousand, does not have a significant direct impact on reducing greenhouse gas emissions in the countries studied. This result may indicate that while innovation is important, its effects on emissions reduction may not be immediate or directly observable within the studied period.

**Share of Renewable Energy:** The share of renewable energy has a negative and statistically significant coefficient (-0.0222,  $p = 0.034$ ), indicating that an increase in the share of renewable energy in total energy consumption is associated with a decrease in greenhouse gas emissions. This finding aligns with the expectation that renewable energy sources, such as wind, solar, and hydroelectric power, contribute to lower emissions compared to fossil fuels.

**Expenditure on Environment-Related R&D:** The expenditure on environment-related R&D shows a positive but non-significant coefficient (0.0636,  $p = 0.925$ ), implying that, within the timeframe and context of this study, such expenditures do not have a statistically significant effect on emissions. This result could suggest that R&D investments in environmental areas might take longer to manifest in tangible reductions in emissions, or that the effectiveness of such investments varies by the nature and focus of the research.

**Expenditure on Environmental Protection R&D:** The coefficient for expenditure on environmental protection R&D is negative and highly significant (-9.5598,  $p = 0.001$ ). This suggests that increased investment in R&D specifically targeted at environmental protection is associated with a significant reduction in greenhouse gas emissions. This finding emphasizes the importance of targeted research and development in achieving environmental goals.

**Expenditure on Pollution Abatement:** The negative and significant coefficient for expenditure on pollution abatement (-12.5233,  $p = 0.000$ ) strongly indicates that financial investments in reducing pollution directly contribute to lowering greenhouse gas emissions. This result reinforces the effectiveness of direct policy measures aimed at pollution control in achieving emissions reductions.

**Green Bonds:** The presence of green bonds is associated with a statistically significant reduction in greenhouse gas emissions, as indicated by the negative coefficient (-1.6526,  $p = 0.000$ ). This suggests that issuing green bonds, which are financial instruments dedicated to funding environmentally beneficial projects, is an effective tool for reducing emissions. The significant impact of green bonds reflects the growing importance of financial markets in supporting environmental sustainability.

**Share of Industry in Total Value Added:** The share of industry in total value added has a positive but non-significant coefficient (0.8743,  $p = 0.822$ ). This result indicates that within these countries, the industrial sector's share does not have a statistically significant effect on emissions, although the positive sign suggests a potential association with higher emissions. The lack of significance may reflect the diverse nature of industries in the studied countries, where some industries may be more emissions-intensive than others.

**Environmentally Related Tax Revenue:** This variable has a large positive and highly significant coefficient (264.9118,  $p = 0.000$ ). The interpretation of this result is that higher revenues from environmentally related taxes are associated with higher reported emissions. This could reflect the fact that these taxes are often levied on industries or activities that are significant sources of emissions, and thus, higher tax revenues might correspond to higher levels of those activities. Alternatively, it may indicate that while such taxes are in place, they have not yet effectively reduced emissions levels during the study period.

The findings presented in this study both align with and expand upon existing research regarding the role of targeted fiscal instruments and innovative financing mechanisms in mitigating greenhouse gas (GHG) emissions. Notably, the statistically significant effect of green bonds in reducing emissions (-1.6526,  $p < 0.01$ ) corroborates prior work highlighting the potential of such instruments to mobilize capital for green projects. Flammer (2019) observes that firms issuing green bonds experience improvements in both financial performance and long-term environmental outcomes, a conclusion echoed in the present results for Denmark, Norway, and Switzerland. In this study's context, consistent issuance of green bonds appears to signal commitment to sustainable projects and strengthens investor confidence. This dynamic likely fosters a policy and market environment that accelerates adoption of lower-carbon infrastructure, aligning with recent global trends emphasizing private-sector participation in climate finance.

A second noteworthy result—the strong negative association between government-led pollution abatement expenditures and emissions—reinforces the argument that direct government intervention can have a measurable and immediate effect on environmental outcomes. Baranzini et al. (2017) and Gugler et al. (2021) similarly conclude that robust policy tools, whether in the form of direct spending or well-calibrated carbon pricing, can yield significant reductions. In particular, expenditure on environmental protection R&D emerges as an effective channel: when the focus of R&D is narrowly aimed at environmental protection, the gains tend to be clearer than in the case of general “environment-related” R&D spending. The latter finding coincides with those of Ganda (2019), who argues that not all forms of innovation equally or immediately translate into tangible emissions reductions. In other words, a sharper policy focus on specific abatement technologies appears more conducive to reducing GHG emissions than broad-based research initiatives, which may disperse resources across varied technology readiness levels.

The results for environmentally related tax revenue (264.9118,  $p < 0.01$ ) illustrate an apparent paradox, suggesting that higher tax revenues are associated with higher reported emissions in these nations. This outcome may reflect the reality that taxes are typically levied on substantial

sources of pollution: higher emissions from certain sectors or activities lead directly to greater tax collection. While carbon taxes and environmental levies are widely acknowledged as useful tools (Hughes & Urpelainen, 2015; Gugler et al., 2021), the findings here imply that in the short to medium term, a robust tax regime can coexist with sizeable emissions if the polluting industries remain prevalent. This underscores the necessity of coupling taxes with complementary policies—targeted R&D, green infrastructure investments, and industry-specific regulations—to ensure that environmentally related taxes translate into concrete, long-term emissions reductions.

Finally, the absence of a clear link between inventions per thousand people and immediate GHG reductions reflects the potential time lag between innovation and measurable environmental benefits. Previous literature (Hojnik & Ruzzier, 2016) points out that eco-innovation's impact often depends on market incentives, diffusion channels, and supportive policy frameworks. The present study's findings suggest that patents or raw innovation metrics alone are insufficient for capturing shifts in emissions. Instead, the results support the idea that policy-driven frameworks—such as pollution-abatement expenditure, targeted environmental R&D, and innovative financing (i.e., green bonds)—can more reliably steer economies toward lower emissions trajectories in the near term.

Recent global policy developments in 2023 and 2024 underscore the continued relevance of this study's findings on green bonds, targeted environmental R&D, and pollution abatement spending. The elevated focus on sustainable finance instruments—in particular, green bonds—has intensified amid stricter net-zero pledges and the expansion of national- and supranational-level frameworks such as the European Union's Green Deal and updated sustainable finance taxonomies. As illustrated in this paper, green bonds can mobilize sizable capital flows toward low-carbon infrastructure; in 2023, global issuance volumes have reached record levels, reinforcing the notion that these instruments serve as both a financial and a policy lever to accelerate the adoption of cleaner technologies. The data from Denmark, Norway, and Switzerland offer an early blueprint showing how proactive bond issuance can translate into measurable declines in greenhouse gas emissions, aligning with the newest climate-oriented investment strategies observed worldwide.

Furthermore, the effectiveness of direct pollution abatement spending and environmentally focused R&D, highlighted in this study, remains pertinent in light of ongoing geopolitical and macroeconomic shifts. Events such as the war in Ukraine and subsequent energy supply challenges have spurred many advanced economies to accelerate investments in renewable energy infrastructure and domestic green manufacturing capacity. These real-time policy responses echo the conclusions here: well-targeted government spending, especially on technologies specifically geared toward environmental protection, can reduce emissions more promptly than less focused interventions. Current discussions within the G20, along with the implementation phases of major climate-focused legislation in both Europe and North America, also emphasize the need for robust fiscal support to decarbonize industrial sectors. Taken together, these emerging 2023–2024 developments provide further evidence that well-designed, precisely funded strategies—such as green bond issuance and direct pollution abatement—are likely to remain at the forefront of effective climate policy portfolios.

## **Limitations**

While this study provides valuable insights into the factors influencing greenhouse gas emissions per capita in Switzerland, Norway, and Denmark, several limitations should be noted.

Firstly, the analysis is based on data from only three countries, which may limit the generalizability of the findings to other regions or countries with different economic and environmental contexts. Secondly, the study period ends in 2019 to avoid potential distortions from the COVID-19 pandemic, but this cutoff may exclude recent developments and policy changes that could affect the variables under study.

Additionally, the fixed effects model, while controlling for time-invariant characteristics, may not fully account for other unobserved variables that vary over time and could influence emissions. Lastly, the use of proxies for innovation and policy measures, such as patents per capita and green bond issuance, may not capture the full complexity of these factors and their impacts on emissions. Further research could address these limitations by expanding the dataset to include more countries and years, and by employing alternative modeling approaches to account for potential endogeneity and omitted variable bias.

## **6. Conclusion**

This study investigated the effectiveness of various green public finance instruments in reducing greenhouse gas emissions per capita in Switzerland, Norway, and Denmark between 1994 and 2019. By employing a fixed effects model, the analysis identified several key findings that contribute to our understanding of how specific economic and policy-related factors influence environmental outcomes.

The results indicate that direct public investments in environmental protection R&D and pollution abatement are particularly effective in reducing emissions. These findings highlight the importance of targeted government spending in areas directly related to environmental protection. Moreover, the issuance of green bonds is also associated with significant reductions in greenhouse gas emissions, demonstrating the potential of financial markets to support environmental sustainability.

On the other hand, the study found that general expenditures on environment-related R&D and the share of industry in total value added do not have a significant direct impact on emissions. This suggests that while innovation and industrial activity are important, their influence on emissions may depend on specific circumstances, including the nature of the R&D activities and the structure of the industry. The positive and significant association between environmentally related tax revenue and emissions underscores the complexity of using taxation as a tool for environmental management. While such taxes aim to reduce emissions by discouraging environmentally harmful activities, their effectiveness may be influenced by the level of economic activity that is subject to taxation.

Overall, this research provides valuable insights into the effectiveness of different fiscal instruments in promoting a green economy. The findings suggest that targeted investments and financial innovations like green bonds play crucial roles in reducing emissions, while the impact of other measures may be more context-dependent. These insights can inform policymakers in designing and implementing more effective strategies to achieve environmental sustainability. Future research could expand on these findings by including a broader range of countries and examining the long-term effects of these policies beyond the study period. Additionally, exploring the interactions between different policy instruments could further enhance our understanding of how to optimize the mix of fiscal measures to achieve the greatest environmental benefits.



## REFERENCES

1. Baranzini, A., van den Bergh, J. C. J. M., Carattini, S., Howarth, R. B., Padilla, E., & Roca, J. (2017). Carbon pricing in climate policy: seven reasons, complementary instruments, and political economy considerations. In *Wiley Interdisciplinary Reviews: Climate Change* (Vol. 8, Issue 4). Wiley-Blackwell. <https://doi.org/10.1002/wcc.462>
2. Flammer, C. (2019). *Green Bonds: Effectiveness and Implications for Public Policy*. <https://doi.org/10.3386/w25950>
3. Ganda, F. (2019). The impact of innovation and technology investments on carbon emissions in selected organisation for economic Co-operation and development countries. *Journal of Cleaner Production*, 217, 469–483. <https://doi.org/10.1016/j.jclepro.2019.01.235>
4. Gonguet, Fabien. (2021). *Climate-Sensitive Management of Public Finances “Green PFM.”* International Monetary Fund.
5. Gugler, K., Haxhimusa, A., & Liebensteiner, M. (2021). Effectiveness of climate policies: Carbon pricing vs. subsidizing renewables. *Journal of Environmental Economics and Management*, 106. <https://doi.org/10.1016/j.jeem.2020.102405>
6. Han, F., Mao, X., Yu, X., & Yang, L. (2024). Government environmental protection subsidies and corporate green innovation: Evidence from Chinese microenterprises. *Journal of Innovation and Knowledge*, 9(1). <https://doi.org/10.1016/j.jik.2023.100458>
7. He, Y. (2024). Promoting Environmental Sustainability: The Role of Renewable Energy Systems and Environmental Taxes. *Applied Sciences*, 14(16), 7404. <https://doi.org/10.3390/app14167404>
8. Hojnik, J., & Ruzzier, M. (2016). The driving forces of process eco-innovation and its impact on performance: Insights from Slovenia. *Journal of Cleaner Production*, 133, 812–825. <https://doi.org/10.1016/j.jclepro.2016.06.002>
9. Hughes, L., & Urpelainen, J. (2015). Interests, institutions, and climate policy: Explaining the choice of policy instruments for the energy sector. *Environmental Science and Policy*, 54, 52–63. <https://doi.org/10.1016/j.envsci.2015.06.014>
10. Koval, V., Laktionova, O., Rogoza, N., Chumak, O., Komandrovskaya, V., & Berdar, M. (2023). The impact of fiscal policy on environmental management in ensuring sustainable economies. *IOP Conference Series: Earth and Environmental Science*, 1126(1). <https://doi.org/10.1088/1755-1315/1126/1/012016>
11. Manta, O. (2020). *INNOVATIVE FINANCIAL INSTRUMENTS IN THE CONTEXT OF THE EUROPEAN GREEN AGREEMENT (2020-2050)*.
12. Scholtens, B. (2001). Borrowing green: economic and environmental effects of green fiscal policy in The Netherlands. In *Ecological Economics* (Vol. 39). [www.elsevier.com/locate/ecocon](http://www.elsevier.com/locate/ecocon)
13. Stucki, T., Woerter, M., Arvanitis, S., Peneder, M., & Rammer, C. (2018). How different policy instruments affect green product innovation: A differentiated perspective. *Energy Policy*, 114, 245–261. <https://doi.org/10.1016/j.enpol.2017.11.049>
14. Taghizadeh-Hesary, F. (2023). Fiscal Policy Instruments and Green Recovery in the Post-Covid-19 era. In *Economic Change and Restructuring* (Vol. 56, Issue 5, pp. 2917–2920). Springer. <https://doi.org/10.1007/s10644-023-09556-y>
15. Zheng, D., & Shi, M. (2017). Multiple environmental policies and pollution haven hypothesis: Evidence from China’s polluting industries. *Journal of Cleaner Production*, 141, 295–304. <https://doi.org/10.1016/j.jclepro.2016.09.091>

# THE ROLE OF FISCAL RULES IN ENSURING THE STABILITY OF PUBLIC FINANCES IN WESTERN BALKAN COUNTRIES

Biljana Srđić Gojković<sup>1,\*</sup>

Sanja Popović<sup>2</sup>

Marijana Đukić<sup>3</sup>

<sup>1</sup>PhD Assistant Professor, University of Banja Luka

<sup>2</sup>MSc student at Faculty of Economics, University of Banja Luka

<sup>3</sup>MSc student at Faculty of Economics, University of Banja Luka

\*Corresponding author: [biljana.srdic-gojkovic@ef.unibl.org](mailto:biljana.srdic-gojkovic@ef.unibl.org)

DOI: [10.63356/978-99976-57-34-3\\_10](https://doi.org/10.63356/978-99976-57-34-3_10)

## Abstract

Stable public finances represent the basis of economic growth and development of any country. That is why the establishing fiscal limits in the form of fiscal rules is considered to be useful mechanism for ensuring fiscal stability. Considering the above, this paper will analyze the application of fiscal rules in the countries of the Western Balkans. The subject of the research is to analyze to what extent the fiscal rules in the countries of the Western Balkans are respected, especially bearing in mind the obligation to apply them in terms of meeting the criteria for accession to the European Union (hereinafter: EU). The main goal of the research is to analyze the impact of the introduction of fiscal rules on the stability of the public finances of the Western Balkan countries. Descriptive and comparative analysis will determine the effects of adoption fiscal rules of the Western Balkans countries. It will be determined whether and to what extent the existing fiscal rules affect the improvement of fiscal indicators in the countries of the Western Balkans. The significance of the aforementioned research is reflected in the fact that the strengthening of fiscal stability and sustainability is a basic precondition for recovery and strengthening of the economic activities of the countries of the Western Balkans, especially in times of crisis and uncertainty.

**Keywords:** fiscal rules, GDP, deficit, public debt

## 1. Introduction

Fiscal rules represent legal or administrative mechanisms that limit the discretionary power of governments in conducting fiscal policy, defining limits for key fiscal variables such as the budget deficit, the level of public debt or government expenditures. The importance of defining and respecting fiscal rules is reflected in the fact that fiscal rules represent the basis for preserving fiscal stability, and therefore overall macroeconomic stability, which is a prerequisite for economic growth and development of every national economy, especially developing countries. In the post-crisis period, countries around the world increasingly recognize the importance of fiscal rules as an instrument that helps limit public debt, reduce the budget deficit and ensure a sustainable fiscal policy.

In the Western Balkans countries, which include Serbia, Montenegro, Bosnia and Herzegovina (hereinafter: B&H), North Macedonia, Albania and Kosovo\*<sup>1</sup>, fiscal rules have become a significant factor in efforts to ensure long-term fiscal stability. Achieving fiscal stability is particularly important due to their economic fragility, low level of economic development, and dependence on external financing, including international loans.

Each of the six countries of the Western Balkans aims to be part of the future enlargement of the EU, and plans to join the EU mean that the countries will have to be in a position to adopt and respect the fiscal rules set at the level of the EU. Fiscal rules in the countries of the Western Balkans are legally prescribed, and mostly refer to the general government sector. In some countries, fiscal rules have been defined that also apply to the local government sector. The national fiscal rules of the countries of the Western Balkans are largely in line with the fiscal rules of the EU.

This paper aims to investigate the established fiscal rules and their role in ensuring the fiscal stability of the countries of the Western Balkans, analyzing their characteristics, the level of compliance with the rules and the challenges in their application, bearing in mind the impact of the suspension of the rules during the corona crisis. Through a comparative analysis of fiscal rules in different countries of the region, the paper will try to provide insight into how fiscal rules contribute to the stability of public finances.

## 2. Literature review

Fiscal stability refers to the state's ability to manage its public finances in a sustainable manner. Fiscal rules are one of the mechanisms for ensuring fiscal stability. Fiscal rules have become popular in the last two decades. In 1990, only five countries (Germany, Indonesia, Japan, Luxembourg and the USA) applied fiscal rules. Today, most countries apply more than one fiscal rule. Most countries today have few rules in place, often combining sustainability goals with the need for flexibility due to economic shocks (Bach, 2014). Balanced public finances and a sustainable level of public debt are a prerequisite for economic growth, as well as a good premise for easier overcoming of economic shocks, i.e. crisis periods in the cyclical movement of the economy (Krajišnik et al. 2019). Fiscal rules represent precisely the instrument for overcoming the aforementioned. The goal of introducing fiscal rules is to reduce excessive spending, especially in good times, in order to ensure fiscal responsibility and debt sustainability.

According to Kopits and Symansky (1998), the characteristics of good fiscal rules are simplicity, sustainability, stabilization, operational guidelines, stability and resilience, and simple possibility of monitoring. Fiscal rules defined in compliance with the aforementioned criteria ensure that fiscal policy fulfills its basic functions of stabilizing economic activity, ensuring and strengthening long-term growth. According to Wyplosz (2012), fiscal rules should be simple for both politicians and citizens to understand, and flexibility at the expense of simplicity is necessary. Fiscal rules can be defined as a permanent limitation of fiscal policy through numerical limitations of budget aggregates (IMF, 2009). A common feature of all fiscal rules is that they give credibility to the conduct of macroeconomic policy by eliminating discretionary intervention (Kopits, 2001).

The national fiscal rules of the countries of the Western Balkans are largely in line with the fiscal rules of the EU. In EU member states, fiscal rules were introduced more than 30 years ago. According to the Maastricht criteria, public debt must not exceed 60% of GDP, and the

---

<sup>1</sup> This name is without prejudice to views on status and is in accordance with UN Security Council Resolution 1244/1999 and the Opinion of the International Court of Justice on Kosovo's Declaration of Independence.

annual budget deficit must not exceed 3% of the country's GDP. In order to respect the set fiscal limits on debt and deficit, and to strengthen fiscal discipline, European leaders adopted the Pact on Stability and Growth in 1997, which began to be implemented in 1999 (Delivorias, A., 2021). The main goal of these rules is to prevent the occurrence of excessive budget deficits, all for the purpose of ensuring fiscal discipline, reasonable management of public finances and preserving economic stability within the Economic and Monetary Union (Grujić Kalkan, 2013). Fiscal rules in the countries of the Western Balkans in the context of joining the EU represent a key aspect of economic policy and reforms that these countries must implement in order to get closer to European standards and criteria.

Numerous literature studies the assessment of the effects of fiscal rules on different dimensions of fiscal policy. However, the literature on these effects in the countries of the Western Balkans is scarce.

The consistent application of fiscal rules leads to the improvement of fiscal discipline and mitigates the pro-cyclical effect of national policy and consequently contributes to macroeconomic stability (Kordić & Vilović, 2011). Bergman et al. (2013) point out that fiscal rules are legal arrangements that promote fiscal discipline by tying the hands of economic policymakers in order to limit decisions about public revenues and public expenditures. Research and analysis of the application of fiscal rules (Debrun et al., 2008; Budina et al. 2012; Schick, 2013;) have shown that rules are not necessary in themselves to achieve fiscal discipline, but that they can strengthen discipline. Badinger and Reuter (2017) in their research on a sample of 47 countries in the period 1985-2012. confirmed that the fiscal rules had a positive impact on reducing the fiscal deficit. The results reached by Combes et al. (2018) show that the primary budget balance as a percentage of GDP was about 1.5% percentage points higher in countries that had fiscal rules compared to those that did not. The results obtained by Potrafke (2024) suggest that the existence of fiscal rules affects the reduction of budget deficits, public spending and borrowing costs on the one hand, while on the other hand they promote economic growth. Also, the research results indicate that fiscal rules do not affect the reduction of public investments. Tapsoba (2012) analyzed the effect of national fiscal rules on fiscal discipline in 74 developing countries in the period 1990-2007. and proved the positive impact of fiscal rules on fiscal discipline. Research results by Brandle and Elsener (2023) suggest that fiscal rules are associated with improved fiscal performance, i.e. improved budget balances, lower debt and lower public spending. Budina et al. (2012) presented empirical evidence in support of establishing that the use of fiscal rules as a support for the fiscal exit from the crisis has become more and more widespread in the world, and that fiscal rules act as a response to the fiscal crisis, only if the policy strengthens and supports them. According to Viplosz (2012), the probability of fiscal survival is higher if they come with accompanying fiscal institutions. Research by the IMF (2013), showed that fiscal rules consequently lead to greater fiscal efficiency, and that fiscal institutions do not contribute to better fiscal results, but that the work of these institutions can contribute to fiscal efficiency.

### **3. Research methodology**

This research is based on the analysis of the identification of the impact of fiscal rules on the fiscal stability of the countries of the Western Balkans. The goal of the research is to assess the effectiveness of fiscal rules in maintaining the stability of public finances.

The Desk Research method was used to collect the necessary data, since already existing external data were used to analyze the problem. These are official sources of data from the national ministries of finance of the Western Balkan countries, the International Monetary Fund (IMF), as well as academic papers and studies relevant to the topic. Fiscal indicators were used

to assess the impact of fiscal rules on fiscal stability, by monitoring changes in these indicators before and after the introduction of fiscal rules individually for the countries of the Western Balkans. Also, the impact of fiscal rules on fiscal stability in the period of the Covid-19 crisis was analyzed.

Based on the classic method of processing and analysis, content analysis, relevant literature was collected, on the basis of which the necessary data were obtained for the processing of the case and the realization of the research goal.

The descriptive method was used in order to comprehensively review and analyze the current situation, providing a clear picture of how fiscal rules work in practice and how they contribute to or hinder the achievement of fiscal stability in the countries of the Western Balkans. The method of description will be used to define basic concepts such as the concept of fiscal rules, fiscal stability, budget deficit, public debt and other similar aggregates. By applying the method of description, the paper describes the fiscal rules implemented in the countries of the Western Balkans and points out the importance of fiscal stability and the existence of fiscal rules in these countries. In this research, specific cases of the application of fiscal rules in individual countries are studied in detail and key moments are identified when fiscal rules had a significant impact on the fiscal stability of the countries of the Western Balkans.

Through comparative analysis, an effort was made to provide a deeper understanding of the differences and similarities in the application of fiscal rules and their impact on fiscal stability. A comparative analysis was made to compare the fiscal rules among the countries of the Western Balkans in order to identify similarities and differences. Also, through a comparative analysis of the average level of debt and deficit as a percentage of GDP in the countries of the Western Balkans before and after the introduction of fiscal rules, it will be determined whether and to what extent there has been an improvement in fiscal indicators. With the aim of analyzing the impact of the COVID crisis on fiscal indicators that are subject to fiscal restrictions, i.e. fiscal rules, through a comparative analysis of the average level of the budget deficit and public debt in the five-year period before and after the corona crisis, it was analyzed how the suspension of fiscal rules affected the level of observed fiscal indicators in extraordinary circumstances.

In the final phase of the research, the facts arrived at by the application of the used methods are linked into one logical unit. In addition, the above conclusions point to the importance of the existence of fiscal rules in the countries of the Western Balkans, bearing in mind that fiscal stability is one of the basic preconditions for macroeconomic stability.

## **4. Research results**

### **4.1. Overview of fiscal rules defined in the countries of the Western Balkans**

All Western Balkan countries have established national fiscal rules. The national fiscal rules of the countries of the Western Balkans, although they are defined in various ways, are largely in line with the fiscal rules of the EU. Fiscal rules established in the countries of the Western Balkans contribute to the fulfillment of the Maastricht criteria, even prescribing in some cases stricter limits for individual budget aggregates than is foreseen for EU countries.

Certain countries of the Western Balkan region have been applying fiscal rules for more than a decade, with certain modifications and changes over time. This confirms the commitment of

the countries of the Western Balkans to preserve the stability of public finances, which is one of the basic goals in establishing fiscal rules.

**Table 1.** Overview of the fiscal rules of the countries of the Western Balkans, for debt and deficit, for the of the general government

	The year when the first fiscal rules were defined	PUBLIC DEBT, % GDP	GENERAL GOVERNMENT DEFICIT, % GDP		
			total	current	primary
Albania	2016.	45	2	0	
Bosnia and Herzegovina					
- The Republic of Srpska	2012.	55	3		
- Federation of B&H	2013.			0	
Kosovo*	2009.	40	2		
North Macedonia	2023.	60	3		
Montenegro	2014.	60	3	0 or >0	0 or >0
Serbia	2011.	60	- 0% if debt >60% GDP - 0.5% if debt 55-60% GDP - 1.5% if debt 45-55% GDP - 3.0% if debt <45% GDP		

*Source:* Authors' presentation based on data from national regulations of fiscal rules for the countries of the Western Balkans.

*Note:* All abovementioned rules are in force in 2024, except for the rules in Serbia.

The data presented in the previous table relating to the year when fiscal rules were first defined in the countries of the Western Balkans show that most of the fiscal rules were established after the global financial crisis of 2008 and the debt crisis of 2010 when most European countries faced growth public debt. The period of application of fiscal rules shows that the causes of their introduction were the negative effects of the previous crisis. Based on that, it can be said that the basis for introducing fiscal rules is the need to overcome negative effects, that is, the need to stabilize the budget after crisis periods. In all countries of the Western Balkans, two fiscal rules for the general government are combined: the debt and deficit rule. The countries of the Western Balkans define differently the coverage of fiscal indicators that are limited by the rule. The fiscal rule on the deficit in North Macedonia covers the total deficit, while in the Federation of B&H and Albania it covers the current deficit. There are also differences in defining the debt covered by the fiscal rule. In Serbia, debt with guarantees is included, while in Montenegro, for example, the debt is limited by the fiscal rule and is defined as public debt of the general government, with a special limit for issued state guarantees (15% of GDP).

In the countries of the Western Balkans, in 2024, about 20 fiscal rules will be applied. When talking about fiscal rules, most often we mean fiscal rules about public debt and budget deficit for the general government level. In addition to the basic fiscal rules that most often refer to public debt and deficit, some countries of the Western Balkans have defined additional fiscal restrictions, which refer to certain expenditures or to issued guarantees. Research shows that certain countries of the Western Balkans have defined fiscal rules for the local level of government as well.

In order to determine the clear effects of the adoption of current fiscal rules in the countries of the Western Balkans, a description of the basic fiscal rules for the countries of the Western Balkans that are currently active is presented below.

### ***Albania***

In Albania, the current debt rule implies the obligation to reduce the debt ratio compared to the previous year until the debt level falls below the level of 45% of GDP, except in exceptional circumstances. The rule on the total budget deficit of Albania takes into account the growth rate, so it is established that the total deficit cannot be higher than 2% of GDP in the case when the real growth rate of GDP is higher than 5%. In addition to the basic rules, auxiliary fiscal rules have been defined, which strengthen fiscal stability. Albania has a prescribed "golden rule", which requires current consumption to be paid from current income, while allowing investment consumption to be financed by borrowing. There is a defined obligation to set aside 0.7% of budget expenditures as a reserve for dealing with unexpected events, that is, potential risks from fluctuations in exchange rates and interest rates.

### ***Bosnia and Herzegovina***

In B&H, fiscal policy is under the competence of the entities, and the fiscal rules are determined by entity regulations. In addition to the entity laws, at the level of B&H, the Law on Borrowing, Debt and Guarantees of B&H defines a fiscal limitation that refers to the amount of repayment of the debt of B&H. According to that law, indebtedness on the basis of long-term national debt can arise if, at the time of indebtedness on the basis of long-term direct internal government debt or long-term direct external government debt, the amount of servicing of the long-term debt due in any subsequent year does not exceed 18% of regular revenues generated in the previous fiscal year.

In addition to that fiscal limitation, there is no common fiscal rule in BiH that refers to the central government.

### ***The Republic of Srpska***

The first fiscal rules in Republika Srpska were defined by the Law on Borrowing, Debt and Guarantees in 2012. The same rules are currently in force and read as follows:

- The total debt of Republika Srpska at the end of the fiscal year cannot exceed 60% of the realized gross domestic product in that year.
- The public debt of the Republic of Srpska at the end of the fiscal year cannot exceed 55% of the realized GDP in that year.
- The short-term debt of the Republika Srpska cannot exceed 8% of the amount of regular revenues generated in the previous fiscal year.
- The total exposure of Republika Srpska based on the issued guarantees cannot exceed 15% of the realized GDP in that year.

The Law on Fiscal Responsibility in the Republic of Srpska establishes fiscal rules related to the public debt and the consolidated budget deficit of the Republic of Srpska. Fiscal rules established by this law can be general or special. The general rule on public debt determines that the public debt of the Republic of Srpska at the end of the fiscal year cannot exceed 55% of the realized GDP in that year, while the debt threshold is defined within the framework of special fiscal rules, which implies that if the public debt of the Republic of Srpska at the end of the fiscal year reaches 50% of the realized GDP in that year, the budget for the following year must have a budget surplus.

The general rule on the consolidated budget deficit defines that the consolidated budget deficit at the end of the fiscal year cannot exceed 3% of the realized GDP in that budget year. A special fiscal rule implies that if the consolidated budget deficit at the end of the fiscal year reaches 2.5% of the realized GDP in that year, the budget for the following year must have a budget surplus.

The Fiscal Council of the Republic of Srpska, which as an independent body was established by the Law on Fiscal Responsibility in the Republic of Srpska, began its work in 2017 and continuously monitors the implementation of the fiscal rules established by the Law, which relate to the level of the consolidated budget deficit and public debt, and once a year reports to what extent they have been respected. In this way, along with the implementation of other functions and tasks prescribed by the Law, the Fiscal Council of the Republic of Srpska ensures the conduct of a stable and responsible fiscal policy in the Republic of Srpska. On the basis of defined rules, the Republika Srpska implemented fiscal consolidation<sup>2</sup>.

### ***Federation of B&H***

Fiscal restrictions in the Federation of B&H are established by the Law on Budgets in the Federation of B&H and the Law on Debt, Borrowing and Guarantees in the Federation of B&H. The fiscal rule of the Federation of B&H that refers to the budget balance reads: "The planned current balance of the budget must be positive or equal to zero, except in cases of natural disasters or natural disasters declared by the legislative body, and in the case when the amount of determined damages reaches or exceeds 20% of the realized expenditures in the previous fiscal year." The government must cover the realized deficit from previous years by planning funds in the budget to cover the realized deficit in the next five fiscal years.

In addition to the aforementioned rule on the budget balance, also prescribes a limitation on the amount of debt repayment in relation to income, which reads: "Indebtedness based on long-term state debt can arise if on the basis of long-term direct internal government debt or long-term direct external government debt, the amount of long-term debt servicing due in any subsequent year does not exceed 18% of regular revenues generated in the previous fiscal year."

### ***Kosovo\****

The fiscal rule on public debt was introduced in 2009 by the Law on Public Debt, which limits total government debt to 40% of GDP, with total government debt including direct debt of the general government sector including state guarantees issued by the general government.

The fiscal rule on the ratio of deficit to GDP, which was established in 2013, includes an upper limit of the total fiscal deficit of 2% of GDP. That rule was "relaxed" in 2016 when exclusions were granted for capital projects financed by international institutions. Also, some flexibility is provided regarding the temporary suspension of rules in cases of economic recession or natural disasters. The capital investment exemption expires in 2025, and it only applies if the level of general government debt is below 30% of GDP. An automatic correction mechanism has been established to correct any excessive deficit over the next three fiscal years.

The fiscal rule for salaries and wages in the public sector was introduced in 2018, and it provides that the annual increase in total expenditures for wages and salaries cannot be higher than the last published nominal GDP growth rate. In the event of a cyclical recession, the rule allows salary expenditures to increase by up to 0.5%.

In addition, there are other "mini-fiscal rules" such as legal limits on different categories of benefits under social benefits.

### ***North Macedonia***

A set of fiscal rules in North Macedonia was introduced under the new Law on Budgets, which was adopted in 2023. They are fully aligned with the fiscal rules of the EU, and they read:

---

<sup>2</sup> For more see the paper (Gojković, B., 2022). *The Impact of the Covid 19 crisis on the Fiscal stability of Republic of Srpska*. Economics Bijeljina.



1. The budget for the current year should be aligned with the fiscal strategy.
2. The budget deficit of the general government must not exceed the level of 3% of nominal GDP.
3. The total debt of the general government cannot exceed the level of 60% of the nominal GDP.
4. Guaranteed public debt cannot exceed 15% of nominal GDP.

In October 2023, the first convocation of the Fiscal Council of North Macedonia was appointed. The Fiscal Council is responsible for monitoring compliance with established fiscal rules.

### ***Montenegro***

Fiscal rules in Montenegro were first introduced in 2014 by the Law on Budget and Fiscal Responsibility. According to that Law, the following fiscal rules were prescribed in Montenegro, which are still in force today:

- The debt of the general government must be less than 60% in relation to GDP.
- Guarantees given by the state must be less than 15% of GDP.
- The primary and current balance of the general government must be positive.
- The total budget deficit of the general government cannot exceed 3% of GDP (excluding spending on natural disasters and other shocks and EU projects).

The planned growth rate of central government spending (excluding interest, donor funds, excluding natural disaster costs, etc.) is limited to the projected growth rate of GDP. That is, nominal current consumption cannot grow faster than real GDP, while nominal capital consumption and budget reserves cannot grow more than the growth rate of nominal GDP.

In 2023, the Fiscal Council of Montenegro was established.

### ***Serbia***

Fiscal rules in Serbia were established for the first time in 2010. In 2022, the fiscal rules were reformed. The revised fiscal rules regarding the target deficit will enter into force in 2025. One of the key improvements achieved by changing the original fiscal rules in Serbia is the simplification of the formula for the targeted medium-term deficit and its matching with the level of public debt. The initial fiscal rules from 2010 prescribed a formula for the level of the target (cyclically adjusted) deficit that turned out to be too complicated for credible implementation in practice.

The amended fiscal rules in Serbia adopted in 2022 refer to the state sector and can be general or special. The general fiscal rules defined by the Law on the Budget System in Serbia read:

- 1) the debt of the state sector, including obligations based on restitution, will not exceed 60% of GDP;
- 2) the target medium-term deficit is 0.5% of GDP.

According to the reformed fiscal rules in Serbia, the level of debt determines the amount of the allowed deficit. Based on that, if the debt of the state sector is above 60% of GDP, the fiscal position of the state sector must be balanced, so that the deficit is at most 0% of GDP. If the debt of the government sector is between 55% and 60% of GDP, the deficit amounts to a maximum of 0.5% of GDP. If the debt of the state sector is between 45% and 55% of GDP, the deficit amounts to a maximum of 1.5% of GDP. If the debt of the government sector is below 45% of GDP, the deficit will not exceed 3% of GDP.

Special fiscal rules ensure the achievement of the targeted fiscal deficit and government sector debt in relation to GDP through the limitation of public expenditures. The principles of responsible fiscal management mandate the determination of expenditures for employees in the

state sector at a sustainable level, so that the share of expenditures for employees in the state sector will be aimed at up to 10% of GDP.

#### **4.2. Assessment of compliance with established fiscal rules**

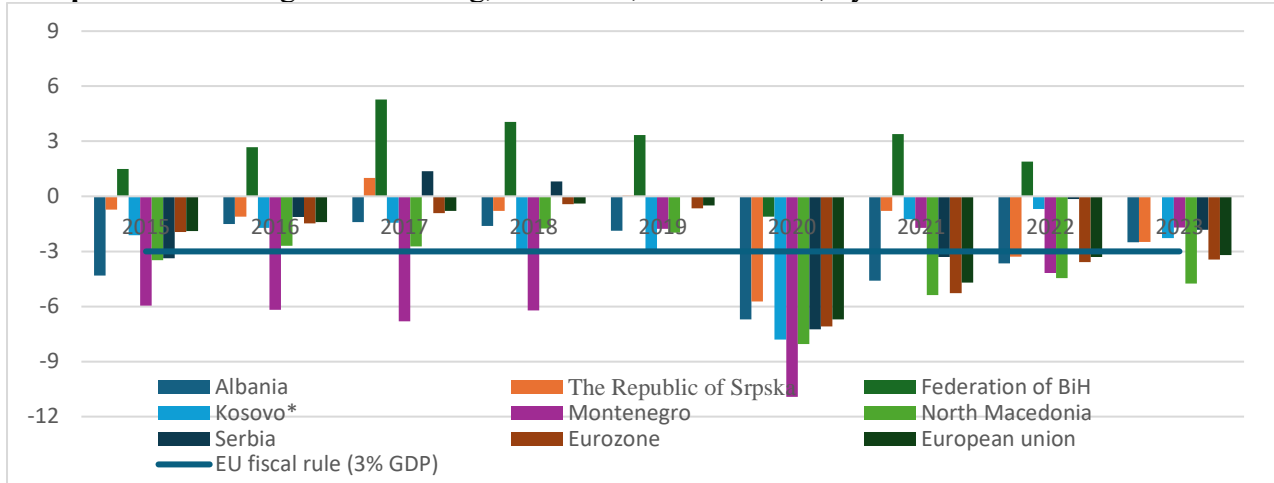
In order to fulfill the basic goal of fiscal rules, which generally refers to the provision of long-term fiscal stability, the basic prerequisite is their compliance.

The analysis of compliance with national fiscal rules individually by country of the Western Balkans showed certain specificities, as well as certain common characteristics and tendencies in the observed period for all countries. Thus, data on compliance with national rules for Albania showed that Albania complied with the deficit rule until the crisis caused by the COVID pandemic, while the debt was above the target value of 45% in most of the analyzed period. During the analysis of compliance with fiscal rules for B&H, subnational fiscal rules were taken into account, that is, fiscal rules at the entity level, since there are no uniform fiscal rules that apply to the state level. The analysis of compliance with the fiscal rules for the Republic of Srpska shows that the Republika Srpska respected the debt rule in all years, while in most of the time it respected the rule on the consolidated budget deficit, with the exception of the crisis years (2020 and 2022), which led to the adoption of the Program fiscal consolidation, with the aim of returning the budget deficit within the framework defined by the fiscal rule. Kosovo\* respected the debt rule every year and the deficit rule most of the time. Most of the time, Montenegro did not respect the fiscal rules, that is, it did not respect the debt rule in all observed years, while it respected the total deficit rule only in a few years. Serbia has generally respected its debt rule since 2017, while in most fiscal years it has respected the deficit rule.

The analysis of the data on the amount of the budget result and public debt in relation to the level established by the national fiscal rules showed that the countries of the Western Balkans in most cases respected the established national fiscal rules. By 2020, that is, by the outbreak of the corona crisis, most of the countries of the Western Balkans had achieved budgetary results in accordance with the fiscal rule on deficit. In 2020, the whole world, the EU, and also the countries of the Western Balkans faced a crisis caused by the corona virus pandemic, which had a negative impact on macroeconomic and fiscal indicators. As a consequence of the above, in 2020 the fiscal rule related to the budget deficit was violated in all Western Balkan countries that had established rules, while the debt rule was violated in two Western Balkan countries (Albania and Montenegro).

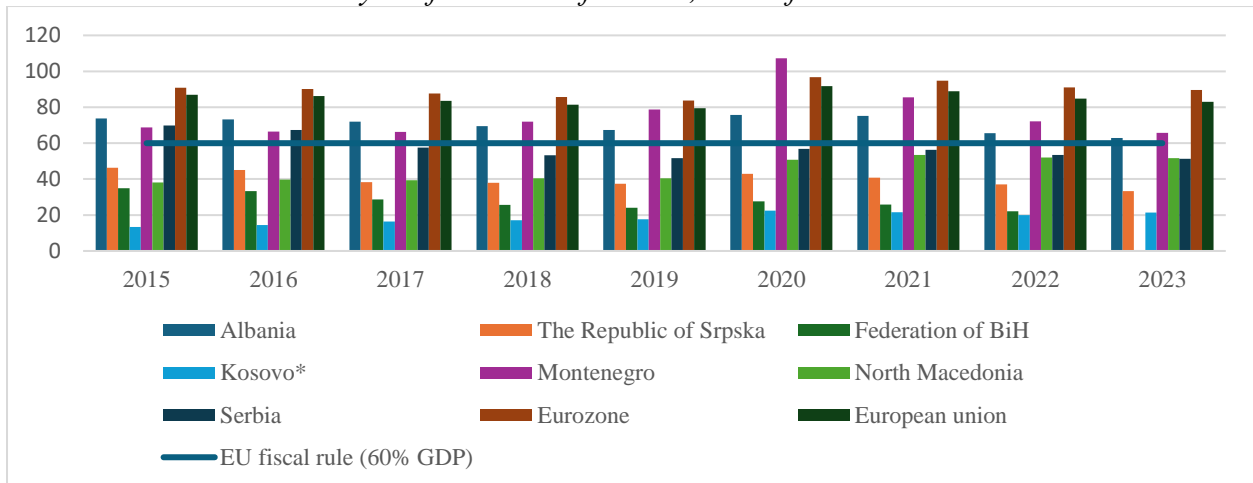
In addition to the analysis of compliance with the national fiscal rules of the countries of the Western Balkans, the compliance of their fiscal indicators with the basic fiscal rules of the EU, the so-called Maastricht criteria for the level of public debt (60% of GDP) and deficit (3% of GDP).

**Graph 1.** Net lending/net borrowing, % of GDP, in 2015-2023, by Western Balkan countries



Source: Authors' calculation, based on Eurostat data.

**Graph 2.** Public debt of the countries of the Western Balkans in relation to the level defined by the fiscal rule of the EU, in % of GDP



Source: Authors' calculation, based on IMF data.

The analysis of the previous two graphs shows that most of the countries of the Western Balkans are in average compliance with the fiscal rules of the EU on the level of deficit and debt for the greater part of the observed period. In all years of the observed period, Montenegro and Albania achieved a debt level above 60% of GDP. While only Montenegro recorded a higher deficit of 3% of GDP in all observed years and before the corona crisis, certain countries of the Western Balkans (Albania, Republika Srpska, Federation of B&H) recorded a higher deficit of 3% for the first time in the observed period (after the outbreak of the Corona crisis in 2020). The data show that a significant worsening of the budget deficit in 2020 due to the Corona crisis is common to the countries of the Western Balkans and the EU. The countries of the Western Balkans, in order to mitigate the negative consequences of the corona crisis, allowed a temporary deviation from the defined national fiscal rules. Also, deviation from the fiscal rules of the EU was made possible for member countries by the decision of the European Commission in March 2020 by activating the so-called "general escape" clause, which suspended the fiscal rules until the end of 2023.

Although the countries of the Western Balkans have defined national fiscal rules, the analysis of the compliance of the fiscal indicators of the countries of the Western Balkans in relation to the level prescribed by the fiscal rules of the EU is significant, it implies that the candidate

countries for EU membership will have to take over its legal acquis, and therefore the fiscal rules of the EU.

Until full accession to the EU, it is important for the countries of the Western Balkans to preserve their fiscal stability, and this should be achieved first of all by respecting their national fiscal rules. Since national fiscal rules are aligned with EU fiscal rules, compliance with national fiscal rules will ensure compliance with EU fiscal rules. The results of the analysis presented in the paper Interdependence of Fiscal consolidation and economic growth in EU countries with different levels of development (Gojković, B., 2021) showed that the future of stable public finances of countries with a lower level of development lies in the introduction of differentiated fiscal rules. This means that rules adapted to the economic development of the country would at the same time limit unproductive consumption, but at the same time encourage economic development.

#### **4.3. The impact of fiscal rules on the fiscal stability of the countries of the Western Balkans**

Fiscal stability represents one of the most important factors of macroeconomic stability of any country. The primary elements on the basis of which the state of the country's public finances is assessed are the amount of the budget deficit and the public debt. Bearing the above in mind, below are analyzed the basic fiscal indicators for the countries of the Western Balkans before and after the establishment of national fiscal rules. Given that the fiscal rules in North Macedonia were established in 2023, and that their effects will be visible only in the following years, North Macedonia is excluded from the analysis.

**Table 2.** General government net lending/net borrowing and gross debt, as percentage of GDP at current prices

General government net lending/borrowing (percent of GDP)								
	Average 5 years before adoption of fiscal rules	Average 5 years after adoption of fiscal rules	DIFFERENCE in average 5 years before and 5 years after adoption of fiscal rule	DIFFERENCE in the year before the adoption of fiscal rules and in the last observed year	Average in five-year period before COVID crisis (2015-2019)	Average in period after COVID crisis (2020-2023)	DIFFERENCE in average 5 years before and after COVID crisis	Average for the forecast (2024-2029)
<b>Albania</b>	-4,38	-1,6	-2,78	-3,20	-2,14	-4,03	1,89	-2,58
<b>Kosovo*</b>	-0,62	-2,26	1,64	-2,50	-2,20	-2,48	0,27	-1,15
<b>Montenegro</b>	-5,72	-5,18	-0,54	-5,20	-5,40	-4,00	-1,40	-3,82
<b>Serbia</b>	-2,60	-4,92	2,32	-2,20	-0,46	-2,98	2,52	-2,10
<b>Bosnia and Herzegovina</b>								
- The Republic of Srpska	-2,93	-0,56	-2,37	-1,80	-0,56	-2,70	2,14	-1,75
- Federation of B&H	1,05	3,37	2,32	-1,52	3,37	1,39	1,97	-1,75
General government gross debt (percent of GDP)								
	Average 5 years before fiscal rules	Average 5 years after adoption of fiscal rules	DIFFERENCE in average 5 years before and 5 years after adoption of fiscal rule	DIFFERENCE in the year before the application of fiscal rules and in the last observed year	Average in five-year period before COVID crisis (2015-2019)	Average in period after COVID crisis	DIFFERENCE in average 5 years before and after COVID crisis	Average for the forecast (2024-2029)
<b>Albania</b>	67,52	70,53	3,01	-13,70	71,16	69,12	-2,04	56,22
<b>Kosovo*</b>	7,68	12,98	5,30	8,80	15,82	20,40	4,58	20,07
<b>Montenegro</b>	50,58	62,76	12,18	2,80	70,42	81,25	10,83	63,33
<b>Serbia</b>	34,70	58,02	23,32	9,10	59,96	53,88	-6,09	47,48
<b>Bosnia and Herzegovina</b>								
- The Republic of Srpska	39,48	44,90	5,42	-7,90	41,02	38,25	-2,77	31,28
- Federation of B&H	n/a	n/a	n/a	n/a	27,8	25,23	-2,57	31,28

Source: Authors' calculation, based on IMF data.

The analysis of the data shown in the previous table on the average level of the budget result in the period before and after the application of the fiscal rule shows that the determination of the fiscal rule on the budget deficit in most countries of the Western Balkans had a positive impact on the budget result. That is, in four of the six countries of the Western Balkans, there was an improvement in the budget result in the form of a decrease in the budget deficit (Albania, Montenegro, B&H – Republic of Srpska) or an increase in the surplus (Federation of B&H).

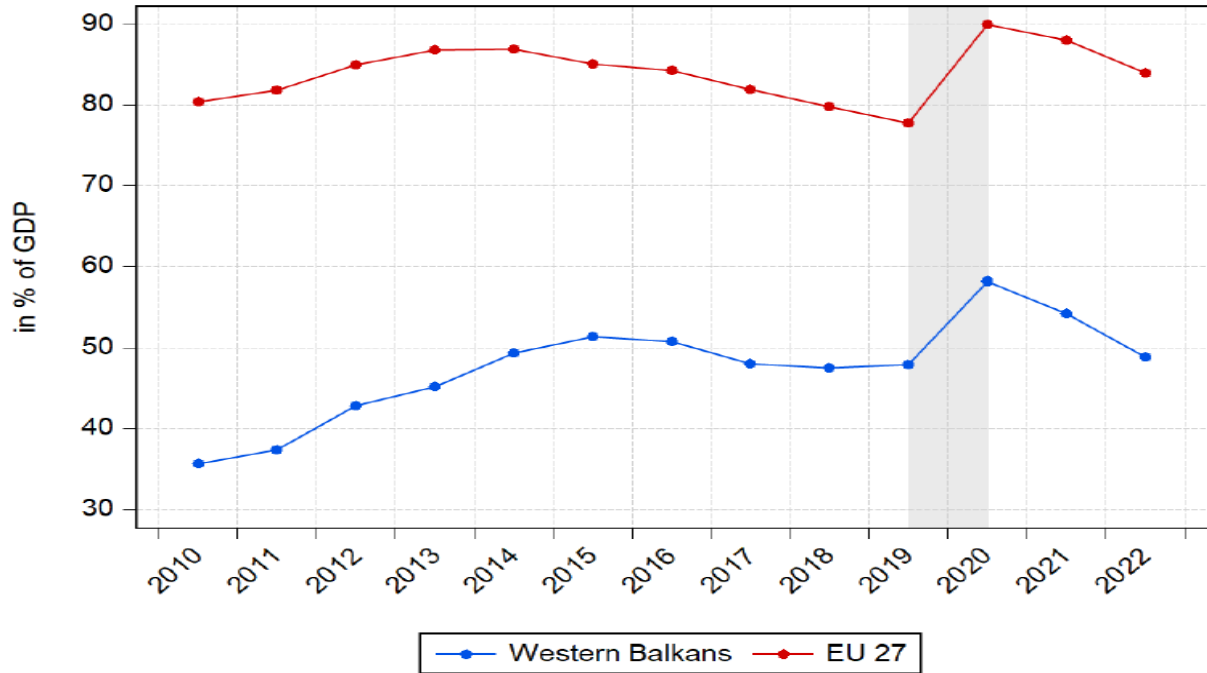
Although in Serbia and Kosovo\* an increase in the budget deficit was recorded on average for the period after the adoption of the fiscal rules, the analysis of the level of the deficit in the year before the adoption of the fiscal rules and the last data on the amount of the budget deficit (ie in 2023) shows that due to the application of fiscal rules and in the mentioned two countries there was an improvement in the budget result. The budget deficit for 2023 in Serbia amounts to 1.3% of GDP, which is 66% lower than in the year before the establishment of fiscal rules, i.e. than in 2010, when it amounted to 3.5% of GDP. Thus, in Kosovo\*, the budget deficit in 2023 is 92% lower than in the year before the application of the fiscal rules on the deficit.

Based on the above, it can be concluded that thanks to the application of fiscal rules, the stability of the budget in the countries of the Western Balkans has been preserved. The establishment of fiscal rules on the budget deficit contributed to the prevention of excessive public spending, that is, it prevented the creation of an excessive budget deficit in the countries of the Western Balkans. The application of fiscal rules in the countries of the Western Balkans made it impossible to accumulate a negative budget result, that is, they largely prevented the budget deficit from being a long-term problem. The chronic budget deficit has a negative effect on the stability of public finances because it usually requires additional debt for their financing.

The positive impact of the application of fiscal rules on the level of the budget result, i.e. on the reduction of the budget deficit of the countries of the Western Balkans in the observed period, becomes particularly important when it is taken into account that all countries faced the negative consequences of the global economic crisis caused by the corona virus pandemic in 2020 and the crisis caused by the events in Ukraine in 2022, which had significant negative consequences on fiscal indicators.

The analysis of data on the average level of public debt before and after the introduction of fiscal rules for the countries of the Western Balkans shown in the previous table shows that, on average, there was an increase in the level of indebtedness. However, it should be borne in mind that despite the increase in the level of indebtedness, the indebtedness of most countries of the Western Balkans is within the limits prescribed by national fiscal rules. In addition to the above, the average indebtedness of the countries of the Western Balkans is far below the average level of indebtedness for the countries of the EU, which can be seen in the following graph.

**Graph 3. Public debt in the EU and Western Balkans, percent of GDP**



Source: World Bank. (2024).

Based on the analysis of the average debt level of the countries of the Western Balkans and the countries of the EU, it is evident that the countries of the Western Balkans are on average much lower in debt compared to the integration debt project. Also, it is evident that the average level of public debt of the Western Balkans is below 60% of GDP, which is prescribed by the basic fiscal regularity of the EU according to the Maastricht Treaty.

As with the budget deficit, the analysis showed that in 2020, due to the global economic crisis caused by the corona virus pandemic, there was an increase in the level of public debt on average for the countries of the Western Balkans. However, after the stabilization of the crisis caused by the pandemic, the public debt of the countries of the Western Balkans is decreasing.

In addition to the analysis of the impact of the introduction of fiscal rules of the countries of the Western Balkans on basic fiscal indicators, the impact of the temporary suspension of fiscal rules during the corona crisis on the fiscal stability of the observed countries was also analyzed. Due to the suspension of fiscal rules due to the COVID crisis in almost all countries of the Western Balkans, there was an increase in the level of deficit compared to the average level of deficit in the five-year period before the COVID crisis. More precisely, all the countries of the Western Balkans, with the exception of Montenegro, recorded on average an increase in the budget deficit during the period of suspension of fiscal rules. Also, in the period after the outbreak of the crisis caused by the pandemic, there was an increase in public debt in half of the countries of the Western Balkans, namely in Montenegro, Kosovo\* and North Macedonia. Analysis of debt and deficit data for the period before and after the COVID crisis, when most Western Balkan countries suspended fiscal rules, show that the suspension of rules led to a deterioration of fiscal indicators. However, the fact that the suspension of the application of fiscal rules will be lifted, that is, that after a certain period it will be necessary to return public finances to the framework prescribed by fiscal rules, to a certain extent prevented the excessive accumulation of debt and deficit. However, the temporary suspension of fiscal rules indirectly influenced the growth of debt and deficit to a certain extent to be lower than it would have been if fiscal rules had not been established, which indicates the importance of the existence and

application of fiscal rules. Accordingly, the existence and observance of fiscal rules is extremely important for the preservation of fiscal stability.

The temporary suspension of fiscal rules was justified, given the extraordinary circumstances that required state intervention. However, the suspension of fiscal rules is unacceptable in the long term. The growth of debt and deficit due to the suspension of the rules indicates that it is necessary to restore their application as soon as the circumstances that were the reason for the suspension stabilize. This was also demonstrated in the implementation of the suspension of fiscal rules in the countries of the Western Balkans.

Since the countries of the Western Balkans are conducting fiscal consolidation in the coming period with the aim of returning the fiscal indicators to the framework defined by the fiscal rules, the data on the average values of the budget deficit and public debt in the following five-year period were analyzed. Projections of fiscal indicators have shown that in the coming period, most of the countries of the Western Balkans will return to the framework of fiscal rules, thanks to the implementation of fiscal consolidation.

Effective management of public debt and budget deficit is of great importance for the economic growth and stability of the public finances of the countries of the Western Balkans in the future. Reducing the deficit and reducing the public debt to a sustainable level while continuing to support economic recovery amid increased uncertainty in the coming period is a priority for all countries of the Western Balkans. While the fiscal policy makers in previous years were focused on mitigating the negative impact of the COVID and the crisis due to the events in Ukraine, now the countries of the Western Balkans face limited fiscal space to support economic growth, and limited possibilities for interventions in case of new crises.

## **5. Conclusion**

For the stable public finances of the countries of the Western Balkans, the role of fiscal rules and ensuring their compliance is crucial. Fiscal rules guide economic policies in the direction of stability and long-term sustainability of public finances. Responsible fiscal behavior through compliance with fiscal rules contributes to greater budget discipline and transparency, more efficient use of budget funds, lower budget deficit and public debt, and thus the stability of public finances.

Despite the numerous challenges and negative consequences of the global economic crises that the public finances of the Western Balkan countries faced in the 21st century, the Western Balkan countries managed to preserve fiscal stability. The aforementioned is largely a consequence of the establishment of fiscal rules, which are established as fiscal restrictions in all countries of the Western Balkans.

The challenge that both European Union and Western Balkan countries will face in the coming period is the return of fiscal indicators to the framework defined by fiscal rules. In order to achieve this, it will be necessary to implement fiscal consolidation in certain countries. Considering the importance of fiscal stability for countries with a relatively lower level of development such as the countries of the Western Balkans, the establishment of fiscal rules is important, as well as the existence of mechanisms that ensure their compliance. In addition to the above, the existence of a certain level of flexibility in fiscal rules is significant, which has gained particular importance in times of extraordinary circumstances, such as the COVID crisis.



## LITERATURE

1. Bach, S. (2014). *Fiskalna pravila kao ključni odgovor na fiskalnu krizu*. Međunarodne studije : časopis za međunarodne odnose, vanjsku politiku i diplomatiju, 14(1).
2. Badinger, H., Reuter, W. H. (2017). *The case for fiscal rules*. Economic Modelling.
3. Bergman, M., Hutchinson, M., Jensen, M. (2013). *Do Sound Public Finances Require Fiscal Rules or is Market Pressure Enough*. Economic Papers, No 489.
4. Brändle, T., Elsener, M. (2023). *Do fiscal rules matter? A survey on recent evidence*. FFA Working Paper No. 26
5. Budina, N., Kinda, T., Schaechter, A., Weber, A. (2012). *Fiscal rules at a Glance: Country Details from a New Dataset*. IMF Working paper. [www.imf.org/external/pubs/ft/wp/2012/wp12273.pdf](http://www.imf.org/external/pubs/ft/wp/2012/wp12273.pdf)
6. Caselli, F., J. Reynaud (2020). *Do fiscal rules cause better fiscal balances? A new instrumental variable strategy*. European Journal of Political Economy, Vol. 63
7. Combes, J.L., Debrun, X., Minea, A., and Tapsoba, R. (2018). *Inflation targeting, fiscal rules and the policy mix: Cross-effects and interactions*. Economic Journal, 128(615)
8. Debrun, X., Moulin, L., Turrini, A., Ayuso-i-Casals, J., Kumar S. M. (2008). *Tied to the Mast? National Fiscal Rules in the European Union*. Economic Policy.
9. Delivorias, A., (2021). *The Maastricht Treaty, the Treaty on Stability, Coordination and Governance, and the Stability and Growth Pact*. European Parliamentary Research Service.
10. Gojković, B. (2021). *Interdependence between Fiscal consolidation and economic growth in EU countries: the role of development level*. Acta Economica Banja Luka 19(35)
11. Gojković, B. (2022). *The Impact of the Covid 19 crisis on the Fiscal stability of Republic of Srpska*. Economics Bijeljina.
12. Grujić Kalkan, M. (2013). *Fiskalna pravila u Evropskoj uniji i stabilizacija*. Financing Vol. 4 No. 1.
13. International Monetary Fund (2009). *Fiscal Rules – Anchoring Expectations for Sustainable Public Finances*. Fiscal Affairs Department, IMF.
14. International Monetary Fund (2013). *The Functions and Impact of Fiscal Councils*. IMF Policy Paper. [www.imf.org/external/np/pp/eng/2013/071613.pdf](http://www.imf.org/external/np/pp/eng/2013/071613.pdf)
15. Kopits G., Symansky S. (1998). *Fiscal policy rules*. IMF Occasional Paper 162. Washington, DC: International Monetary Fund. <https://doi.org/10.5089/9781557757043.084>
16. Kopits, G. (2001). *Fiscal Rules: Useful Policy Framework or Unnecessary Ornament?* IMF Working Paper 01/145.
17. Kordić, G., Vilović, N. (2011). *Fiskalna pravila i fiskalna transparentnost zemalja Europske unije s osvrtnom na Republiku Hrvatsku – poboljšavaju li fiskalna pravila učinkovitost poreznog sustava*. [http://www.rifin.com/images/stories/2011/04/kordic\\_gordana\\_vidovic\\_nika%20.pdf](http://www.rifin.com/images/stories/2011/04/kordic_gordana_vidovic_nika%20.pdf)
18. Krajišnik, M., Gligorić, D. Gojković, B. (2019). *Effects of fiscal consolidation in Western Balkan Countries*. Proceedings of Rijeka.
19. Potrafke, N. (2024). *The Economic Consequences of Fiscal Rules*. CESifo Working Paper No. 10765
20. Schick, A. (2013). *Lessons from the crisis*. OECD Journal on Budgeting. Vol. 12/3. [www.dx.doi.org/10.1787/budget-12-5k47tb29wn6h](http://www.dx.doi.org/10.1787/budget-12-5k47tb29wn6h)
21. Tapsoba, R. (2012). *Do National Numerical Fiscal Rules really shape fiscal behaviours in developing countries? A treatment effect evaluation*. Economic Modelling.
22. Wyplosz, C. (2012). *Fiscal Rules: Theoretical Issues and Historical Experiences*. National Bureau of Economic Research, Working Paper 1788. [http://www.nber.org/papers/w17884.pdf?new\\_window=1](http://www.nber.org/papers/w17884.pdf?new_window=1)

# OBSERVING THE ROLE OF SECTORAL EMPLOYMENT SHIFTS IN THE CONTEXT OF GREEN TRANSITION: EVIDENCE FROM BOSNIA AND HERZEGOVINA AND THE EUROPEAN COUNTRIES

Andrej Ševa<sup>1,\*</sup>

Tea Milojević<sup>1</sup>

<sup>1</sup>Faculty of Economics, University of Banja Luka

\*Corresponding author: [andrej.seva@ef.unibl.org](mailto:andrej.seva@ef.unibl.org)

DOI: [10.63356/978-99976-57-34-3\\_11](https://doi.org/10.63356/978-99976-57-34-3_11)

## Abstract

This paper analyses the structural changes in the labor market of Bosnia and Herzegovina, focusing predominantly on the shifts among three key identified sectors: agriculture, industry, and services sector. This analysis was done historically and comparatively to EU-27 and other observed world countries and regions. Using mostly modeled data from the International Labor Organization and their database (ILOSTAT), the authors aim to identify the historical shifts that have been happening since 1992. These shifts are also analyzed in the context of green transition, introducing the Green Transition Index, developed by Oliver Wyman, which benchmarks EU-27 along with the United Kingdom and Norway on progress made in the transition towards environmental sustainability. A multiple linear regression model was used to examine the cross-country variability of the index and its relation with variables such as GDP per capita, employment, and value-added in observed sectors. The results yielded the importance of economic prosperity in achieving higher green transition index scores, while the role of both employment in services and its value added to GDP was deemed insignificant by the model. This was also explained through a comprehensive review of literature, which all suggested mixed services effect on green transition in general, while also focusing on the industry and agriculture sectors, and inspecting their potential and role in the overall green transformation. This suggests a need for further research on sector-specific contributions to green transition efforts. The study aims to provide the foundation for policymakers to consider sectoral specifics and dynamics when overviewing and planning for sustainable economic development.

**Key words:** labor market shifts; labor market sectors; Green Transition Index; green transition; Bosnia and Herzegovina; EU-27.

## 1. Introduction

According to the United Nations, employment comprises all persons of working age who, during a short reference period (one week), were engaged in any activity to produce goods or provide services for pay or profit. When it comes to employment, a classification given by Eurostat, it can be divided into three sectors: employment in agriculture, fishery, and forestry (for further reference: Employment in agriculture), employment in services, and employment in industry.

This paper overviews sectoral shifts between the three aforementioned sectors, compares the shifts in Bosnia and Herzegovina to the EU-27 Norway and the United Kingdom, and eventually discusses the characteristics of each sector in the context of the green transition. The reason for including two additional countries is the Green Transition Index, which overviews EU-27 plus Norway and the United Kingdom.

The green transition is a global term used to explain the shift economies are making towards more sustainable and environmentally oriented practices. We are often faced with cases of implementing green economy principles in several countries. According to some views, a green economy is a system of inclusive economic growth, social protection, and natural ecosystems in the absence of posing considerable risks and ecological scarcity to future generations (Africa Union Commission, 2015). The realization of these principles naturally depends on access to financial resources and on public and private institutions that will implement the transition process (Batrancea et. al., 2021).

As more and more countries are, at least declaratively, in favor of striving to reduce their carbon footprints and embrace renewable energy sources, the impact of this transition on various economic sectors becomes an important topic and area of study. This paper explores structural changes in the labor market of Bosnia and Herzegovina, comparing it to their European counterparts. The focus is clear, and it is on the shifts among three key sectors: agriculture, services, and industry. These shifts are analyzed both historically and comparatively, using data from the International Labor Organization and their database ILOSTAT, with predominantly modeled data to fill in the series breaks. The modeled data is derived from ILOSTAT and is not the result of the authors' calculations.

Besides this, the benchmarks from the Green Transition Index by Oliver Wyman are used. By examining employment trends from 1991 to 2022 in Bosnia and Herzegovina, this study investigates the role of sectoral employment shifts in the context of green transition efforts, comparing Bosnia and Herzegovina's progress with that of EU-27 countries, the United Kingdom and Norway. Particular focus has been put on the services sector, as the literature ground gave mixed opinions and findings regarding its influence and impact on the green transition and the green transition index scores.

Many studies, as will be seen throughout the paper, have explored and discussed both green transition and structural changes in various labor markets. However, not many have delved into the very relationship between the green transition and the labor markets, especially in the EU-27, Norway, the United Kingdom, and ultimately Bosnia and Herzegovina. This is, on the other hand, expected since these relationships are relatively new, thus the data availability is scarce and asymmetrical. Consequently, this paper seeks to answer the following research question: How do sectoral employment shifts influence the progress of green transition in Bosnia and Herzegovina and comparable European countries? Likewise, this paper contributes to the literature by providing a comparative analysis of sectoral employment shifts within the context of green transition, applying the Green Transition Index to a case study of Bosnia and Herzegovina, after having observed its relationship with certain labor market and economic indicators in the comparable European countries. From this, the objectives of the research are derived and are as follows:

- (1) *Analyze sectoral employment shifts.* To analyze the historical and comparative shifts in employment among the agriculture, industry, and services sectors in Bosnia and Herzegovina, EU-27, the United Kingdom, and Norway.

- (2) *Examine the relationship with green transition.* To examine how these sectoral shifts influence the progress of green transition, focusing on the impact of employment changes on environmental sustainability efforts.
- (3) *Provide insights for policymakers.* To provide insights for policymakers on sector-specific contributions to sustainable development, highlighting which sectors have the most potential for contributing to green transition efforts and informing strategic planning for sustainable economic development.

## 2. Labor market structural changes in global and Bosnia and Herzegovina terms

The sector of agriculture, in many regions, including the Republic of Srpska, as well as Bosnia and Herzegovina, is characterized by low value-added per worker products when compared to other sectors (Čekrlija et. al., 2023). Additionally, in European countries in total, agriculture contributes less to gross value added compared to industry or services, pointing out its lower economic impact (Salimova et. al., 2020). The services sector, on the other hand, has a complex relationship with economic growth and tends to vary between low and high gross value added, depending on the observed sub-sector and even region. For example, services such as communications, finance, and transportation tend to be technologically sophisticated and can contribute greatly to value-added (Quinn, 1988), whereas traditional tourism and restaurant services can show low value-added (Murshed et. al., 2020). Concludingly, the services sector, observing its scope and sub-sectors, can offer significant potential in value-added terms.

Observing modeled data for Bosnia and Herzegovina using the International Labor Organization Database (ILOSTAT) from 1991 to 2022, certain trends can be captured. Employment in services, since the 1990s, has had the largest share in overall employment, followed by industry and agriculture, respectively. This can be seen in the graph below.

**Figure 1.** Employment by sectors in Bosnia and Herzegovina



Source: Data retrieved and visualized from ILOSTAT

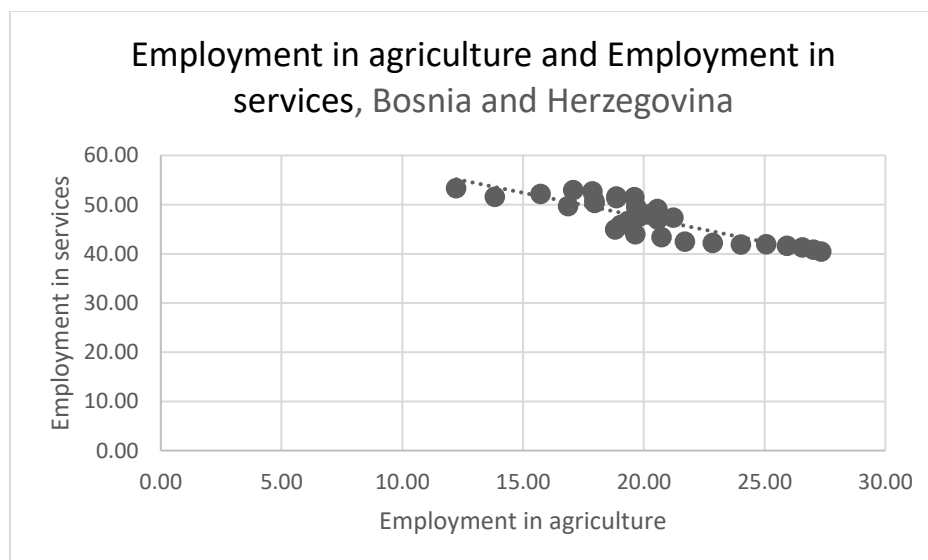
The gap between services and the other two sectors has been widening since 1991. For example, in 1991, the share of employment was 27,35%, 32,23%, and 40,42% for agriculture, industry, and services, respectively. In 2022, the distribution was 16,87%, 33,49%, and 49,64% for agriculture, industry, and services, respectively. It is safe to say that the shift towards services has been happening, and low-added-value sectors such as agriculture have been decreasing in Bosnia and Herzegovina.

However, the EU-27 average stands tall at 71% employment in services, the Euro area at 74%, the upper middle-income countries group at 51%, and the global average at 50%. Given the historical data, it can be said that Bosnia and Herzegovina is roughly in line with both the global average and the income group it belongs to but not nearly in line with the EU-27 or Euro area.

The industry sector is well above the world average (24%), as well as the Euro area and EU-27, which stand at 23% and 25% respectively. Agriculture, fishery, and forestry is well below the world average (26%), but still way above than Euro area and EU-27 which are at 4% and 3% respectively.

Observing the connections between these three sectors, it is visible and intuitive that some might correlate in-between one another. In Bosnia and Herzegovina, a strong link can be seen between those employed in agriculture and those employed in services. The Pearson's correlation coefficient ( $r$ ) between the two for the period 1991-2022 is  $r \approx -0,86$ , which indicates a strong inverse link, meaning that the relation of the switch to services might potentially be highly influenced by those having been employed in agriculture. This correlation is statistically significant with  $p < 0,001$ .

**Figure 2.** Employment in agriculture and services, scatterplot



*Source:* Authors' calculation

As per findings by Dinç (2022), Turkey and potentially many other countries follow a certain pattern where the switch from agriculture to services is not direct, but rather through a pathway of agriculture-industry-services. This would potentially mean that the decreasing employment in the agriculture sector might not immediately translate into increasing employment in the services sector. Testing this through simple tools, such as correlation, made it look like this does not fully apply to Bosnia and Herzegovina, given that the link between agriculture and

services employment is much stronger than between agriculture and industry employment. This could potentially mean that the time series are not vertically wide (i.e., do not include monthly or quarterly data) enough to capture this sectoral pathway or that agriculture and services might have found a direct way among themselves to avoid the industry sector in this pattern. This is potentially explained by Newsome & Sheridan (2018), who note that in Australia and globally, employment in agriculture has been declining, but growing demand is noticed, and it concerns services related to agriculture, such as legal, financial, marketing, and other services in agriculture. This is not captured by the traditional employment statistics and might therefore indicate a hidden services sector that is reliant on agriculture.

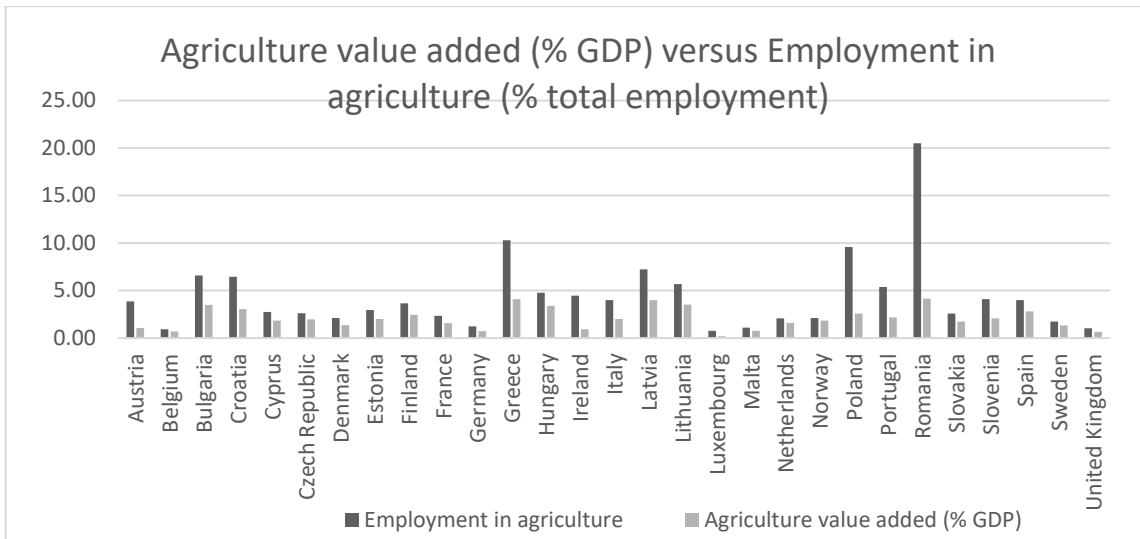
### **3. Taking green transition into account: EU-27, United Kingdom and Norway**

Green transition is deemed to have had mixed effects on employment and labor markets, depending on the region and structure. For example, in the EU the shift to low-carbon technologies resulted in a net increase of 530.000 jobs in the observed period 1995-2009. Some countries saw net job gains (Poland, Germany, Italy, Hungary, and Spain) while others experienced net job losses (Ireland, Lithuania, France, and the Czech Republic) (Markandya et. al., 2016). This is also backed by Aldieri & Vinci (2018) who say that green economy investments can lead to job displacement due to the shift from traditional to green technologies, whereas they can also create new job opportunities, particularly in green sectors. To better understand the implications of green transition on the country's labor market, the point of view should be sectoral. This means that positive effects, along with potentially negative ones should be viewed through a prism of transformation possibilities in three different sectors: agriculture, industry, and services. The Green Transition index cumulates and retrieves data mostly from, but is not limited to, the year 2020. For clarity and modeling purposes, data presented in graphs and used in the models onward will be from 2020.

#### **3.1. Agriculture**

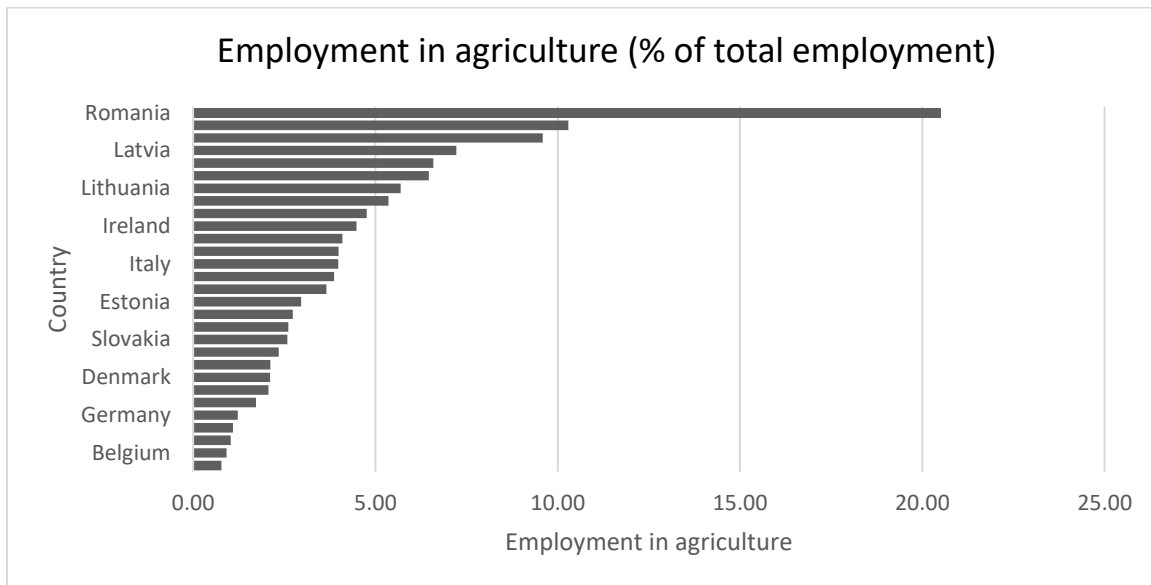
Agriculture has a significant potential to transform itself into a sustainable sector at a large scale, through a variety of strategies and sub-sector approaches. Agriculture, in its economic importance aspect, can be considered low when compared to the other two sectors in the EU-27, Norway and the United Kingdom, both in terms of value-added and employment. However, agricultural development in green and sustainable directions has the potential to transform low productivity, high resource consumption, and high environmental costs systems into those with high productivity, high resource use efficiency, and low environmental impact (Shen et. al., 2020). The data used is from the World Bank's Database, using either ILOSTAT's model estimates or data derived from the national agencies.

**Figure 4.** Agriculture value added in GDP versus employment in agriculture, in 2020



Source: Data sourced and visualized from ILOSTAT

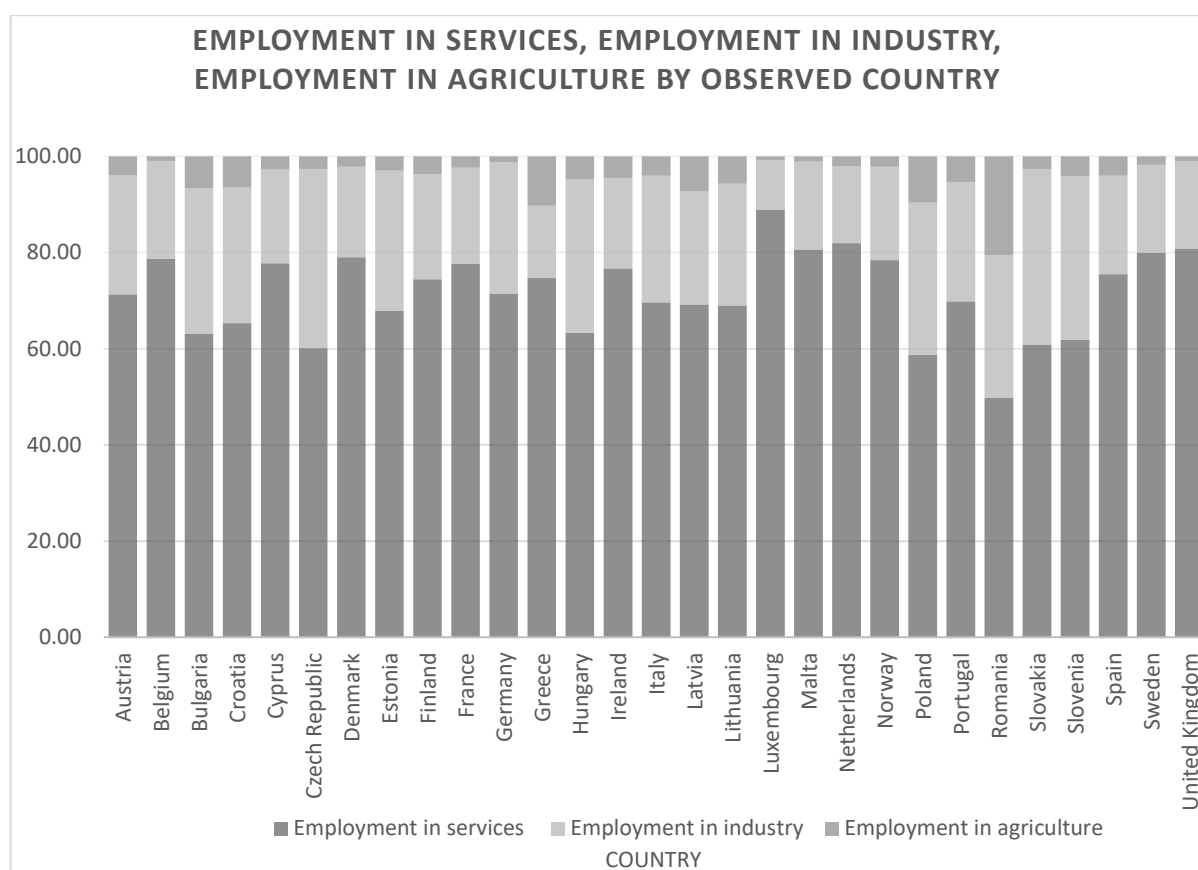
**Figure 5.** Employment in agriculture by percent in 2020, descending



Source: Data sourced and visualized from ILOSTAT

Some EU countries, which are outliers in this case, are: Romania (20,51% employment in agriculture), Greece (10,29% employment in agriculture), Poland, Latvia, and Bulgaria. On the other hand, in spite of the employment difference, Romania tends to display a relatively low value added of the agricultural sector in GDP, given the whopping 20% share in total employment. This may signalize productivity and efficiency issues previously mentioned. When compared to Hungary for example, Romanian agricultural companies operate with significantly lower efficiency compared to Hungarian counterparts (Jeremias & Tarnóczy, 2022), which is very much visible in the graph above. Additionally, the problem was identified by many more researchers in this field, all of which signalize this persistent issue. The disparity among the stakes displays a significantly low value added per worker in this sector.

**Figure 6.** Total employment by sectors in 2020



Source: Data sourced and visualized from ILOSTAT

### 3.2. Services

Services are multilayered and -faceted, making it challenging to observe and conclude whether they have significant potential in the green transition context. Shifting to green services can have a positive effect on individual and overall basis, reducing consumption growth, working hours, and ultimately environmental degradation (Campiglio, 2014). According to Henriques & Kander (2010), on the other hand, environmental relief experienced in observed countries was modest in terms of energy intensity impact in 7 out of 10 developed countries studied, and no impact in others. The major driver of the decline in energy is the manufacturing sector, observed in this paper within the industry sector. Others state, however, that services can more or less easily be designed to be more sustainable by promoting efficient resource use and minimizing environmental impact (Wolfson et al., 2015). Also, on that note, a study in Turkey showed that agriculture and export value-added can mitigate environmental hazards, whereas merchandise value-added and energy use can increase carbon emissions (Baş et al., 2021). Additionally, Greenford et. al. (2020) have argued that shifting to a service-based economy is unlikely to solely decouple economic activity from environmental impacts. Agriculture in this context will be neglected, and attention will be paid to the services sector, to try and fully understand the mixed claims by several authors.

Observing these statements and literature review, truly mixed opinions and views are noticed, which was thus purposefully mentioned at the very beginning of the paper. These mixed views make the services sector appear most inconsistent when compared to the other two.

#### 3.2.1. The Green Transition Index (GTI) and the European countries



According to these, the authors decided to test and see whether services are a significant contributor to green transition. More concretely, this model is designed to show whether the transformed services make up a significant portion of the services sectors in the observed economies. The variable that would initially describe the services' importance in observed economies is employment in the services sector (% of total employment). This was done by observing the Green Transition Index (GTI in further text) in EU-27, plus the United Kingdom and Norway. The GTI covers data from 2020 and summarizes relevant indicators into an index. It benchmarks 29 countries across Europe on the progress they have made in the transition to environmental sustainability in the following categories: overall, Economy, Nature, Manufacturing, Utilities, Waste, Buildings, and Transport (Wyman, 2022).

For these purposes, a multiple linear regression model was formed. The dependent variable chosen was the overall GTI, whereas the independent ones were Employment in services in 2020 (as a percent of total employment) and GDP per capita in 2020 (current USD). The time point for the analysis was fixed (2020), and the analysis was conducted over the observed 29 economies. GDP per capita was chosen as a variable indicating economic prosperity. Employment in services represents the share of total employment the services sector holds in the observed economies, and it indicates the importance the service sector may have for the labor market and the economy in general. To account for the skewness and kurtosis of the GDP per capita variable, the authors opted for logging the variable, with the aim of flattening it out. The confidence interval was set at 95%, even though the sample size is considered small ( $n=29$ ,  $n<30$ ). T-distribution was used instead to account for the smaller sample size, resulting in thicker and heavier distribution tails.

The multiple linear regression model was selected to analyze the relationship between sectoral employment shifts and the Green Transition Index because it allows for the simultaneous evaluation of multiple predictors while controlling for their individual effects. Additionally, due to the regression method's nature, it provides coefficients that quantify the impact of each independent variable. This feature helps isolate the contribution of each single factor while accounting for the effects of other variables. The testing method used was *enter* given the small number of variables, and thus, there was no need for *stepwise* regression method.

The model is set as follows:

$$GTI_i = \beta_0 + \beta_1 \cdot \log GDPpc_i + \beta_2 \cdot EmplInServices + \epsilon_i, \quad (1)$$

where:

1.  $GTI_i$  stands for Green Transition Index for country  $i$ ;
2.  $\beta_0$  is the intercept term;
3.  $\beta_1$  represents the coefficient for GDP per capita;
4.  $\log GDPpc_i$  stands for logged (by base 10) GDP per capita for country  $i$ ;
5.  $\beta_2$  represents the coefficient for Employment in services;
6.  $EmplInServices$  stands for the percent of employment in service in the total;
7.  $\epsilon_i$  is an error term for country  $i$ , representing a stochastic part of the model
8.  $i \in \{EU - 27, Norway, United Kingdom\}$

The results obtained are as follows (see Appendix 2 in the Appendices section):

R-squared value is roughly 0,4 which suggests that roughly 40% of the variability in the GTI across countries can be explained by the chosen independent variables. The significance of the model is at 0,001 which is well below the common p-value level of 0,05, which makes this

model statistically significant. Logged GDP per capita with a p-value less than 0,001 suggests that this indicator is a statistically significant predictor, meaning that countries with higher GDP per capita tend to perform better when it comes to the GTI. Employment in services, however, turns out not to be statistically significant with a p-value of 0,62. Also, it correlates negatively with the GTI, which might be counter-intuitive but also could be a result of lacking other indicators, the year observed, and the model size. This is in line with the previous findings that the services sector has a small to moderate importance in green transition overall.

Additionally, one of the main lackings of the model is the potential multicollinearity issue between two independent variables: GDP per capita and employment in services (% of total employment). Namely, these two correlate highly with one another, which is understandable, but it could distort the model. There are several ways to check if multicollinearity exists, which is either observing the correlation coefficient to see whether it is higher than 0,7 or 0,8. The issue is that the threshold has not been set clearly (Mladenovic & Petrovic, 2011). The authors state that another way to perform this check is to see whether the R squared value of the model is smaller than the correlation coefficient squared value. In this case, it is almost twice the value of the coefficient.

To better understand the negative relationship, and to evade the multicollinearity issue, as well as the skewness and kurtosis of the independent variables, the authors decided to refine the model and to include the services sector value added as a percent of GDP of the observed economy, and to proceed with the log-transformed GDP per capita. In the observed model Employment in services was omitted as a predictor, and Value Added in Services as a percent of GDP was included. This was done to see if the significance of the services sector in a country's GDP is potentially related to the higher GTI. The dependent variable chosen was the overall GTI, whereas the independent ones were Value Added in Services in 2020 (as a percent of gross domestic product) and logged GDP per capita in 2020 (current USD). The time point for the analysis was fixed (2020), and the analysis was conducted over the observed 29 economies. GDP per capita was chosen yet again as a variable tightly indicative of economic prosperity. The logged GDP per capita was needed to evade potential future collinearity issues, as well as to linearise the connection and account for the skewness of the source variable. Value added in services as a percent of GDP represents a variable indicating the importance and the effect the services sector has on the total economic output, as well as its share in overall economic prosperity. The confidence interval was set at 95%.

The model is set as follows:

$$GTI_i = \beta_0 + \beta_1 \cdot \log GDPpc_i + \beta_2 \cdot ServicesValueAddedGDP + \epsilon_i, \quad (1)$$

where:

1.  $GTI_i$  stands for Green Transition Index for country  $i$ ;
2.  $\beta_0$  is the intercept term;
3.  $\beta_1$  represents the coefficient for logGDP per capita;
4.  $\log GDPpc_i$  stands for GDP per capita for country  $i$ , *logged*
5.  $\beta_2$  represents the coefficient for Value Added in Services (as a percent of GDP);
6.  $ServicesValueAddedGDP$  stands for Value Added in Services (as a percent of GDP);
7.  $\epsilon_i$  is an error term for country  $i$ , representing a stochastic part of the model;
8.  $i \in \{EU - 27, Norway, United Kingdom\}$ .

The results obtained are as follows (see Appendix 3 in the Appendices section):

The R-square (coefficient of determination) value is 0,605 which suggests that roughly 60,5% of the variability in the GTI across countries can be explained by the chosen independent variables. The adjusted R-square is smaller and amounts to 0,366. The significance of the model is at 0,003 which is below the common p-value level of 0,05, which makes this model statistically significant. Logged GDP per capita with a p-value of less than 0,001 suggests that this indicator is a statistically significant predictor, meaning that countries with higher GDP per capita tend to perform better when it comes to the GTI, which was also shown in the previous model. This strengthens the hypothesis that GDP per capita is highly significant when it comes to the GTI performance.

Value added in services as a percent of GDP, however, turns out not to be statistically significant with a p-value of 0,146. Also, it correlates negatively with the GTI, which additionally complicates the previous finding, again potentially showing that services are not in the very end deemed crucial for the green transition. To be clear, the services sector has shown that it is not a suitable source of indicating whether the observed economy has made significant progress towards the green economy. As one of the index's integral parts is the economy section, which includes value-added in the environmental goods and services sector, it is safe to assume that these services sectors do not make up a significant percent of the total value added in services, given the results. Other important parts are left out of the model, which influences the index heavily and these are: nature, manufacturing, utilities, transport, waste, and buildings.

A step further was taken to analyze the effect of sectoral employment on the position within the Green Transition Index. Namely, Eurostat gathers data on employment in the environmental goods and services (% of total employment) in the EU countries. As this, according to the previous work, may reflect the greening of the economy more clearly, the authors decided to test for a correlation between employment in this intersector<sup>1</sup> and the Green Transition Index. Countries observed were EU countries, omitting the United Kingdom, Norway, as well as Austria due to lack of data. Results obtained show a weak to moderate connection between the two, with Pearson's correlation coefficient being roughly  $r \approx 0,37$ .

This testing included this specific intersector to account for the green title it carries, as well as its multisectoral (goods and services) approach. Yet again, the findings are weak to moderate as stated above, which again strengthens that the services sector is not crucially important when it comes to the green transition.

It would turn out that the services sector may highly fall under the neutral sector umbrella, thus making little to no impact in greening the economy. Neutral jobs and sectors refer to jobs or occupations that are neither directly associated with traditional carbon-intensive sectors nor part of the emerging green economy sectors. They are deemed to be indirectly influenced by green policies, primarily within service sectors. The index creators have not specifically mentioned the previous observation but have in fact shown the importance of the industry and manufacturing sectors, which can be seen further in the text.

### **3.3. Industry**

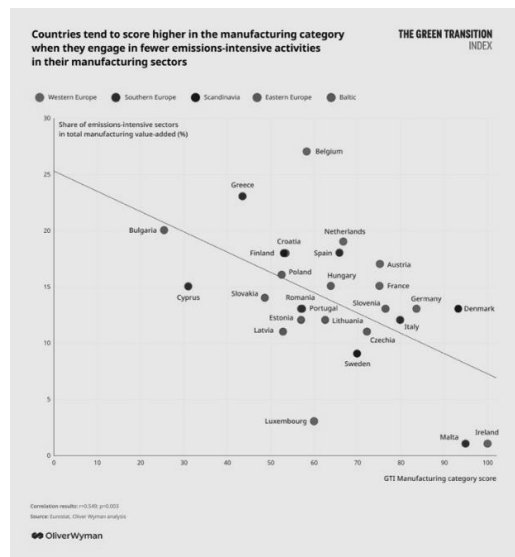
It is useful to see, the impact manufacturing sub-sectors and overall industry sectors may have when it comes to national performance within the Green Transition Index. In the paper *Rethinking the European Green Deal*, the authors agree that the EU's Green Deal lacks a vision of a just, post-carbon economy, offering inadequate resources with limited implementation

---

<sup>1</sup> Intersector refers to the various sector approach in the data observation. The employment in the following intersector comprises of both goods and services sectors which explains the term.

tools. They are unanimous on requiring a broader range of green industrial policies for carbon-neutral production (Pianta & Lucchese, 2020). This is expectedly, a solid ground for upcoming issues regarding the industry directioning. As the industry is multilayered, it is often difficult to obtain value-added data for the specific sector, either through national accounts or unified databases. Even testing the correlation between the GTI and employment in industry, the results are of no to low correlation between the two. The low correlation rate might indicate that countries that have higher rates of employment in industry, might still not be open to greening the industry. For example, in the US, the overall rate of transition from carbon-intensive to green jobs is increasing, but still, less than 1% of workers are making this transition (Curtis et. al., 2023). However, in the manufacturing sub-sector, the Green Transition Index shows a certain connection between the GTI Manufacturing score and the share of the emissions-intensive sector in total manufacturing value added. Namely, countries with fewer emission-intensive activities in their manufacturing sectors tend to score higher in the category.

**Figure 7.** GTI Manufacturing category score versus Share of emissions-intensive sectors in total manufacturing value-added, scatterplot



Source: Sourced from Green Transition Index Report 2020, Oliver Wyman

#### 4. Discussion and conclusion

Even though the GTI does not cover Bosnia and Herzegovina, several assumptions can be made. Firstly, the overall share of the services sector both in employment and value-added in GDP, would not be crucial for scoring higher in the index terms, as it was shown in the previous models. GDP per capita is shown to matter and that it correlates significantly with the GTI score of an observed economy, meaning countries that are more developed and generally wealthier, tend to have more resources and the ability to transition to the green economy sooner and more efficiently. One of the most important factors is how well and how efficiently countries can ‘green’ their manufacturing sub-sectors, as this was seen in the case of these 29 European countries and their GTI scores.

Bosnia and Herzegovina has a large stake in the manufacturing sector active as of 2023, when the manufacturing sub-sector accounted for 20% of the total employment, indicating that this might be the sector where the attention of the policymakers should be directed. Environmental regulation and green innovation are critical for industrial green development. Different types of environmental regulations (administrative, market-based, and public participation) have varying impacts on green innovation and industrial performance (Feng & Chen, 2018). Overall

results indicate that economic prosperity, measured by GDP per capita, turns out to be a significant predictor of a higher score in the GTI.

On the other hand, the role of sectoral employment, particularly in services, remains very much context dependent. While the services sector does not show a strong positive correlation with the GTI, the importance of green innovations in this sector must not be overlooked. On that note, Opazo-Basáez et al. (2018) found that green servitization in the automotive industry positively influences productivity outcomes, indicating potential areas within services that can significantly contribute to the green transition. In this manner, the services and industry sectors link to one another. The findings, concludingly, suggest that countries with more developed economies are better positioned to tackle the challenges regarding the green transition. For Bosnia and Herzegovina, which maintains a significant employment share in the manufacturing sub-sector, targeted policies that promote sustainable practices should be suggested. Further issues of the paper could discuss the structure of the industry sector in the country and its potential of being an ally, rather than an enemy, towards green transition.

## LITERATURE

1. Aldieri, L., & Vinci, C. (2018). Green Economy and Sustainable Development: The Economic Impact of Innovation on Employment. *Sustainability*. <https://doi.org/10.3390/SU10103541>.
2. Baş, T., Kara, F., & Alola, A. (2021). The environmental aspects of agriculture, merchandize, share, and export value-added calibrations in Turkey. *Environmental Science and Pollution Research*, 28, 62677 - 62689. <https://doi.org/10.1007/s11356-021-15171-z>.
3. Batrancea, L., Pop, M., Rathnaswamy, M., Batrancea, I., & Rus, M. (2021). An Empirical Investigation on the Transition Process toward a Green Economy. *Sustainability*. <https://doi.org/10.3390/su132313151>.
4. Campiglio, E. (2014). The structural shift to green services: A two-sector growth model with public capital and open-access resources. *Structural Change and Economic Dynamics*, 30, 148-161. <https://doi.org/10.1016/J.STRUECO.2014.05.003>.
5. Čekrljija, S., Đuričić, Z., Jovanović, R., & Pešević, S. (2023). MANAGING THE PRODUCTIVITY PROCESS IN AGRICULTURE, A FRAMEWORK FOR IMPROVING THE MARKET POSITION OF AGRICULTURE OF THE REPUBLIC OF SRPSKA. *Ekonomika poljoprivrede*. <https://doi.org/10.59267/ekopolj2303855c>.
6. Curtis, E., Layla, O., Park, K., O'Kane, L., & Park, R. (2023). Workers and the Green-Energy Transition: Evidence from 300 Million Job Transitions. *SSRN Electronic Journal*. <https://doi.org/10.3386/w31539>.
7. Dinç, Ö. (2022). THE RELATIONSHIP BETWEEN AGRICULTURE, INDUSTRY, SERVICE SECTORS AND ECONOMIC GROWTH IN TURKEY: BOOTSTRAP TODA-YAMAMOTO CAUSALITY TEST. *İşletme Ekonomi ve Yönetim Araştırmaları Dergisi*. <https://doi.org/10.33416/baybem.1125113>.
8. Feng, Z., & Chen, W. (2018). Environmental Regulation, Green Innovation, and Industrial Green Development: An Empirical Analysis Based on the Spatial Durbin Model. *Sustainability*, 10, 223. <https://doi.org/10.3390/SU10010223>.
9. Oliver Wyman. (2022). Green Transition Index. Retrieved from <https://www.oliverwyman.com/our-expertise/insights/2022/jun/green-transition-index.html>
10. Greenford, D., Crownshaw, T., Lesk, C., Stadler, K., & Matthews, H. (2020). Shifting economic activity to services has limited potential to reduce global environmental impacts due to the household consumption of labour. *Environmental Research Letters*, 15. <https://doi.org/10.1088/1748-9326/ab7f63>.
11. Henriques, S., & Kander, A. (2010). The modest environmental relief resulting from the transition to a service economy. *Ecological Economics*, 70, 271-282. <https://doi.org/10.1016/J.ECOLECON.2010.08.010>.
12. International Labor Organization. (n.d.). ILOSTAT. Retrieved from <https://ilostat.ilo.org/data/>
13. Markandya, A., Arto, I., González-Eguino, M., & Román, M. (2016). Towards a green energy economy? Tracking the employment effects of low-carbon technologies in the European Union. *Applied Energy*, 179, 1342-1350. <https://doi.org/10.1016/J.APENERGY.2016.02.122>.
14. Mladenović, Z., & Petrović, P. (2011). Uvod u ekonometriju. Beograd: Ekonomski fakultet
15. Murshed, M., Nurmakhanova, M., Elheddad, M., & Ahmed, R. (2020). Value addition in the services sector and its heterogeneous impacts on CO2 emissions: revisiting the EKC hypothesis for the OPEC using panel spatial estimation techniques. *Environmental Science and Pollution Research*, 27, 38951 - 38973. <https://doi.org/10.1007/s11356-020-09593-4>.

16. Newsome, L., & Sheridan, A. (2018). Taking Stock: Identifying the Growing Agricultural Service Sector in Australia. *Australasian Agribusiness Review*, 26, 1-18. <https://doi.org/10.22004/AG.ECON.285016>.
17. Oliver Wyman. (2022). Green Transition Index Report. Retrieved from <https://www.oliverwyman.com/our-expertise/insights/2022/jun/green-transition-index/methodology.html>
18. Opazo-Basáez, M., Vendrell-Herrero, F., & Bustinza, O. (2018). Uncovering Productivity Gains of Digital and Green Servitization: Implications from the Automotive Industry. *Sustainability*, 10, 1524. <https://doi.org/10.3390/SU10051524>.
19. Pianta, M., & Lucchese, M. (2020). Rethinking the European Green Deal. *Review of Radical Political Economics*, 52, 633 - 641. <https://doi.org/10.1177/0486613420938207>.
20. Quinn, J. (1988). Technology in services: Past myths and future challenges. *Technological Forecasting and Social Change*, 34, 327-350. [https://doi.org/10.1016/0040-1625\(88\)90003-0](https://doi.org/10.1016/0040-1625(88)90003-0).
21. Salimova, G., Ableeva, A., Lubova, T., Zalilova, Z., & Sharafutdinov, A. (2020). The Role of Agriculture in Gross Added Value. *Montenegrin journal of economics*, 16, 183-191. <https://doi.org/10.14254/1800-5845/2020.16-1.12>.
22. Shen, J., Zhu, Q., Jiao, X., Ying, H., Wang, H., Wen, X., Xu, W., Li, T., Cong, W., Liu, X., Hou, Y., Cui, Z., Oenema, O., Davies, W., & Zhang, F. (2020). Agriculture Green Development: a model for China and the world. *Frontiers of Agricultural Science and Engineering*, 7, 5-13. <https://doi.org/10.15302/j-fase-2019300>.
23. Wolfson, A., Mark, S., Martin, P. M., & Dorith Tavor. (2014). Sustainability and Service. *SpringerBriefs in Applied Sciences and Technology*, 31-48. [https://doi.org/10.1007/978-3-319-12964-8\\_3](https://doi.org/10.1007/978-3-319-12964-8_3)
24. World Bank. (2024). World Development Indicators. Retrieved from <https://data.worldbank.org/>

## APPENDICES

### Appendix 1

**Table 1-1.** Aggregated indicators

Country	Indicator (year 2020)					
	Green transition index (0-100)	Employment in services (% of total employment, modeled ILOSTAT data)	GDP per capita (current USD, modeled ILOSTAT data)	GDP per capita logged (base 10)	Services value added (% GDP, modeled ILOSTAT data)	Employment in environmental goods and services (% of total employment, EUROSTAT)
Austria	55,40	71,27	48789,50	4,69	63,19	n/a
Belgium	48,50	78,67	45587,97	4,66	69,75	1,52
Bulgaria	34,50	63,09	10148,34	4,01	61,43	1,90
Croatia	43,60	65,30	14383,87	4,16	59,22	2,30
Cyprus	26,90	77,76	28281,41	4,45	74,17	2,33
Czech Republic	48,00	60,14	22992,88	4,36	58,37	2,68
Denmark	57,00	79,00	60836,59	4,78	65,76	2,75
Estonia	55,40	67,89	23565,18	4,37	63,08	5,73
Finland	51,20	74,40	49169,72	4,69	60,12	4,73
France	55,10	77,69	39179,74	4,59	70,89	3,39
Germany	54,50	71,41	46749,48	4,67	63,23	1,48

Greece	39,60	74,69	17617,29	4,25	68,93	1,75
Hungary	45,60	63,34	16131,95	4,21	56,63	1,00
Ireland	48,20	76,70	85973,09	4,93	56,36	1,91
Italy	52,10	69,65	31922,92	4,50	66,90	2,42
Latvia	46,80	69,14	18096,20	4,26	63,64	2,79
Lithuania	39,40	68,95	20381,86	4,31	61,22	3,36
Luxembourg	50,30	88,86	116905,37	5,07	79,76	4,60
Malta	43,00	80,63	29592,57	4,47	76,70	1,52
Netherlands	57,40	81,97	52162,57	4,72	69,63	1,94
Norway	53,20	78,42	68340,02	4,83	59,60	n/a
Poland	41,80	58,73	15816,82	4,20	57,16	1,77
Portugal	48,00	69,86	22242,41	4,35	65,58	2,40
Romania	48,00	49,77	13047,46	4,12	59,98	1,75
Slovakia	46,10	60,86	19553,26	4,29	59,58	1,92
Slovenia	51,30	61,86	25558,43	4,41	57,04	2,90
Spain	49,60	75,48	26984,30	4,43	68,30	2,37
Sweden	53,60	79,96	52837,90	4,72	65,84	2,98
United Kingdom	54,90	80,79	40217,01	4,60	72,15	n/a
Average	48,24	71,60	36657,45	4,56	64,63	2,55

*Source:* Author's calculation based on the data obtained from the Green Transition Index website and ILOSTAT's modeled data)

## Appendix 2. Model results

**Table 2-1. Descriptive statistics**

Descriptive statistics						
Variable	Observed as	Sample size	Mean	Standard deviation	Median	Skewness
GTI	Dependent	29	48,24	7,04	48,50	-1,18
GDPpc_logged	Independent	29	4,49	0,26	4,45	0,27
GDPpc		29	36657,45	24104,19	28281,41	1,65
EmployServices%	Independent	29	71,60	8,71	71,41	-0,44

*Source:* Authors' calculation in SPSS

**Table 2-2. Correlation matrix**

Correlation matrix			
Variable	GTI	GDPpc_logged	EmployServices%
GTI	1,00	<b>0,56*</b>	0,25
GDPpc_logged	<b>0,56*</b>	1,00	<b>0,78*</b>
EmployServices%	0,25	<b>0,78*</b>	1,00

Source: Authors' calculation in SPSS

**Table 2-3. Model summary**

Model summary - dependent				
Variable	R value	R square value	Adjusted R square	Model Significance
GTI	0,63	0,4	0,35	p<0,001

Source: Authors' calculation in SPSS

**Table 2-4. Model summary – variable contribution**

Model summary - independents				
	β coefficients		t-value	Variable significance
	Standardized	Unstandardized		
<b>GDPpc_logged*</b>	0,93	25,01	3,82	<b>p&lt;0,001*</b>
EmployServices%	-0,47	-0,38	-1,95	p=0,62

Source: Authors' calculation in SPSS

### Appendix 3. Model results

**Table 3-1. Descriptive statistics**

Descriptive statistics						
Variable	Observed as	Sample size	Mean	Standard deviation	Median	Skewness
GTI	Dependent	29	48,24	7,04	48,50	-1,18
GDPpc_logged	Independent	29	4,49	0,26	4,45	0,27
GDPpc		29	36657,45	24104,19	28281,41	1,65
ServicesVA%	Independent	29	64,63	6,24	63,23	0,68

Source: Authors' calculation in SPSS

**Table 3-2. Correlation matrix**

Correlation matrix			
Variable	GTI	GDPpc_logged	ServicesVA%



GTI	1,00	<b>0,56*</b>	-0,009
GDPpc_logged	<b>0,56*</b>	1,00	<b>0,37*</b>
ServicesVA%	-	<b>0,37*</b>	1,00

Source: Authors' calculation in SPSS

**Table 3-3.** Model summary

Model summary - dependent				
Variable	R value	R square value	Adjusted R square	Model Significance
GTI	0,61	0,37	0,32	p=0,003

Source: Authors' calculation in SPSS

**Table 3-4.** Model summary – variable contribution

Model summary - independents				
	β coefficients		t-value	Variable significance
	Standardized	Unstandardized		
<b>GDPpc_logged*</b>	0,65	17,60	3,82	<b>p&lt;0,001*</b>
ServicesVA%	-0,253	0,19	-1,5	p=0,15

Source: Authors' calculation in SPSS

\* Values in bold are statistically significant (p-value below 0,05)

# EVALUATING THE IMPACT OF PROCEDURAL NON-TARIFF BARRIERS ON BOSNIA AND HERZEGOVINA'S EXPORTS TO ITS MAIN PARTNERS FROM THE EUROPEAN UNION

Vladana Ritan 1,\*

<sup>1</sup>University of Banja Luka, Faculty of Economics

\* Corresponding author: [vladana.ritan@ef.unibl.org](mailto:vladana.ritan@ef.unibl.org)

DOI: [10.63356/978-99976-57-34-3\\_12](https://doi.org/10.63356/978-99976-57-34-3_12)

## Abstract

This paper investigates the impact of procedural non-tariff barriers on Bosnia and Herzegovina's (B&H) export to the 10 key export partners in the European Union during the period from 2006 to 2019, including the signing of the Stabilization and Association Agreement (SAA). Using a gravity model framework and applying a random effects regression approach, the study examines how factors such as GDP, distance, and regional agreements influence Bosnia and Herzegovina's export performance. Additionally, the role of logistical performance, measured through the Logistics Performance Index (LPI), is explored to assess how administrative efficiency affects B&H exports and is used as proxy for the effect of the procedural non-tariff barriers. The results reveal that higher GDP and membership in the former Yugoslav bloc positively affect export values, while greater geographical distance presents a significant barrier. Moreover, the analysis confirms that the SAA has had a positive and significant effect on exports, while improvements in logistical performance, although marginally significant, contribute to higher export levels. These findings provide valuable insights for policymakers aiming to reduce procedural barriers and enhance trade infrastructure to better integrate Bosnia and Herzegovina into European markets.

**Keywords:** Procedural non-tariff barriers, Bosnia and Herzegovina, Gravity model framework, European Union, Stabilization and Association Agreement

**JEL Classification:** F13, F14, F15, F53, L91, O24

## 1. Introduction

In the context of global economic integration, non-tariff barriers (NTBs) have emerged as significant impediments to international trade, often overshadowing the impact of traditional tariff barriers. Procedural NTBs, in particular, represent a critical challenge for economies striving to enhance their trade competitiveness. These barriers, encompassing procedural administrative inefficiencies, documentation requirements, and customs delays, disproportionately affect smaller and less developed economies such as Bosnia and Herzegovina (B&H).

Bosnia and Herzegovina's trade landscape is heavily oriented towards the European Union (EU), with over 73% of its exports directed to EU member states (Agency for Statistics of Bosnia and Herzegovina, 2024). Despite this strong trade relationship, the presence of procedural NTBs continues to hinder B&H's export potential. As a non-member of the World Trade Organization (WTO), B&H faces additional complexities in aligning its trade policies with global standards, further exacerbating these barriers. The Stabilization and Association

Agreement (SAA), which came into effect in 2015, was a pivotal step towards fostering economic integration with the EU. However, the extent to which the SAA has mitigated procedural NTBs remains a pertinent question.

The theoretical underpinnings of this study are rooted in the gravity model of trade, a widely recognized framework for analyzing bilateral trade flows. Originally developed by Tinbergen (1962) and further refined by Anderson (1979), the gravity model posits that trade between two countries is positively correlated with their economic size and inversely correlated with the distance between them. This study employs the gravity model to investigate the impact of procedural NTBs on B&H's exports to its ten key EU trading partners: Germany, Croatia, Italy, Austria, Slovenia, the Netherlands, Hungary, Switzerland, France, and the Czech Republic. These countries were identified based on the total export values during the period from 2006 to 2019 (Agency for Statistics of Bosnia and Herzegovina, 2021).

The methodological approach involves the use of a random effects regression model to account for both within-group and between-group variations in the panel data. Key variables include Gross Domestic Product (GDP) of both B&H and its trading partners, geographical distance, and logistical performance as measured by the Logistics Performance Index (LPI). The LPI serves as a proxy for procedural NTBs, capturing the efficiency of customs processes, infrastructure, and supply chain management.

Preliminary findings highlight the significance of GDP and regional agreements in boosting export values. Membership in the former Yugoslav bloc emerges as a positive determinant, reflecting historical trade ties and cultural affinities. Conversely, geographical distance poses a substantial barrier to trade, consistent with theoretical expectations. The analysis also underscores the positive impact of the SAA on B&H's export performance, indicating the benefits of regional trade agreements in reducing procedural barriers. However, the role of logistical performance, while positive, remains marginally significant, suggesting that further improvements in procedural administrative efficiency are necessary.

This paper aims to contribute to the literature on NTBs by providing empirical evidence on the specific challenges faced by B&H in its trade with the EU. By identifying the key determinants of export performance and quantifying the effects of procedural NTBs, the study offers actionable insights for policymakers. The findings underscore the need for targeted reforms, including the digitalization of customs processes, harmonization of standards with the EU, and investments in logistical infrastructure. These measures are essential for enhancing B&H's trade competitiveness and fostering deeper economic integration with its European partners.

The subsequent sections of this paper are organized as follows: The literature review provides an overview of the theoretical and empirical research on NTBs, with a focus on procedural barriers and their implications for trade. The methodology section details the econometric approach and data sources used in the analysis. The results section presents the key findings, followed by a discussion of their policy implications. Finally, the conclusion summarizes the study's contributions and outlines directions for future research.

## **2. Literature Review**

Procedural non-tariff barriers (NTBs) are increasingly recognized as a significant impediment to international trade, particularly for emerging economies. These barriers encompass administrative, regulatory, and procedural requirements that often create inefficiencies in trade processes. Among the various forms of NTBs, procedural barriers have been shown to impose particularly high costs on smaller economies in Southeast Europe, including Bosnia and Herzegovina (Bjelić, Dragutinović-Mitrović, & Popović-Petrović, 2013).

Historically, non-tariff barriers have been categorized into quantitative restrictions, technical measures, and administrative barriers. Bjelić et al. (2013) highlighted the distinction between procedural and legal barriers, with procedural barriers such as customs delays and documentation requirements being particularly detrimental. These barriers exacerbate trade inefficiencies, increasing transaction costs and limiting market access for exporting firms. Baldwin (1970) was one of the first to identify these "administrative hindrances" as a structural obstacle to trade, a finding that remains relevant in contemporary studies.

Administrative procedural barriers have been extensively documented as critical obstacles to trade. Hornok and Koren (2015) developed a model showing that administrative costs, such as per-shipment fees and customs inspections, significantly reduce trade volumes. Their analysis revealed that reducing these costs is equivalent to lowering tariffs, thereby emphasizing the need for trade facilitation measures. Similarly, the OECD (2005) highlighted that non-tariff barriers, particularly procedural inefficiencies, can be more restrictive than tariffs, underlining the importance of simplifying customs procedures and enhancing transparency.

The Central European Free Trade Agreement (CEFTA) region, including Bosnia and Herzegovina, has been significantly affected by procedural NTBs. The GIZ (2022) report underscores the prevalence of conformity assessments, labeling requirements, and sanitary measures as major procedural barriers. Specific challenges highlighted by Bosnian traders include delays in pre-arrival processing, inadequate recognition of electronic documentation, and inefficiencies at border crossings. These issues contribute to prolonged waiting times and increased costs, emphasizing the need for harmonized procedures and enhanced regional cooperation.

Bosnia and Herzegovina's export sectors, particularly agri-food products, are disproportionately affected by these procedural barriers (Marković, Krstić, & Popović, 2022). Inefficient customs practices and non-standardized documentation requirements impede the country's ability to capitalize on its trade agreements, including the Stabilization and Association Agreement (SAA) with the European Union. The SAA, which aimed to foster economic integration, has only partially mitigated these barriers, as evidenced by the modest improvements in export performance post-implementation (Ristanović et al., 2020).

The Logistics Performance Index (LPI) provides additional evidence of Bosnia and Herzegovina's logistical challenges. Ranked among the lower-performing countries in the region, Bosnia's inefficiencies in customs and border management are a recurring theme in both academic and policy-oriented research (World Bank, 2023). Bjelić et al. (2013) emphasize that administrative reforms, while beneficial, have on the other hand been insufficient to resolve these systemic issues. The GIZ (2022) study corroborates this, indicating that procedural harmonization and digitalization of customs processes are crucial for improving trade performance. Trade facilitation measures play a key role in mitigating the diverse effects of procedural NTBs. The World Trade Organization's Trade Facilitation Agreement (TFA) advocates for pre-arrival processing, electronic documentation, and inter-agency coordination to streamline customs procedures (Indirect Tax Authority, 2023). Empirical evidence suggests that these measures can significantly improve trade efficiency. For instance, the Time Release Study conducted in B&H identified lengthy customs clearance times as a major bottleneck, recommending digitalization and improved coordination among border agencies to enhance efficiency (Indirect Tax Authority, 2023).

Building on the necessity of trade facilitation, the gravity model provides a robust theoretical framework to quantify how economic and logistical factors interact to influence bilateral trade flows. Originally introduced by Tinbergen (1962), the model posits that trade volume between

two countries is positively correlated with their economic size and negatively correlated with the distance between them. Christie (2002) demonstrated the applicability of the gravity model to Southeast Europe, emphasizing the roles of historical ties and geographic proximity. Similarly, Đogo, Gligorić, and Berez (2024) identified historical relationships and economic size as significant determinants of trade flows between Bosnia and Herzegovina and its European partners.

Empirical applications of the gravity model have revealed critical insights into Bosnia and Herzegovina's trade dynamics. Ristanović et al. (2020) found that GDP and distance are primary drivers of trade flows, with regional trade agreements like the SAA playing a supportive role. The findings of Đogo et al. (2024) further highlight the underutilization of Bosnia's trade potential, suggesting that procedural reforms could unlock significant gains. These studies underscore the need for targeted interventions to address procedural NTBs and enhance trade efficiency.

Studies underscore the quantitative impact of procedural NTBs on trade performance. For instance, Đogo et al. (2024) found that distance remains a major trade deterrent, while procedural barriers worsen these challenges. The role of procedural reforms in strengthening trade efficiency is further supported by the findings of Marković et al. (2022), who emphasized the need for improved customs practices and streamlined regulatory frameworks. Similarly, the GIZ (2022) study provides evidence that harmonization of procedures and reduction of NTBs could significantly enhance trade flows within the CEFTA region, with Bosnia and Herzegovina benefiting from improved regional trade integration.

The empirical literature collectively highlights the quantitative and qualitative impacts of procedural NTBs on trade. Distance, administrative inefficiencies, and historical ties emerge as consistent themes, with studies emphasizing the role of regional cooperation and harmonized standards in overcoming these barriers. By addressing procedural inefficiencies, Bosnia and Herzegovina could significantly enhance its trade competitiveness and economic integration within the European Union.

### 3. Methodology

#### Model specifications

The gravity model framework forms the cornerstone of this study's methodological approach to analyzing Bosnia and Herzegovina's trade dynamics. Introduced by Tinbergen (1962) and popularized by Anderson (1979), the gravity model is predicated on the analogy of Newton's law of gravitation, where trade flows between two countries are proportional to their economic mass and inversely proportional to the distance separating them. The particular model is expressed as:

$$\ln(\text{Export\_Value}_{it}) = \alpha + \beta_1 * \ln(\text{GDP\_BiH}_{it}) + \beta_2 * \ln(\text{GDP\_Partner}_{it}) + \beta_3 * \ln(\text{Distance}_{it}) + \beta_4 * \text{Former\_Yugoslav\_Country}_{it} + \beta_5 * \text{SAA}_{it} + \beta_6 * \text{Log\_Index}_{it} + u_i + \varepsilon_{it}$$

Where:

- $\ln(\text{Export\_Value}_{it})$  is the natural logarithm of export value from Bosnia and Herzegovina to partner country  $i$  at time  $t$ ,
- $\alpha$  is the constant term,
- $\beta_1$  to  $\beta_6$  are the coefficients representing the effect of each variable on the export value,
- $\ln(\text{GDP\_BiH}_t)$  is the natural logarithm of Bosnia and Herzegovina's GDP,

- $\ln(GDP\_Partner_t)$  is the natural logarithm of the trading partner's GDP,
- $\ln(Distance_i)$  is the natural logarithm of the distance between Bosnia and the partner country,
- $Former\_Yugoslav\_Country_i$  is a dummy variable indicating whether the partner country is a former Yugoslav state
- $SAA_t$  is a dummy variable representing the Stabilization and Association Agreement,
- $LPI_t$  is the logistics performance index of Bosnia and Herzegovina
- $u_i$  is the country-specific random effect, and
- $\epsilon_i$  is the error term for country  $i$  at time  $t$

The study uses panel data for Bosnia and Herzegovina's trade with its main EU partners from 2006 to 2021. Key export partners were defined based on the total export value to individual countries within the European Union. The identified countries include Germany, Croatia, Italy, Austria, Slovenia, the Netherlands, Hungary, Switzerland, France, and the Czech Republic. Data on export values were sourced from the Agency for Statistics of Bosnia and Herzegovina. Data sources include the World Bank's Logistics Performance Index, CEPII's distance database, and national statistics on GDP and trade flows.

## Results

In this section, the impact of Bosnia and Herzegovina's economic size, trade partnerships, and administrative and logistical factors on its export performance to the European Union was examined. The gravity model framework to estimate the effects of these variables was applied. Multiple models were tested, including random effects (RE), fixed effects (FE), and random effects models with clustered robust standard errors to account for heterogeneity and possible violations of assumptions, such as heteroskedasticity and autocorrelation. After testing different specifications, we focus on the random effects model with clustered robust standard errors as the most reliable and robust specification.

Several model specifications were considered to estimate the relationship between Bosnia and Herzegovina's export value and key variables. The random effects model was selected as the most appropriate based on the Hausman test (Prob > chi-square = 0.5193), which suggested that the random effects estimator was consistent. Further, the use of clustered robust standard errors helps account for any remaining heteroskedasticity and autocorrelation, which were confirmed using the Breusch-Pagan test and Wooldridge test, respectively.

Table 1 presents the results from the random effects model with clustered robust standard errors. This model is selected due to its ability to control for both within-group and between-group variations while addressing potential issues with heteroskedasticity and autocorrelation.

**Table 1.** Random Effects GLS Regression Results with Clustered Robust Standard Errors

Variable	Coefficient t	Std. Error	z	P> z	95% Confidence Interval
ln_GDP_BiH	1,3343	0,4381	3,05	0,002	[0,4757 to 2,1930]
ln_GDP_Partner	0,6161	0,3382	1,82	0,069	[-0,0468 to 1,2789]
ln_Distance	-1,6262	0,4321	-3,76	0,000	[-2,4731 to -0,7792]
Former Yugoslav Country	1,4899	0,7096	2,10	0,036	[0,0992 to 2,8806]

Stabilization and Association Agreement (SAA)	0,3586	0,0743	4,83	0,000	[0,2129 to 0,5042]
LPI	0,3909	0,2066	1,89	0,059	[-0,0141 to 0,7958]
_cons	20,6681	2,2938	9,01	0,000	[16,1723 to 25,1640]

*Source:* Author's calculation performed in STATA software.

**Table 2.** Model Fit Statistics

Statistic	Value
Within R-squared	0,5061
Between R-squared	0,8159
Overall R-squared	0,7895
Wald chi2(6)	706.97
rho (Fraction of Variance due to u_i)	0,8519

*Source:* Author's calculation performed in STATA software.

The findings reveal that Bosnia's GDP plays a critical role in enhancing export values, with a 1% increase in GDP correlating with a 1.33% increase in exports. This positive and statistically significant relationship highlights the importance of economic growth in driving export performance. Similarly, the GDP of trading partners also positively influences export values, albeit with marginal statistical significance. Larger economies, due to their consumption capacities, tend to engage in more extensive trade activities.

The impact of geographical distance as a trade barrier was found to be substantial and statistically significant. A 1% increase in distance between Bosnia and its trading partners is associated with a 1.63% decrease in export values. This aligns with the gravity model's theoretical expectations, underscoring the challenges posed by transportation costs and logistical complexities in fostering long-distance trade.

Regional and historical ties emerge as significant determinants of Bosnia's trade flows. Exports to former Yugoslav countries were found to be 1.49% higher than to other trading partners, reflecting enduring cultural, economic, and institutional linkages. This finding suggests that regional trade agreements and historical relationships play a pivotal role in shaping trade dynamics.

The Stabilization and Association Agreement (SAA) with the European Union has had a marked positive impact on Bosnia's exports. The analysis shows that the SAA is associated with a 35.86% increase in export values, demonstrating the effectiveness of trade agreements in reducing procedural barriers and fostering economic integration.

Logistical and procedural administrative factors also influence trade performance. Improvements in the Logistics Performance Index (LPI), which measures procedural administrative efficiency and logistical capabilities, were associated with higher export values. As proxy for the procedural administrative barriers, LPI index (0.39,  $p = 0.059$ ) is marginally significant, suggesting that improvements in procedural administrative efficiency contribute to higher export levels, though the effect is relatively weak.

Several robustness checks were performed to ensure the validity of the results. The Hausman test indicated that the random effects model is appropriate (Prob > chi2 = 0.5193), and the Breusch-Pagan test for heteroskedasticity showed no evidence of heteroskedasticity (Prob > chi2 = 0.9803). Additionally, multicollinearity was assessed using VIF values, which were all below 10, indicating that multicollinearity is not a concern in this model (mean VIF = 1.83).

The Wooldridge test for autocorrelation detected first-order autocorrelation in the panel data (Prob > F = 0.0019). To address this, clustered robust standard errors were used in the final model to account for potential heteroskedasticity and autocorrelation, thus improving the reliability of the coefficient estimates.

In summary, the results of this study highlight the significance of economic size, distance, historical relationships, and trade agreements in determining Bosnia and Herzegovina's export performance. The positive impact of the SAA demonstrates the benefits of trade agreements in reducing barriers and fostering closer economic ties with the European Union. Furthermore, the marginal significance of the procedural administrative barriers index suggests that continued improvements in logistical and procedural administrative efficiency could further enhance Bosnia's trade competitiveness.

### **Limitations**

This study recognizes several limitations. First, the reliance on the Logistics Performance Index (LPI) as a proxy for procedural barriers may not fully capture the effects of administrative inefficiencies. A key limitation is the lack of data on commonly used indicators such as "Trading Across Borders" from the World Bank's Doing Business reports, which are often considered more precise proxies for procedural barriers. Additionally, the model does not account for informal barriers, such as corruption or unofficial fees, which may also significantly impact trade flows. Finally, the study's focus on Bosnia and Herzegovina's main EU partners limits the generalizability of the findings to other trading relationships.

## **4. Conclusion**

By applying a gravity model framework, the study revealed that economic size, geographic proximity, and regional agreements are pivotal determinants of trade dynamics. The findings highlight the positive impact of the Stabilization and Association Agreement (SAA) on export values, illustrating its effectiveness in reducing procedural barriers and fostering closer economic ties. Despite these gains, administrative inefficiencies, as measured by the Logistics Performance Index (LPI), continue to pose challenges, indicating the need for systemic reforms to streamline customs and logistical processes.

The results demonstrate that Bosnia and Herzegovina's GDP has a robust positive correlation with export performance, while the GDP of trading partners also plays a supportive role, although with marginal significance. Geographical distance remains a significant obstacle, emphasizing the persistent logistical and transportation costs that hinder trade expansion. Additionally, historical and regional ties with former Yugoslav countries contribute positively to trade flows, reflecting the enduring influence of shared cultural and economic linkages.

The study's contributions are twofold. First, it provides empirical evidence on the impact of procedural NTBs on trade, offering valuable insights for policymakers seeking to enhance Bosnia and Herzegovina's trade competitiveness. Second, it underscores the potential of regional agreements like the SAA to mitigate barriers and foster economic integration.



Nevertheless, the findings also highlight critical areas for improvement, particularly in addressing procedural inefficiencies that continue to constrain trade flows.

While the LPI was employed in this study as a proxy for logistical and administrative efficiency, it is important to acknowledge that this index may not fully capture certain specific aspects of procedural barriers, such as corruption or informal practices, which can significantly impact trade. This limitation suggests the value of incorporating alternative approaches in future research. For instance, micro-level data, such as firm-specific export activities, or detailed case studies targeting particular sectors, could provide a more granular perspective on the effects of procedural inefficiencies. These methods could complement broader indices like the LPI and enhance the understanding of administrative barriers in their entirety.

In conclusion, the study contributes to the existing body of knowledge by providing empirical evidence on the impact of procedural NTBs on trade, particularly in the context of Bosnia and Herzegovina's integration with the European Union. It highlights the potential of regional agreements like the SAA to mitigate barriers and foster economic integration, while also identifying critical areas for improvement in addressing logistical inefficiencies. Additionally, the findings underscore the value of exploring alternative approaches in future research to more precisely approximate the effects of administrative barriers.

## REFERENCES

1. Agency for Statistics of Bosnia and Herzegovina. (2021). Export data. Retrived June 5, 2024 from <https://bhas.gov.ba/Calendar/Category/11>
2. Anderson, J. E. (1979). A theoretical foundation for the gravity equation. *American Economic Review*, 69(1), 106–116.
3. Baier, S. L., & Bergstrand, J. H. (2007). Do free trade agreements actually increase members' international trade? *Journal of International Economics*, 71(1), 72–95. <https://doi.org/10.1016/j.jinteco.2006.02.005>
4. Baldwin, R. (1970). *Nontariff distortions of international trade*. Brookings Institution. Washington.
5. Bjelić, P., Dragutinović-Mitrović, R., & Popović-Petrović, I. (2013). Administrative barriers in trade: A regional perspective. ISSN: 16941225
6. Christie, E. (2002). *Potential trade in Southeast Europe*.
7. Devadason, E. S. (2020). "New Protectionism" in ASEAN. *Journal of Asia-Pacific Business*, 21(1), 57–76. <https://doi.org/10.1080/10599231.2020.1708232>
8. Đogo, M., Gligorić, N., & Berez, R. (2024). Trade patterns in the Western Balkans: An empirical analysis. *Ekonomski horizonti*. Vol 26, 2, pg.183-199. doi:10.5937/ekonhor2402183D
9. Indirect Tax Authority. (2023). *Time Release Study: Bosnia and Herzegovina*. EU4TRADE Project.
10. GIZ, Open Regional Fund for South-East Europe – Foreign Trade. (2022). *Report on non-tariff measures in CEFTA*.
11. Hornok, C., & Koren, M. (2015). Administrative barriers to trade. *Journal of International Economics*, 96(S1), S110–S122. <https://doi.org/10.1016/j.jinteco.2015.01.002>

12. Marković, J., Krstić, B., & Popović, V. (2022). Impacts of procedural barriers on agri-food exports. *Ekonomika poljoprivrede*. doi: 10.5937/ekoPolj2201227M
13. OECD. (2005). Looking beyond tariffs: The role of non-tariff barriers in world trade. OECD Trade Policy Studies.
14. Ristanović, V., et al. (2020). The impact of regional trade agreements on procedural barriers: Evidence from the Western Balkans. *Economic Review*, 45(3), 456–478.
15. Tinbergen, J. (1962). Shaping the world economy: Suggestions for an international economic policy. The Twentieth Century Fund.
16. World Bank. (2023). Logistics Performance Index. World Bank Group. Available online at <https://lpi.worldbank.org/>

# EFFICIENCY OF INVESTMENTS IN TOURISM IN BOSNIA AND HERZEGOVINA

## - A COMPARATIVE ANALYSIS-

Andrijana Mrkaic Ateljevic<sup>1,\*</sup>

Sonja Vujovic<sup>2</sup>

Danijela Vukoicic<sup>3</sup>

Andrej Raspor<sup>4</sup>

<sup>1</sup>College of Tourism and Hotel Management, Trebinje

<sup>2</sup>University of Pristina, Faculty of Economics; [sonja.vujovic@pr.ac.rs](mailto:sonja.vujovic@pr.ac.rs)

<sup>3</sup>University of Pristina, Faculty of Science and Mathematics; [danijela.vukoicic@pr.ac.rs](mailto:danijela.vukoicic@pr.ac.rs)

<sup>4</sup>School of Advanced Social Studies, Nova Gorica, Slovenia; [andrej.raspor@fuds.si](mailto:andrej.raspor@fuds.si)

\*Corresponding author: [andrijanamrkaic@gmail.com](mailto:andrijanamrkaic@gmail.com)

DOI: [10.63356/978-99976-57-34-3\\_13](https://doi.org/10.63356/978-99976-57-34-3_13)

### Abstract

This research paper speaks about investments in the tourist hotel industry, in Bosnia and Herzegovina. Secondary data were used and they confirmed, through quantitative analysis, that a higher share of investments in GDP does not necessarily mean a higher efficiency of realized investments. The researchers put a special focus on the analysis of foreign direct investments in the tourism sector and their efficiency. The goal of the work is to look at the possibilities of increasing the GDP growth rate through the ICOR concept, with a special focus on the tourism industry.

Appropriate statistical methods were used for analyses of the state and determinants of investments in tourism in selected countries, while the efficiency of investments was measured by the Incremental Capital Output Ratio (ICOR). Previous scientific research has confirmed that ICOR and income are positively related. The authors decided to use ICOR as the simplest way to calculate the investment rate and GDP growth rate.

A comparative analysis showed that foreign direct investments in the tourism and hotel industry in Bosnia and Herzegovina, are below the European average. At the same time, the effectiveness of the investments and the rationality of the return period of the invested funds, are questionable.

**Keywords:** tourism, investments, ICOR, Bosnia and Herzegovina

## 1. Literature review and introduction

Tourism is very often a generator of economic development, it creates new jobs, contributes to the inflow of foreign currency, diversification of the local economy, but it can also be seen as a guardian of cultural heritage. For all this, it is necessary to start a "tourist story", and for that, significant capital is needed, which is often lacking. That is why the importance of investments in tourism is unquestionable. The tourism sector requires knowledge, capital, and infrastructure, but also access to global marketing and distribution chains (Nunkoo, Seetanah, 2018). Therefore, in modern economic conditions, there is a permanent need for capital investments that would facilitate the increase of the total value and accelerate the realization of profits in the future. The inflow of FDI most often encourages tourism development through

the strengthening of the offer and the construction of hotel services, historical sites, recreational centers, and all other forms of physical infrastructure that are lacking in the destination.

This paper will focus primarily on real (active) investments that are recorded in statistical reports as investments in tangible assets, that is, the acquisition and construction of basic and permanent working capital in order to create conditions for business (Lojović & Mrkaić-Ateljević, 2016). From an economic perspective, funds from private investors are always preferable, because in this way the public sector is less burdened. Investment by the public sector is expected only when there is no private interest (Rosentraub & Joo, 2009). Regardless of whether the funds invested in tourism are private, state intervention and investment control must not be absent (Ribarić & Ribarić, 2013). It is the state that should create an ideal business environment attractive to investors, primarily through strengthening the infrastructure base (Nawaz & Hassan, 2016). According to Keynes, the investor buys the right to a series of future net incomes, which he expects from the sale of the investment in question during its duration (Keynes, 1973). According to recent Keynesian models, lack of investment is largely ignored as a factor in high unemployment despite the strong empirical link between investment and the unemployment rate (Smith & Zoega, 2009). Krugman denies the link between investment and employment growth, especially in developed countries (Krugman, 1991). Blomstrom expands that theory and emphasizes that investments have a major contribution to economic development only in underdeveloped countries (Blomstrom, 1992). Significant research done by the authors Nguyen and others shows that the main motives for investment in tourism are economic growth, the rate of urbanization, and the rate of the young and employed population, and as a particularly significant motive, they single out the UNESCO list as a key driver of investment in the destination (Nguyen, Binh, & Su, 2020). Papadopoulos et al. (2016) emphasize the importance of national branding in attracting foreign investment in tourism. The size of the market, attractiveness, the level of minimum wages, but also the administrative conditions in the country that receives the investment significantly affect investments (Falk, 2016). Investigating the regional cooperation between Croatia and Bosnia and Herzegovina, the authors came to the conclusion that in 2010 as much as 32% of FDI in Bosnia and Herzegovina was of a regional nature (Broz, Buturac, Tkalec, 2015). Policymakers in many countries believe that market liberalization and deregulation reduce bureaucratic barriers to investment. An example is India, which was once ranked as the second most favorable destination for investments, right after China (Selevanathan, 2012). Similar rapid progress was achieved by Australia in the 1980s when, due to the process of internationalization, a significant impact on the pattern of economic regional activity was achieved, especially through FDI from Japan (Daly, Stimson, Jenkins, 1996).

Countries in transition attract FDI through pull and push factors. The attractiveness of the environment is expressed by pull factors, while "pushing" investment projects that are badly needed by the host country creates a push effect. Bosnia and Herzegovina attracted most of its FDI on the basis of push factors through the privatization process (Domazet, 2008).

## **2. Methodology**

Investment activity is most often interpreted according to the volume of realized investment in the tourism and hotel sector, by the contribution to new jobs or by the share of investments in the country's GDP (Li, 2017). However, for a more serious monitoring of the effects of investments, it is necessary to compare and process the aforementioned statistical data. Due to the fact that tourist destinations require significant capital-intensive investments, exchange of

experience, knowledge, and access to global chains, FDI is considered the best way to achieve these goals (UNCTAD, 2007).

The question is, what determines the value of FDI? How important are FDI flows to the host country? Quantitatively, the state of FDI measured by own capital, and reserves does not say much about the efficiency of investments (Endo, 2006). That is why it is necessary to reconsider whether large investments are also efficient investments. One study conducted in seven EU countries showed that FDI does not have a significant effect on economic growth and tourism development, even though it is a high capital investment (Sokhanvar, 2019).

The methodology was adapted to quantitative research and the data from official statistical websites were used. They were processed with adequate statistical methods in order to obtain tabular and graphical representations.

In order to analyze the efficiency of investments, the incremental capital coefficient is used. It is based on the ratio of the share of gross investments in GDP and the growth rate of GDP. In order to calculate the share of tourism investments, the state of GDP for the observed period was given first. Based on the share of investments in GDP and the real GDP growth rate, the ICOR coefficient was obtained. In addition, there will be an overview of structural variables from the field of tourism, that are significant for the interpretation of the efficiency of investments,

### 3. Comparative analysis of FDI in tourism in Bosnia and Herzegovina and Serbia

For economic growth, FDI is of great importance. For the purposes of this research, an overview of realized investments and the share of investments in tourism for Bosnia and Herzegovina and Serbia will be given. Below is an overview of the state of realized investments in Bosnia and Herzegovina, which are measured from May 1994 until today. A detailed numerical overview refers to the state of total investments for the period from 2017-2022. years. The balance implies the totality of realized investments for a long-term period. In addition to the balance, the website of the Central Bank of Bosnia and Herzegovina also provides data on realized flows and the annual inflow of investments.

After the investment record year 2007, the best year was 2022. However, 2007 cannot be commended from an economic point of view because it is the result of post-war privatization processes and acquisitions, with an extremely small participation of greenfield investments.

In the same period, the most significant percentage of foreign direct investments was realized in the sphere of production, banking, and trade. The tourism sector only participates with 1% of investments.

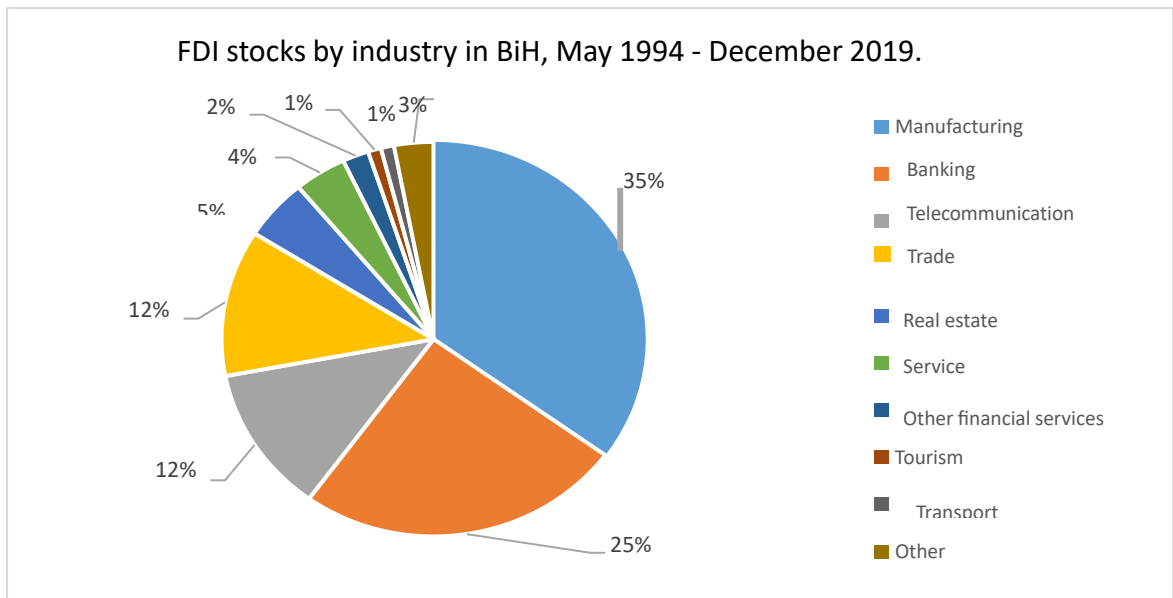
**Table 1.** Status and flows of total FDI in Bosnia and Herzegovina 2017-2022, millions of BAM

Year	State	Flows
2017.	13 949.0	853.6
2018.	14 745.4	963.3
2019.	15 342.0	799.3
2020.	15 680.0	823.5
2021.	16 757.6	1 130.0
2022.	17 447.4	1 440.3

Source: [http://statistics.cbbh.ba/Panorama/novaview/SimpleLogin\\_sr.html.aspx](http://statistics.cbbh.ba/Panorama/novaview/SimpleLogin_sr.html.aspx), 10.09.2023.

The World Council for Tourism and Travel has made a long-term assessment of investments in the tourism sector in the period 2008-2019. year, where the average investment growth rate for Bosnia and Herzegovina was 3.7% (WTTC, 2019). As can be seen in the table, the state of total FDI in 2022 was 17 447.4 billion BAM, and the flows, i.e. the realized total inflow in the mentioned year was about 1 440.3 BAM.

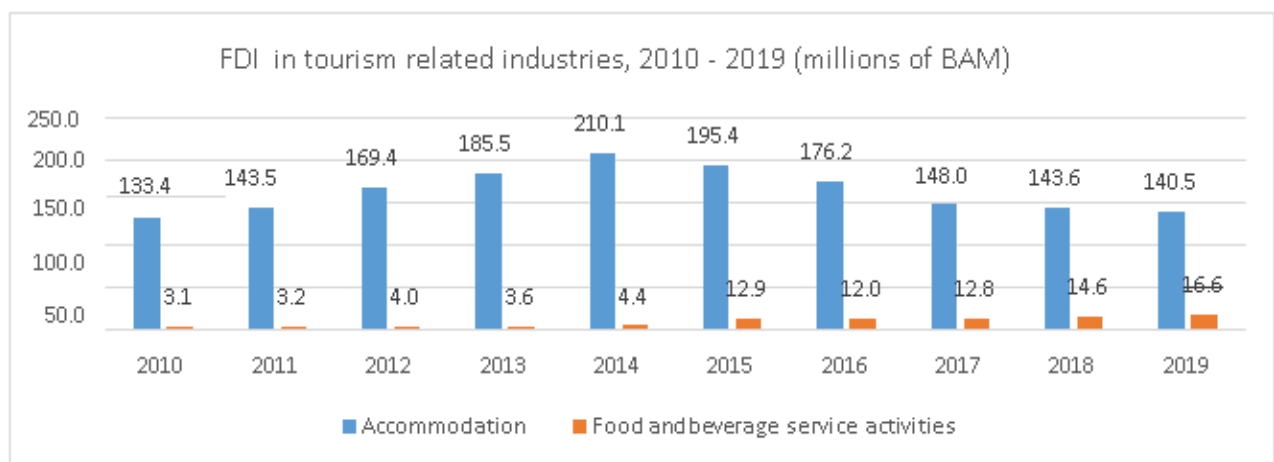
**Chart 1.** Share of FDI by sector in Bosnia and Herzegovina, 1994-2019. year



Source: <http://www.fipa.gov.ba/informacije/statistike/investicije/default.aspx?id=180&langTag=bs-BA>, 15.09.2023.

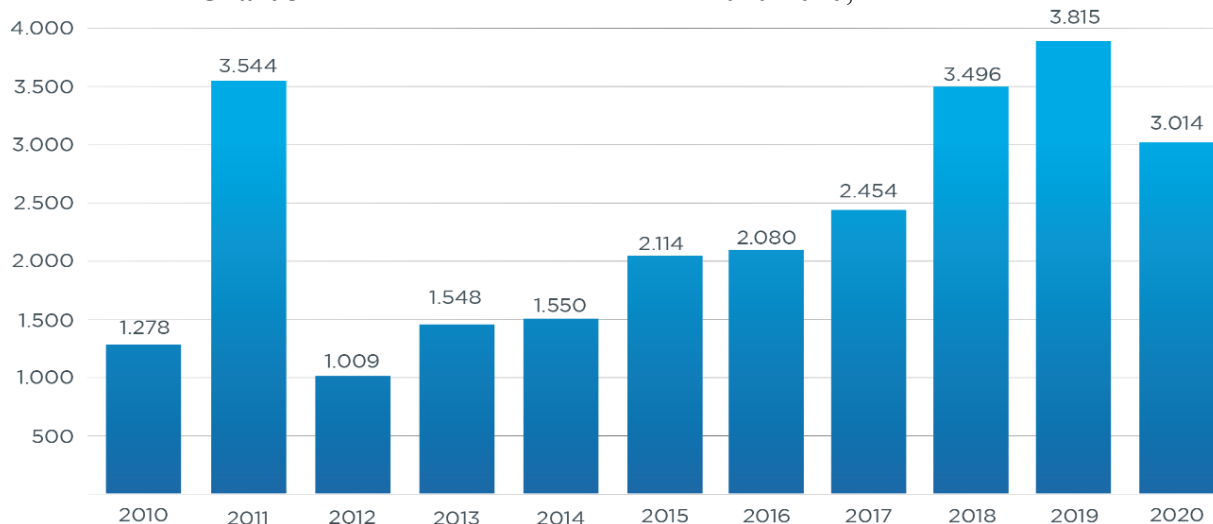
According to the fact that the tourism sector in Bosnia and Herzegovina does not have a regulated statistical nomenclature, the state and flows of FDI in this sector are monitored through two separate categories, accommodation activities, and food and beverage preparation and service activities, but we get a complete picture if we also take into account the data for travel agencies, creative activities and for sports, entertainment and recreation.

**Chart 2.** FDI inflows into the tourism sector in Bosnia and Herzegovina, millions of BAM



Source: [https://www.efsa.unsa.ba/ef/sites/default/files/peer\\_sebs\\_tourism\\_report\\_clean\\_2022.04.05.pdf](https://www.efsa.unsa.ba/ef/sites/default/files/peer_sebs_tourism_report_clean_2022.04.05.pdf), 22.09.2023.

When it comes to Serbia, it seems that it is becoming a real leader in attracting FDI. The following chart provides an overview of FDI inflows for all sectors.

**Chart 3. Inflows of total FDI in Serbia 2010-2020, billions of EUR**

Source: <https://cegit.org/strane-direktne-investicije-u-srbiji-ko-najvise-ulaze/>, 15.09.2023.

According to the IBM Global Location Trends 2020 Report, Serbia had a leading position in the period 2016-2020 in terms of the inflow of total investments, in relation to the number of inhabitants. In terms of jobs created, Serbia is the fifth economy in Europe in terms of realized FDI.

Significantly less is invested in the tourism sector than in the manufacturing industry, construction and financial operations, as the three most suitable sectors for investment.

According to data from the National Bank of Serbia, around 32.4 million euros were invested in the tourism sector in 2022. The following table shows the structure of investments in the tourism sector for Serbia in the period 2017-2022. years.

**Table 2. FDI in tourism for Serbia 2017-2022. years**

FDI		FDI by year, million EUR					
		2017	2018	2019	2020	2021	2022
By activities							
0	Total FDI for all activities	2.548,1	3.464,5	3.815,3	3.038,9	3.886,0	4.432,5
1	Accommodation and food services	16.3	7.6	8.5	15.1	1.3	23.3
2	Travel agencies	0.0	-0.1	0.4	0.0	0.0	-0.4
3	Creative, artistic and entertainment activities	16.1	1.1	-3.7	12.6	15.1	9.5
4	Total tourism (from 1 to 3)	32.4	8.6	5.2	27.7	16.4	32.4
5	Share (4) in total FDI (0)	1,27%	0,24%	0,13%	0,91%	0,42%	0,73%

Source: [https://www.nbs.rs/sr\\_RS/drugi-nivo-navigacije/statistika/platni\\_bilans/](https://www.nbs.rs/sr_RS/drugi-nivo-navigacije/statistika/platni_bilans/), downloaded 10.09.2023.

As can be seen from the table, foreign direct investments had a fluctuating trend during the observed period. It is interesting that in 2019, which is considered a record year in tourism at the global level, the level of investments for this sector decreased significantly, while the total increased significantly.

A similar scenario happened in 2021.

The most significant total investments in Bosnia and Herzegovina came from Austria, Croatia and Serbia, with a tendency to grow from year to year. When it comes to Serbia, the most significant total investments came from the Netherlands, Slovenia and China.

#### 4. Efficiency of investments in tourism in Bosnia and Herzegovina – ICOR

Before making a decision on the realization of an investment project, investors analyze the determinants of the market they plan to enter. This especially applies to foreign direct investments, where investors must consider the international rating enjoyed by the country in which they wish to invest, natural and human resources, the state of technological equipment of the country, and regulatory and institutional frameworks of the country in which the investment is made. According to the Doing Business report on the ease of doing business for the year 2023, Bosnia and Herzegovina is ranked 90th out of 190 countries. This is certainly not encouraging information for investors.

After reviewing the conditions and examining the market, investors must prepare an analysis of the economic and social justification of the project with a plan of action that will ensure efficient implementation. The efficiency of invested funds, that is, the rationality of investing, is most often measured by the capital ratio. The capital ratio can be marginal, average, and incremental. Incremental Capital Output Ratio - ICOR is the GDP growth rate. Therefore, for the needs of the tourist sector, ICOR (investment efficiency) is calculated in the following way (Bendeković et al. 1981).

$$ICOR = \frac{\text{(gross investments in the tourism sector in \% of GDP)}}{\text{growth rate of real GDP}}$$

ICOR measures the necessary percentage increase in the share of investments in order to achieve a 1% increase in the real GDP growth rate. A smaller ICOR means that a smaller percentage increase in investment is needed to increase GDP by 1%. A higher value of ICOR means a lower investment efficiency.

First, the percentage share of investments in GDP for the tourism sector must be determined, because these data are not available in secondary research sources. For this purpose, data on FDI in tourism were used because foreign investments are mostly related to superstructural capital investments, while domestic investments are less directly related to tourism and focused on infrastructure. These data are then compared with the GDP growth rate.

**Table 3.** Analysis of FDI for the tourism sector in Bosnia and Herzegovina 2017-2022.

FDI		Balance of FDI by year in millions of BAM					
		2017	2018	2019	2020	2021	2022
	By activities						
0	Total FDI for all activities	13 949.0	14 745.4	15 342.0	15 680.0	16 757.6	17 447.4



1	Accommodation	148.0	143.9	177.2	203.3	207.8	167.9
2	Preparation and serving of food and beverages	12.8	14.5	16.6	14.3	12.1	45.1
3	Travel agencies	1.9	4.3	4.7	8.7	9.2	9.6
4	Creative, artistic and entertainment activities	0.0	0.0	0.0	0.1	0.4	0.3
5	Sports, entertainment and recreation	13.4	13.6	13.6	9.5	9.5	9.3
6	Total tourism (from 1 to 5)	176.1	176.3	212.1	235.9	239	232.2
7	Share (6) in total FDI (0)	1,26%	1,19%	1,38%	1,50%	1,42%	1,33%

Source: Author's personal processing according to [http://statistics.cbbh.ba/Panorama/novaview/SimpleLogin\\_sr\\_html.aspx](http://statistics.cbbh.ba/Panorama/novaview/SimpleLogin_sr_html.aspx), 12.10.2023.

As can be seen from the previous table, in 2022, a slightly more significant participation of FDI in tourism was recorded in relation to total FDI, although it is very low compared to other activities. That year was the beginning of the conflict on the territory of Ukraine and Russia, so due to the difficult geopolitical situation, investors' interest was redirected to Bosnia and Herzegovina and the region.

In particular, in that period, investments were made in the real estate market, which led to an increase in demand and an increase in real estate prices, which certainly had a bad effect on the local population. Share of FDI in tourism in total FDI amounted to 1.33 %, while real estate in the same year participated with about 4.32% of participation in FDI flows.

For the purposes of analyzing the achieved efficiency of investments, the state of FDI in tourism and the nominal gross social product will be used in order to obtain the share of investments in tourism in GDP.

After that, the share of investments in tourism in GDP is put into relation with the growth rate of GDP.

**Table 4.** Calculation of ICOR for Bosnia and Herzegovina

Year	State of FDI in tourism	GDP	Share of FDI in tourism in GDP %	GDP growth rate %	ICOR
2017.	176.1	31 803,0	0,55	3,2	0,17
2018.	176.3	33 444,0	0,52	3,7	0,14
2019.	212.1	35 785,0	0,59	2,9	0,2
2020.	235.9	34 727,0	0,67	-3,0	-
2021.	239	39 107,0	0,61	7,4	0,08
2022.	232.2	45 605,0	0,50	3,9	0,12

Source: Author's personal processing according to <http://statistics.cbbh.ba>, 14.09.2023.

The table shows the data used to calculate ICOR, as well as its values by year. For example, for the year 2021, the value of ICOR is 0.08, which means that an increase in the share of investments by the percentage value of ICOR is necessary in order to achieve an increase in the GDP growth rate by 1%. A smaller ICOR indicates a higher investment efficiency at a given moment.

An increase in the share of tourism investments in GDP does not necessarily mean greater investment efficiency. If we look at table 4) and in 2017, when the share of tourism investments in GDP was 0.55%, and ICOR 0.17, and when we compare it with the data for 2022, when the share was 0.50%, and ICOR 0.12 i.e. lower than in 2017, which implies that investments were more efficient, even though they had a smaller percentage share in GDP.

Based on the above table, the average value of ICOR (investment effectiveness) for the observed period can be calculated, using the average values of the share of tourism FDI in GDP and the average growth rate for the observed period.

**Table 5.** Average value of investment effectiveness (ICOR) for the period 2017-2022.

<b>Period of time</b>	<b>Average share of FDI in tourism in GDP %</b>	<b>Average GDP growth rate %</b>	<b>ICOR-efficiency</b>
<b>2017-2022.</b>	0,57	3,01	0,14

*Source:* Author's personal processing

The average share of FDI in tourism in GDP for the observed period is 0.57%, while the average efficiency rate of investments is 0.14, not taking into account values for the year 2020. It is very important to note that it is desirable that higher GDP growth rates are the result of higher efficiency of investments, and not a higher share of investments. Therefore, not every large investment has to be efficient and increase the gross social product.

Using Pearson's coefficient of simple linear correlation ( $r$ ), we can examine whether the variable share of tourism FDI in GDP and efficiency of investments are correlated, i.e. whether a higher share of investments means higher efficiency. As a reminder, the Pearson coefficient ranges from -1 to +1, where the value +1 shows a complete positive correlation of the observed variables, and -1 a complete negative correlation of the observed variables (one phenomenon increases, the other decreases). A value of 0.00 indicates that there is no association between the variables. By calculation in Excel, Pearson's coefficient is  $r = -0.02$ , which means that there is no correlation between the phenomena.

Applied to this case, the increase in the share of tourism investments in the GDP of Bosnia and Herzegovina does not mean greater investment efficiency. This fact could be justified by stating that the tourist market of Bosnia and Herzegovina is small and that the increase of investments in that sector reduces efficiency, in the sense that intra-sector competition increases, so a larger offer means a slower return of individual investment funds because tourists have an alternative choice<sup>1</sup>. In

---

<sup>1</sup> The same conclusion was reached for the tertiary sector (to which tourism also belongs) in BiH by Velagić, who investigated the correlation between the efficiency of investments by sector and the share of SDU in the gross national product. More details:

addition, the reason for this negative correlation may be the type of investment. Greenfield investments involve investing in completely new assets and they are crucial for economic development and progress, because they start from "empty land" and require new labor force, affect the balance of payments and significantly increase the GDP growth rate, but the return of funds is slower. In contrast to them, brownfield investments imply investment in existing production assets, they aim at greater profitability of taken over jobs, and the easiest way to do this is to lay off workers.

## 5. Conclusion

The World Council for Tourism and Travel forecasted that by 2028, investments in Bosnia and Herzegovina could increase by more than 5.2% per year, however, the emergence of the Covid-19 pandemic stopped these forecasts.

The paper analyzed total foreign direct investments in Bosnia and Herzegovina and Serbia, after which an overview of FDI in tourism in the mentioned countries was given. The state of total foreign investments in Bosnia and Herzegovina in the period 2017-2022. was in constant growth. Total investments in Serbia have been steadily increasing since 2016, with the exception of 2020, when the COVID-19 pandemic appeared and left negative effects. FDI in Serbia is mostly based on the "nearshoring" investment system, which significantly shortens the supply and delivery chain for investors with foreign trade, language and cultural facilitation. The overview of investments shows that the tourism sector is less interesting for investors in both countries, because in relation to the total of these investments, they participate with only up to 1% in Serbia, and in Bosnia and Herzegovina up to 1.50%, which was achieved in 2020.

The geopolitical situation between Russia and Ukraine caused an increase in investment in the real estate market, more significantly than in earlier periods. This refers primarily to investments in apartments for secondary housing. However, investments in accommodation, food and beverage activities, travel agencies, sports, entertainment, and recreation, which collectively make up investments in tourism, participated with only about 1% of GDP since 1994. The efficiency of these investments is not correlated with the amount of investment. On the contrary, the analysis showed that the ICOR as an efficiency coefficient was lower in 2022, which implies greater investment efficiency, even though the state of investments was lower. Investment efficiency is closely related to the type of investment, but also to the characteristics of the market in which it is invested.

The analysis showed that the higher GDP growth rate in 2022 is not the result of a higher share of investments in tourism in the gross domestic product, but the result of more efficient investments (smaller ICOR). From 2018 to 2022, investments in accommodation were on a constant rise, and in 2022 there would be a drop in investment in accommodation and a drastic increase in investments in the preparation and serving of food and beverages. In the statistical reports for Serbia, these two categories are combined, so it is not possible to specify whether the dominant investments were in accommodation or in food and drink. Compared to Serbia, total investments in Bosnia and Herzegovina were constantly increasing, but the state of total investments was significantly lower.

Taking into account everything presented so far, it is concluded that we need larger investments to create more productive tourist offer projects that could rival the competition in the region, thus creating a good resource base and the opportunity to attract tourists. An increase in investments, if they are accompanied by a high rate of efficiency, actually means an increase in the export of tourist

---

Velagić, I. (2011). "Effects of direct foreign investment on the economy of the host country", Journal of economics and politics of transition, vol. XIII, (27), p. 9; Also available at [www.hrčak.srce.hr](http://www.hrčak.srce.hr)

products. Tourism export is an invisible export in which tourism products and services are sold to foreign tourists, for which large amounts of foreign currency are obtained. The type of investment also determines the direction of the investment's impact on the foreign trade balance, whereby greenfield investments are the most desirable because they imply the new engagement of fixed assets, supporting activities, workforce, i.e. the engagement of all three production factors of land, labor and capital.

## LITERATURE

1. Bendeković D., Barbić J., i drugi.(1981). *Metode ocjene opravdanosti investicionog projekta*, Ekonomski institut, Zagreb, str.31-33.
2. Broz, T., Buturac, G., & Tkalec, M. (2015). *To what extent does Croatia really cooperate with SEE countries in the fields of foreign trade, direct investment and tourism?* Economic research-Ekonomska istraživanja, 28(1), 879-906. <https://doi.org/10.1080/1331677X.2015.1092703>
3. Blomstrom, M., Lipsey, R., Zejan, M. (1992). *What Explains Developing Country Growth*. NBER Working Paper No. 4132, 1-36. DOI 10.3386/w4132
4. DALY, M. T., STIMSON, R. J., & JENKINS, O. (1996). Tourism and foreign investment in Australia: trends, prospects and policy implications. *Australian Geographical Studies*, 34(2), 169-184.
5. Domazet, A. (2016). Strane direktne investicije u Bosni i Hercegovini: od zabluda neoliberalizma do pokretača ekonomskog rasta. *Posebna izdanja Akademije nauka i umjetnosti BiH*, (2), 126-145.
6. Falk, M. (2016). *A gravity model of foreign direct investment in the hospitality industry*. Tourism Management, 55, 225-237. <https://doi.org/10.1016/j.tourman.2016.02.012>
7. Endo, K. (2006). Foreign direct investment in tourism—flows and volumes. *Tourism management*, 27(4), 600-614.
8. Keynes, J.M. (1973). *The General Theory: „Fundamental Concepts and Ideas“*, Monetary Theory, Penguin Books.
9. Krugman, P. (1991). *Geography and Trade*, M.I.T. Cambridge: Press MA.
10. Li, X., Huang, S., and Song, C. (2017). China's outward foreign direct investment in tourism. *Tourism Management*, 59, 1–6. <https://doi.org/10.1016/j.tourman.2016.07.007>
11. Lojovic Milimir, Mrkačić Ateljević Andrijana, Upravljanje investicijama u turizmu, Visoka škola za turizam i hotelijerstvo, 2016.
12. NAWAZ, M. A., & HASSAN, S. (2016). Investment and Tourism: Insights from the Literature. *International Journal of Economic Perspectives*, 10(4), 581-590.
13. Nunkoo, R., & Seetanah, B. (2018). Foreign direct investment and tourism development: A theoretical and empirical review. *Sage Handbook Tourism Manag*, 9, 556-566.
14. Nguyen, C. P., Binh, P. T., & Su, T. D. (2020). Capital investment in tourism: a global investigation. *Tourism Planning & Development*, 1-27.
15. Papadopoulos, N., Hamzaoui-Essoussi, L., & El Banna, A. (2016). Nation branding for foreign direct investment: an Integrative review and directions for research and strategy. *Journal of Product & Brand Management*, 25(7), 615-628. <https://doi.org/10.1108/JPBm-09-2016-1320>
16. Ribarić, H., & Ribarić, I. (2013). Government Intervention in Driving the Development of Sustainable Tourism. Paper presented at the 2nd International Scientific Conference Tourism in South East Europe.
17. Rosentraub, M. S., & Joo, M. (2009). Tourism and economic development: Which investments produce gains for regions? *Tourism Management*, 30(5), 759-770.
18. Selvanathan, S., Selvanathan, E. A., & Viswanathan, B. (2012). Causality between foreign direct investment and tourism: Empirical evidence from India. *Tourism Analysis*, 17(1), 91-98.
19. Smith, R., & Zoega, G. (2009). Keynes, investment, unemployment and expectations. *International Review of Applied Economics*, 23(4), 427-444.
20. Sokhanvar, A. (2019). *Does foreign direct investment accelerate tourism and economic growth within Europe?* Tourism Management Perspectives, 29, 86-96. <https://doi.org/10.1016/j.tmp.2018.10.005>
21. Velagić, I.(2011).“Efekti direktnih stranih ulaganja na ekonomiju zemlje domaćina“, Časopis za ekonomiju i politiku tranzicije, god. XIII (27).
22. [www.unwto.org](http://www.unwto.org)
23. [www.nbs.rs/sr](http://www.nbs.rs/sr)
24. [www.statistics.cbbh.ba](http://www.statistics.cbbh.ba)
25. [www.tradingeconomics.com](http://www.tradingeconomics.com)

CIP - Каталогизација у публикацији  
Народна и универзитетска библиотека  
Републике Српске, Бања Лука

338.246.88:316.42(082)(0.034.2)

**RESEARCHING Economic Development and  
Entrepreneurship in Transition Economies REDETE (11 ;  
2024 ; Ancona)**

Sustainability in Western Balkans in an Era of Uncertainty  
[Електронски извор] : Conference Proceedings / Researching  
economic development and entrepreneurship in transition  
economies, Ancona, Italy 17-18 September , 2024 ; Marche  
Polytechnic University & University of Banja Luka ; [11th REDETE  
conference 2024] ; [managing editors Jovo Ateljević, Donato  
Iacobucci and Dragan Gligorić]. - Онлајн. изд. - Banja Luka :  
Faculty of Economics, University of Banja Luka, 2025

Системски захтјеви: Нису наведени. - Наћин pristupa  
(URL): [https://redete.org/assets/content/conf-prog/conf-proceedings\\_2024.pdf](https://redete.org/assets/content/conf-prog/conf-proceedings_2024.pdf). - Ел. зборник. - Ел. публикација у ПДФ  
формату опсега 172 стр. - Насл. са насл. екрана. - Опис извора  
дана 1.4.2025. - Библиографија уз радове.

ISBN 978-99976-57-34-3

COBISS.RS-ID 142407937