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Greening policy in the Western Balkans: Financial Pathways

SUMMARY

The topicalisation of the green economy has gained attention in the Balkan Peninsula. While other EU countries have made significant progress on various greening policy issues, the Western Balkan countries (WBCs) are moving at a slower pace. The WBCs show substantial potential; they possess the capacity for growth, and regulations regarding greening have improved considerably. However, the transition from a brown to a green economy is progressing slowly. The expansion of green transition finance concepts, through measures such as green foreign direct investment, development aid, green loans, and green bonds, has revealed many limitations of traditional investment approaches. By analysing the current situation in EU-Serbia relations and Serbia's capacities and potential concerning greening policy, we conduct an analysis that draws analogies from various aspects of the effectiveness of green investments in the economic sectors. The study identifies the role of financing in the economic growth of the WBCs. It also examines the role of EU development assistance, the main trading partner of the Western Balkans region (WBR). This research provides concrete recommendations for economic policymakers to enhance the efficiency of

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financing the green transition, thereby contributing to the development and modernisation of the WBCs.

Keywords: Green Transition, Green Economy, Brown Economy, Green Agenda, Comparative Analysis..

Politika ozelenjavanja na Zapadnom Balkanu: finansijski putevi

Aktuelizacija zelene ekonomije privukla je pažnju na Balkanskom poluostrvu. Dok su druge zemlje EU postigle značajan napredak u različitim pitanjima politike ozelenjavanja, zemlje Zapadnog Balkana (ZB) kreću se sporijim tempom. ZB pokazuju značajan potencijal; poseduju kapacitet za rast, a propisi u vezi sa ozelenjavanjem su se znatno poboljšali. Međutim, prelazak sa smeđe na zelenu ekonomiju napreduje sporo. Širenje koncepata finansiranja zelene tranzicije, kroz mere kao što su zelene strane direktne investicije, razvojna pomoć, zeleni krediti i zelene obveznice, otkrilo je mnoga ograničenja tradicionalnih investicionih pristupa. Analizirajući trenutnu situaciju u odnosima EU i Srbije i kapacitete i potencijal Srbije u vezi sa politikom ozelenjavanja, sprovodimo analizu koja povlači analogije iz različitih aspekata efikasnosti zelenih investicija u ekonomskim sektorima. Studija identifikuje ulogu finansiranja u ekonomskom rastu ZB. Takođe ispituje ulogu razvojne pomoći EU, glavnog trgovinskog partnera regiona Zapadnog Balkana (ZB). Ovo istraživanje pruža konkretne preporuke kreatorima ekonomske politike kako bi se poboljšala efikasnost finansiranja zelene tranzicije, čime bi se doprinelo razvoju i modernizaciji ZB.

Ključne reči: Zelena tranzicija, Zelena ekonomija, Smeđa ekonomija, Zelena agenda, Komparativna analiza.

Introduction

The WBCs (Serbia, Bosnia and Herzegovina, Macedonia, Albania, Montenegro, and Kosovo) strive to achieve the individual and preserve the collective Sustainable Development Goals set out in the 2030 Agenda.[4]

[4] This designation is without prejudice to positions on status, and is in line with UNSCR *1244*/1999 and the ICJ Opinion on the Kosovo Declaration of Independence. The rest of the manuscript contains the symbol * next to Kosovo.

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Numerous challenges arise, and the crucial one is found in the difficult financing of the already expensive green transition process. Expectations are high, but there are many limitations related to the region's high dependence on coal and its vulnerability to energy price shocks, climate change, and insufficiently strong economies, limited budgets, insufficient regulation or law enforcement, limited public participation, and political tensions (OECD 2022) (Gomes and Rsende 2019). Progress has been made in the adoption of international energy frameworks and commitments to decarbonise by 2050, but pressure from energy poverty, fossil fuel subsidies, and environmental degradation remains.

Examining the current institutional framework for the green transition in this group of countries, we aim to identify the primary obstacles to greening policies and assess the role of the EU in this context. The determination of green economies is largely constrained by corruption and poor governance. Still, it drives change in the region through a broader framework of the EU accession process. The EU's interest in the RWB is evident, as confirmed by the growing cooperation in the field of sustainable economy. Progress is achieved on both sides through the European Green Deal, the Economic and Investment Plan (EIP) for the Western Balkans, and the Green Agenda for the Western Balkans (European Commission 2020) (European Commission 2020). The emphasis of all joint activities is on increasing investments in green technology and reducing investment costs. The implementation of the Green Agenda is supported by the EU through IPA III and the Western Balkans Investment Framework (WBIF), which is implemented through two channels, the Green for Growth Fund (GGF) and the Regional Energy Efficiency Programme (REEP). At the same time, guarantees are given through the Western Balkans Guarantee Facility (EFSD+) (European Commission 2023).

Acceleration of greening could be achieved by speeding the energy transition with the application of new technology (Karlo Hainsch et al. 2022). The green transformation helps to meet the climate and energy targets set by the EU (Loffler et al. 2022). Wagner points out that the implementation of the transition from a grey to a green economy could be directed with the help of partnerships between local, regional, and national levels (2021). There is a group of authors who oppose the implementation of the green transition due to allegations that it intensifies the socio-ecological environment, threatens energy justice, increases energy poverty, harms the environment, and that the costs of the necessary climate actions are too high (Dunlap and Laratte 2022; Guayo and Cuesta 2022; Scott and Smith 2017; Jewell and Sherp 2019).

The research on the current topic of greening leads us to the question of how favourable the environment is for financing a sustainable economy in the WBR. In other words, what are the prospects for the WBCs in implementing the green transition? Trends towards greening in the region are positive at the institutional, business, and social levels. Traditional and conservative approaches to work and business are still present, thanks to a relatively high

share of the grey economy. Innovation, technology, education, and the labour market all benefit from the energy sector's role in the greening process. Using a comparative method, we argue that WBCs have the capacity and environment to implement greening policies properly and strongly influence actions and outcomes in the green transition. We also show that financial, technical, or institutional EU support should help achieve the set goals. Moreover, these countries need to maintain regional cooperation in sustainable development to withstand external shocks and ensure sufficient funding to achieve the goals, which can increase overall trust.

Following the introduction, we go over growth models in the second section of this paper. We describe the viewpoints on greening in the WBR in the third section. The shared viewpoints of the EU and the WBCs are presented in the fourth section. The fifth section highlights the significance of EU assistance to this area. We presented the findings together with recommendations and limitations in the sixth section. The conclusion is the last section of this paper.

Evolving Growth Models: From Neoclassical Roots to Green Innovation

Advances in investment theory since the mid-1980s have expanded the traditional neoclassical framework by incorporating the concepts of investment irreversibility and the effects of uncertainty. Earlier models suggested that adjustment costs have decreased with the size of investment projects, often limiting the number of such projects. However, contemporary thinking emphasises that investment in productive capacities occurs as a continuous flow, reflecting dynamic paths of capital formation over time. Real options theory demonstrates how economic uncertainty reduces investment rates, especially in both developing and OECD countries (Pindyck and Solimano 1993). That is particularly relevant in today's context of climate change and policy volatility. Investment spending is a key component of national income, reflecting the short-term use of resources and shaping the long-term capital base, increasing national wealth (Parker 2010).

Building on this foundation, modern development strategies prioritise inclusive green growth as a pathway to sustainable development. Green growth theories integrate environmental sustainability with economic progress, emphasising the efficient use of natural resources, the reduction of ecological risks, and the generation of multiple co-benefits across sectors. These theories evolve from endogenous growth models by including environmental externalities, innovation in clean technologies, and natural capital as productive assets (Fabozzi, Focardi, Ponta, Rivoire, and Mazza 2022). The shift from fossil-based models to low-carbon economies represents not only an ecological imperative but also a structural economic transition. Green investments thus serve as strategic tools for promoting long-term resilience,

environmental integrity, and inclusive wealth creation, positioning sustainability at the core of national development (Soumyananda 2013).

Contemporary theories of green growth extend traditional investment models by integrating sustainability and environmental constraints. While neoclassical models have emphasised cost minimisation and profit under certainty, green growth models prioritise long-term resilience, low-carbon technologies, and efficient resource use (in the energy sector). These models account for investment irreversibility and uncertainty, especially under climate volatility and evolving regulatory frameworks. The transition towards inclusive green growth reflects not only a change in the direction of investment flows but also a redefinition of national wealth to include environmental and social dimensions, as well as political ones (Sjak, Toman, and Withagen 2014).

WBR Greening Perspectives

The WBR's experience in sustainable energy investments and jobs has been built over decades. Their scope is not extremely large, nor do they yield significant results. However, they represent the basis for future investments in renewable sources, replacement of inefficient and outdated equipment, and acquisition of resources through the digitalisation of operations for efficient use. Djoric points out that these are poor and small countries with enormous potential for the green economy, sustainable development, and ecological entrepreneurship implementation (2021). Business transformation, social responsibility, and environmental awareness are the main guides of the WBCs on greening. The process itself is complex, expensive, and uncertain. As such, it puts market participants in a position of continuous adaptation to green demands, often in an unfavourable and uncertain business environment. In Serbia, the MSME sector has faced several constraints after the COVID-19 pandemic, namely a lack of capital, insufficient skills, unreliable information on green technologies, a lack of financial products and tools, incomplete support from the state, a lack of support from the banking sector, and an inadequate regulatory environment (dysfunctional fiscal framework) (Berhens 2021). An additional problem for companies is the demanding administration (procedures and regulations) that accompanies green investments. Finally, there is a limitation on the part of the companies themselves due to the inability to prepare project proposals and feasibility studies.

There is a high level of interest in companies getting involved in green projects. Unequivocally, they express readiness to participate in green projects co-financed through subsidies or grants, external financing, and their own resources. There is also a great interest in providing technical assistance through technical support and training workers to increase capacity. The overall financial framework for green projects includes state guarantees and a more efficient banking system, which can ensure sustainable financing and implementation of these projects. Finally, it is in the interest of the entire region

to create an environment for green investments through simplified regulation, sustainable long-term incentives, and predictable returns from green projects.

The WBR potentials are obvious and enable a greater number of private investors and companies in the green sector. Companies in Serbia have shown that the main motive for green investments is the reduction of operating costs. Also, corporate social responsibility has become a key driver of green investments (Ibid., 23). The extent of greening varies significantly depending on the type of measurement and coverage but also on the approach to assessing greening. The Global Green Economy Index shows the achievements of the WBR countries in anticipating green measures through four dimensions (climate change & social equity, decarbonisation sector, markets & ESG investment, and environmental health) (Dual Citizen n.d.). According to this index, Albania (ranks 39 out of 160 countries) has dominated the region for several years, with Montenegro (57) and Serbia (81) making significant progress. North Macedonia (100) and Bosnia and Herzegovina (127) are in a slight stagnation. The Green Growth Index (column 2nd of Table 1) measures a country's performance in achieving sustainability in a given year through four dimensions (efficient and sustainable resource use, natural capital protection, green economic opportunities, and social inclusion). The higher the value of the index, the higher the levels of sustainability in the economy. The values in the WBR countries reflect the low performance of green growth (20-40). According to Acosta, green growth is a developmental concept of economic growth, which is, at the same time, environmentally sustainable and socially inclusive (Acosta et al. 2023). During 2023, Bosnia and Herzegovina used the most opportunities for green growth (rank 23) and Montenegro the least (rank 39) in the WBR.

Table 1. Scores on pillars for green economic opportunities by region and rank, 2023

	Albania	Bosnia and Hercegovina	Montenegro	North Macedonia	Serbia
Green Growth Index (rank)	**25**	**23**	**39**	**29**	**31**
Green Economic Opportunities	38.31	51.44	32.01	45.08	38.57
Indicator categories: (rank)	*30*	*10*	*36*	*29*	*29*
Green Investment	24.10	41.29	21.68	64.07	39.05
Green Trade	65.55	67.47	54.34	:	64.27
Green Employment	38.48	66.25	39.01	46.64	41.70
Green Innovation	35.43	37.94	22.85	30.67	21.55

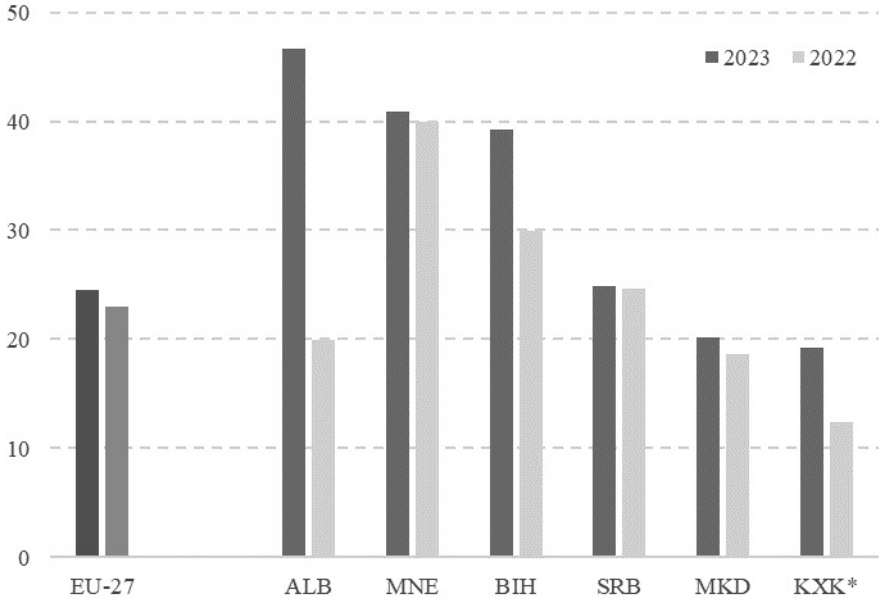
Source: Acosta et al. (2023)

Note: No available data for Kosovo* (UN 1244)

Table 1 presents values that relate only to the dimension of the green economy. Bosnia and Herzegovina dominates in the WBR with a high value of the Green Economic Opportunities sub-indicator of 51.44 and a rank of 10 (it is a top 10 in the Europe sub-region). In the region, trade has gone the furthest with greening. However, North Macedonia dominates in green investments, which refer to public and private investments in the sustainable use of resources, such as materials, water, energy, and land, and the protection of natural capital, such as the environment, climate, sustainable development, and green growth (Ibid.).

Sustainable energy production opportunities in the WBR do exist, creating a favourable environment for investments in the energy sector, ensuring economic, environmental, and social stability (Muench et al. 2022). The basic initiatives and greatest achievements of the green transition are achieved through the energy sector, transforming the energy system and ecological allocation of resources. The results are visible through the growing share of renewable energy production every year, thanks to the strong growth in the share of wind and solar energy (Figure 1).

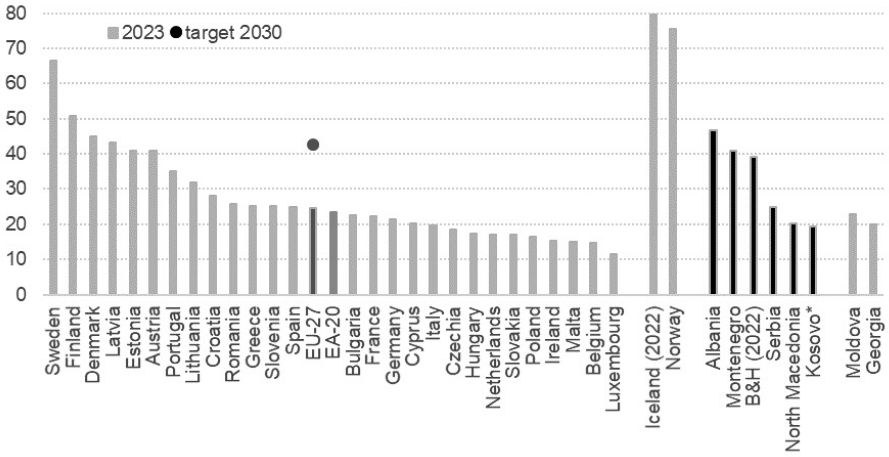
Figure 1. Share of renewables in total energy production, WBC



Source: Author's calculations based on the Eurostat database
Note: * UNCHR 1244/1999.

The contribution also comes from reducing the consumption of nonrenewable energy. The WB region has a favourable image of the RES compared to many EU member states. It is even closer to the EU's 2030 target. (Figure 2). To that should be added the global trend of creating microgrids — an energy market with a larger number of players (producers & consumers) in the local energy market.

Figure 2. Share of Energy from Renewable Sources in European Countries, 2023 (% of gross final energy consumption)



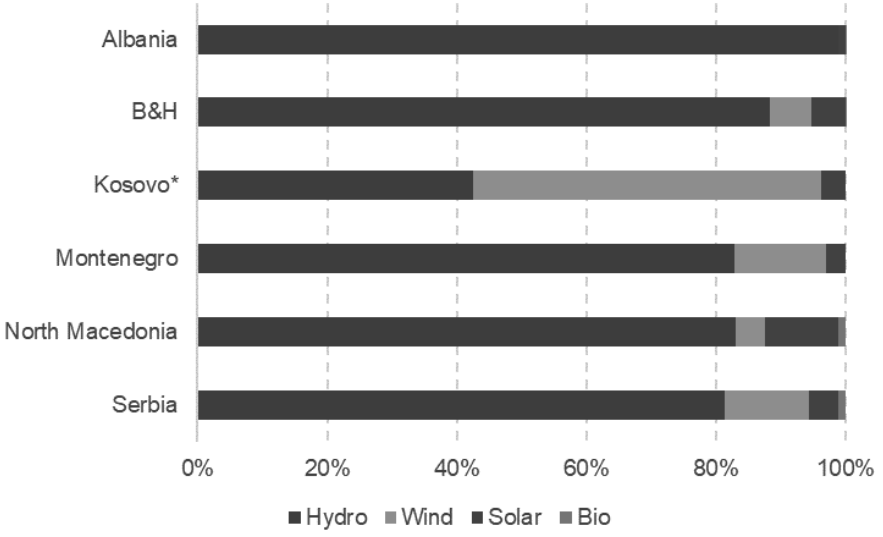
Source: Author's calculations based on the Eurostat database

Note: * UNCHR 1244/1999. The latest available data for Iceland and B&H (Bosnia and Herzegovina) in 2022.

In 2023, Albania and Montenegro had the largest shares of renewable energy sources, while this level has grown significantly since 2017 in Bosnia and Herzegovina and is now close to the level in Albania (UNCTAD 2024).

Renewable energy sources are involved in electricity production at different scales (Figure 2). The largest percentage of energy production comes from hydro capacity (Albania dominates with as much as 99%), followed by wind and solar power (Kosovo* dominates with solar sources). Bioenergy sources are almost non-existent (only 1.2% in Serbia and North Macedonia). This picture has changed in recent years, with increasing investment in wind and solar power and the expanding bioenergy capacity.

Figure 2. Energy Production Structure from renewable sources, in megawatts, 2022



Source: Author's calculations based on the Eurostat database

Viewed through the structure of energy consumption by sector, which was produced from renewable energy sources in the WBR, it was most represented in 2023 for heating and cooling. Albania is an exception, as it produced more electricity from renewable sources than the total amount of electricity it consumed (the share is 105.38%). In 2023, Albania and Montenegro had the largest shares of renewable energy sources, while this level has grown significantly since 2017 in Bosnia and Herzegovina and is now close to the level in Albania (Ibid., 155).

The concrete results of the WB6 green investments have been noted in several sectors of the economy so far (OECD 2022). Albania, a dominant hydropower producer in the region, has significantly increased the volume of renewable energy, thanks to solar and wind projects (EUKI 2024). The role of hydropower in Bosnia and Herzegovina is established, and the support of green investments is focused on energy efficiency (World Energy Council 2022). The inflow of green investments into Kosovo* is mainly in waste management and solar power (Gjukaj, Kerolli, Kabashi, and Bualoti 2024). Eco-tourism and green FDI are expressed in Montenegro (Domazet, Marjanović, and Subić 2024). In North Macedonia, green investments are focused on the creation of solar and wind farms (Filipovski Jelačić 2020). Serbia has the largest inflow of green investments in the region and is represented in all renewable

energy sources—solar, wind, and hydrogen (Gburčik, Gburčik, Gavrilov, Srdanović and Mastilović 2009).

In the WB region, public investment in infrastructure and RES projects is far below the EU average (Frey 2024). Private investors are failing to provide sufficient funds for more concrete green transition goals. At the same time, they face inadequate sources of financing, an insufficient level of investment security, and insufficiently reliable regulation. Such circumstances have an adverse effect on local SMEs. However, through the Western Balkans' ambitious energy plan, the green transition opens up opportunities for FDI in the green energy sector (Berhens 2021). Together with the Green Agenda for the Western Balkans, an environmental policy will be created in line with the EU's (European Commission 2024). An appropriately set regulatory environment will leave more room for the market itself to drive the green transition. Investments in energy-efficient use of (scarce) resources, renewable energy sources, and other green technologies are more profitable than investments in old conventional sectors of the economy. Many technologies and solutions have reached technology readiness, but various sources of funding will be needed for further success, as much capital is still being invested in the green economy (Muench et al. 2022). In fact, there are incentives for this type of investment that follow market prices but ignore the long-term social and environmental costs. The WBR taxonomy follows the definitions and standards for environmentally sustainable economic activities prescribed by the EU, but its application in practice is incomplete.

A prerequisite for greater incentives in the energy sector is the expansion of capacities (transmission system, grid modernisation, and storage development) and the improvement of regulations. Developed hydro potentials in the WBR have the largest share in the production of sustainable energy. However, with climate change in recent years, hydro resources have been dwindling, so future energy production must rely more heavily on solar and wind power, the two fastest-growing energy sources. Biomass capacities represent a good transitional option in the energy transition, although their application is ambiguous, especially in household heating (Frey 2022). EU standards are gradually introduced, but the energy market is still fragmented and monopolised (OECD 2022). The largest energy consumers are households, at 30-60% per country, which is above the EU average (40%).

Mutual perspectives of the EU and the WBR

The EU is committed to the WBR, and in recent years, this commitment has manifested in different degrees. The pace of commitment is determined by the political framework. However, the EU's commitment to the WBR is strengthening, which can be seen through joint engagement in long-term economic recovery, green and digital transitions, faster regional integration, and EU rapprochement.

To open the channel for investment in the Western Balkans, the European Commission adopted the EU's Economic and Investment Plan (EIP) for the WB in October 2020. The plan is the basis for successful regional economic integration, which would be reflected in the accelerated process of EU integration and the decrease in the development gap among the countries of the region. In detail, the plan covers a wide range of investment ventures. The package of infrastructure projects aims to unlock significant investments in the region. The EU's digital strategy is to support digital transformation and human-centric societies. The incentives for the creation of a common regional market are aimed at closer and faster integration into the EU's single market. Investing in human and entrepreneurial capacities is an indispensable part of support through innovation and the development of economic niches. The European Green Deal serves as a basis for a draft of joint action to address the challenges of the green transition. Last but not least is good governance and the rule of law in the region, respect for fundamental rights, the functioning of democratic institutions, and public administration.

The EIP is implemented through the Western Balkans Investment Framework (WBIF). It is a joint financial platform launched 15 years ago, bringing together the European Commission, financial organisations, EU member states and Norway, bilateral donors, and beneficiaries to enhance cooperation in public and private sector investments. It supports the socio-economic development of the region and contributes to the integration of the Western Balkans into a single European framework. The plan identifies ten leading investment companies and aims to boost long-term recovery, accelerate the green and digital transitions, and foster regional cooperation and convergence with the EU. In addition to being the main financial vehicle for the implementation of the EU EIP, the WBIF will also play an important role in the implementation of the new €6 billion Reform and Growth Fund for the WB, which has the dual objective of fostering socio-economic convergence with the EU and accelerating the accession process. The WBIF will channel €3 billion in grants and loans under the Fund to support priority investments in the areas of transport, energy, digital, and human capital. Of the IPA III funds, as much as €5 billion has been committed through the WBIF.

So far, the EU has approved programmes to mobilise up to €17.5 billion of investments under the EIP, including €5.4 billion in EU grants and a COVID-19 support package (€3.3 billion). At its meeting in July 2024, the EC announced the sixth investment package under the EU EIP for the Western Balkans (2024) (WBIF n.d.). An amount of €1.2 billion is planned, fulfilling a total investment plan worth €30 billion. According to the structure of the package, €300 million is EU grants (IPA III), bilateral contributions from EU member states and Norway, loans from international financial institutions, and contributions from the economies of Western countries. The investment package refers to eight new investments in water supply and sanitation, wastewater treatment (part of priority: Environment and climate), rail

transport (part of priority: Sustainable transport), and innovation and green transformation in the SME sector (part of priority: Support to the business sector). The implementation of this package is left to partners and international financial institutions.

The Western Balkans Initiative was further enhanced at the end of 2023, when the EC adopted the Growth Plan for the Western Balkans (2020). The implementation of the plan is envisaged through (1) advancing economic integration with the EU single market, (2) fostering economic integration within the Western Balkans through a common regional market, (3) accelerating fundamental reforms, and (4) increasing financial assistance to support reforms. The plan aims to bring the countries of the Western Balkans region closer to the EU through pre-accession processes, stimulating economic growth and accelerating socio-economic convergence. The WBR is only 35% of the EU average, which implies the need to accelerate reforms. The plan is expected to double the size of the economies of the Western Balkans in the next 10 years. €6 billion has been earmarked for the implementation of this process (Financial Instrument for Reform and Growth for the Western Balkans for the period 2024-2027). The countries of the region were obliged to prepare a so-called reform agenda based on existing recommendations, including the annual enlargement package and the Countries' Economic Reform Programmes (ERAs). Once the EC has assessed and accepted the reform agenda, the funds will be disbursed twice a year (following the request of the countries and the EC's assessment of the fulfilment of payment conditions—macro-financial stability, good management of public finances, transparency, and budgetary oversight). Failure to meet the conditions will lead to the suspension of the approval of funds, and the partner country will be obliged to meet the conditions within the next 1-2 years. If this deadline expires, the allocated funds will be distributed to the other partners.

The creation of a common regional market for the WBR, within the second pillar of the development plan, should be based on EU rules and standards. The entire plan is aligned with the Green Agenda and the Digital and Innovation Agenda for the region. The WBCs' integration into the EU single market should, among other things, make the region attractive for investors and ensure easier supply chains. The plan also includes topics related to support measures during the energy crisis, the balance of households and businesses affected by the rise in energy prices, diversification of energy supply, and other parts that fall under the promotion of sustainable energy and energy efficiency.

Since the establishment of the WBIF in 2009, the Western Balkans have been awarded over €1.4 billion in grants for infrastructure projects, with an estimated cost of more than €22 billion. These investments reflect the contribution through increased capacity, quality, and travel time; increased transport safety; more renewable energy; better education; and greater competitiveness. That reduces barriers on the way to adapting to EU

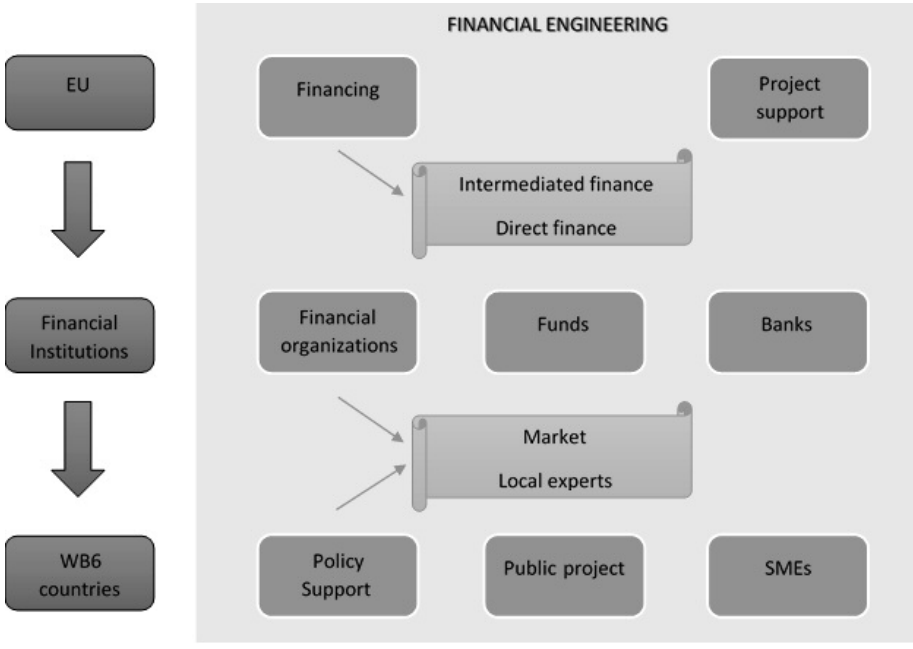
standards. However, it is a "two-way street". In one direction, funds are earmarked for the Western Balkans. The second direction should come from the Western Balkans to have better results. In other words, the sustainability of investments depends on the Western Balkan countries and their engagement in institutional and structural reforms, including the rule of law and the fight against corruption. In this way, the ground is prepared and should lead to sustainable economic growth and the creation of new jobs.

Since 2009, the results achieved have been very significant for the WBR. Estimated investments in the MSME sector amounted to €6.8 billion, providing €317 million for the sector, supported by 390,960 SMEs and 1,092,600 jobs. Significant results in the SME sector have been achieved in the field of sustainable energy—average annual energy savings reached 1.4 million MWh with an average annual reduction in CO□ emissions of 425,000 t. Through the Western Balkans Guarantee Fund alone, €937 million in guarantee coverage and €47.1 million in technical assistance were provided (WBIF 2022). Significant results were obtained from these sources in the period 2015-2020. In the field of transport, 937 km of new roads have been implemented (Sustainable Transport). In the field of clean energy, as much as 123 MW of electricity comes from renewable sources. The contribution to the environment is measured through the launch of the wastewater system, which benefits over 2 million people. In addition to the public sector and strategic projects, the contribution is also reflected in the development of the private sector, within which 5,905 SMEs are financed by the World Bank's EDIF. The social benefit of these investments has been made by a contribution measurable through human capital, with better conditions for as many as 96,600 students. Digitalisation is widespread and is measured through several indicators: broadband deployment, data centres, edge, and cloud infrastructure.

Investment support packages for the WBC are regularly opened. Donors direct funds in several directions, which are the true priorities: green transition, sustainable agriculture, digital transition and innovation, trade and value chain integration, financial inclusion, financing and financial diversification, crowding-in private capital, and multi-thematic. The EU continuously helps the WBCs meet standards related to sustainable development, clean energy, environment and climate, digital future, private sector, and human capital, which enables them to adapt to the EU single market as efficiently as possible.

The potential of the WBCs is increased by empowering the private sector through regional development and integration, improving the region's competitiveness, innovation, and green economy. EU funding is available through a combination of grants, loans, and guarantees under the Western Balkans Guarantee Fund (EFSD+). The financed projects are not selective but aim to create the most efficient infrastructure network by EU standards. In Figure 1, the algorithm of EU funding in the WBR is presented.

Figure 3. Financial Algorithm in WBR



Source: Authors' elaboration

EU financial engineering is an established process. In practice, the steps are predefined, standardised procedures are carried out, with demanding administration. Intermediary finance (WeBGEFF) involves the approval of credit lines through partner financial institutions and bilateral donors (Energy Community, the European Bank for Reconstruction and Development, the European Commission, and KfW Banking Group), intended for individuals, housing associations, companies, and municipalities for renewable energy and energy efficiency projects (REEP). Direct financing (WeBSEDFF) is implemented through investments in renewable energy sources and energy efficiency in industrial companies. Public support is achieved through the support of financial institutions in three directions. The first is implemented through public projects (in the public sector and public-private partnerships) in energy efficiency. Others include technical assistance to municipalities or central governments in preparing, tendering, and implementing local or regional energy performance contracts. The third direction refers to lending to public buildings (businesses, schools, hospitals, and state and local buildings) to improve energy efficiency (nearly-zero-energy buildings and carbon neutrality).

An example of a funding stream can be found in the Western Balkans Enterprise Development & Innovation Facility (WB EDIF). This financial

instrument is designed to offer complementary financial engineering, which fosters the SME sector in the Western Balkans. It consists of four pillars of support. (1) Financing of SME capital shall be implemented through two phases, within which two action funds are provided—one in the initial phase (Enterprise Innovation Fund), and the other in the expansion phase (Enterprise Expansion Fund). (2) Guarantees for loans to SMEs aim to take part of the risk from banks when granting loans to provide banks with financing on favourable terms (e.g., lower collateral and interest). (3) Lending to small and medium-sized enterprises shall be supported with EBRD funding directed to local commercial banks and credit institutions in the Western Balkans to provide favourable loans to local SMEs. (4). Support services come from the EIB, EBRD, the World Bank, and OECD to create a favourable investment climate and sustainable market conditions that would truly enable SMEs to promote the emergence and growth of innovative and high-potential SMEs in the region. Besides, the World Bank's programme is designed to assist the Government of the Republic of Serbia in better management of public finances in the green transition (2023).

Certainly, such a concept is not possible without a political background. Support for policy dialogue enables the transition to sustainable energy efficiency markets, improving the regulatory environment and removing barriers to energy efficiency investments. The aim is to harmonise the relevant legislation of the WBCs with EU standards through legal regulations and bylaws, inclusion in national strategic documents, and building institutional capacities and tools for policy implementation and enforcement.

The WBIF provides support to public infrastructure and the private sector. Partner organisations that provide the largest amount of funding are the European Commission (€ 3 bn committed funds, € 9 bn funding under EIP), the European Investment Bank (€ 1.3 bn grants as lead IFI, € 3.2 bn signed loans), the European Bank for Reconstruction and Development (€ 1.2 bn grants as lead IFI, € 2.4 bn signed loans), etc. In public infrastructure support, €25.8 bn in estimated investments, €3 bn in grants awarded, and €7.8 bn in loans leveraged, while support to the private sector is measured in terms of €4.2 bn in support to the private sector image, €529 m in financing available for SMEs image, €417 bn in sub-loan investments image, and €3.2 bn on-lent to final beneficiaries. The largest beneficiaries of these funds in 2023 are Serbia and Bosnia and Herzegovina (Table 2), while the largest individual donors are Norway, Sweden, Austria, and Germany.

Table 2. The structure of support to the public sector since 2009, millions of euros

	Albania	*Bosnia and Hercegovina*	*Kosovo**	*Montenegro*	*North Macedonia*	*Serbia*
No. grants	*67*	*82*	*52*	*59*	*48*	*84*
WIBF grants	*464.1*	*1,100*	*298.9*	*341.3*	*486.5*	*909.5*
Investment grants	*406.9*	*1,031*	*253.6*	*284.2*	*457.3*	*820.8*
Investment grants in Public Sector						
Transport – Sustainable transport	*335.6*	*975*	*182.7*	*215.6*	*306.4*	*637*
Energy – Clean energy	*81.1*	*70.5*	*79*	*31.3*	*69.4*	*109.8*
Environment – Environment & climate	*30.2*	*47.4*	*32.5*	*80.5*	*97.8*	*53.3*
Social – Human capital	*3*	*11.1*	*3.9*	*12.8*	*12.9*	*73.5*
Digital infrastructure – Digital future	*14.2*	*-*	*0.8*	*1.1*	*-*	*35.9*
Investment grants in Private Sector						
SMEs	*60.1*	*44.2*	*115.9*	*28.1*	*21.9*	*342*
Sub-loans	*123.1*	*779.9*	*326.4*	*263*	*216*	*1,400*
Green sub-loans	*32*	*32.6*	*23.8*	*5.2*	*51.6*	*253.8*
Residental sector	*1.2*	*11.9*	*8.7*	*0.26*	*19.5*	*12.4*
Technical assistance	*57.2*	*73*	*45.3*	*57.1*	*29.2*	*88.7*
Estimated investments	*4,100*	*6,700*	*2,000*	*2,300*	*3,000*	*9,400*
Loans signed	*658*	*2,200*	*418*	*272*	*900*	*3,600*
Other donors	*16.6*	*18*	*13.9*	*30.6*	*20.2*	*25.8*

Source: WBIF (n.d.)

The Importance of EU Investment for Serbia

The geographical location of the WBR is very favourable and important for Europe. The shortest transit route and connection to Central Europe is through the countries of this region. That is why the EU is the largest trading partner of the WBCs, the primary source of foreign direct investment, and the main destination for labour migration. (Dabrowski and Myachenkova 2018). There is also interest from other countries in the region. While Russia's efforts are focused on cultural and historical ties, China has funded major infrastructure projects.

EU pre-accession funds are an important development component of Serbia's economy. Seemingly easily accessible or irreversible, they are often accompanied by political pressures and large administration. At the same time, their volume is 5-10 times less than the funds received by the EU member states that receive the least funds from the EU budget, such as Bulgaria, Croatia, and Romania. Official data show that for the period 2014-2020, Bulgaria received €11.7 billion from the EU budget, while Serbia received €1.5 billion from pre-accession funds. Linear financial support would also be preferable as an incentive to accelerate the EU adjustment process. Serbia replaces the missing investments with money from China, which has had an organised investment campaign in Central and Eastern European countries since 2012, especially since 2018, through a series of large investment projects. Such cooperation did not benefit the Brussels administration. That is why the EU's interest in the Western Balkans was enhanced in 2014 through the Berlin Process. It was continuously implemented as an open-ended forum. The first summit encouraged leaders from the Balkans to resolve their differences and strengthen the rule of law and the project "connectivity" in transport and energy, along with issues dedicated to democracy and cooperation. Currently, it is a summit of the main EU member states and the WB6 ministerial meetings (external, internal, economic, and Roma) and several accompanying events (Digital Summit, Business Forum, Youth Forum, Civil Society Forum, Gender Forum, Scientific Conference, and German Business Buying Initiative). The process involves EU institutions, international financial institutions, and civil society, youth, and businesses in the region (The Trieste Agenda for the Re-Creation of the Regional Economic Zone, 2017, and the Paris Initiative for Youth Cooperation, 2015). At the same time, it provides a high level of political support and broad reach and visibility to regional cooperation initiatives and relevant policies, as well as EU connectivity projects in the region. That has grown significantly in recent years, as engagement has increased through various forms of assistance (financial and technical), credit lines, grants, etc.

Membership negotiations are crucial for the WB6, and they have their own dynamics. However, differentiated integration through the green transition is on the horizon. The WB6 countries have not yet completed their NECPs and other documents to define the goals of the green transition. Therefore, it is impossible to precisely determine the amount of finance needed for this expensive and extensive transition process (OECD 2022). The World Bank estimated that about $15 billion in new investment is needed by 2035 (half of which is in manufacturing and a third in transmission and distribution) (World Bank 2018). Estimating the total financing required is even more difficult because the transition is capital-intensive. Key steps to attract private investment to the region are addressing major national planning and structural documents for the energy transition, as well as strengthening the legal and regulatory framework for investments. All things considered, national governments need to take crucial steps to adequately finance the green transition. This will be the basis for future national and private multilateral financing.

Policy-making in the WBR should be directed towards a greater degree of international connectivity of the region with the global economy, especially with the EU (World Bank 2017). Investment in research and innovation (R&I) should be advocated over research and development (R&D) to maximise its impact (Barca 2009). Hence the question: Why green investments? The WBCs show a high degree of dependence on FDI. The range of SDI and green FDI differs. While traditional FDI is directed directly into the sector, it has little indirect impact on closely related sectors. It is the opposite of green SDI. They have a greater impact on the economy because their range of activities is greater. Indirect influence operates not only within a sector or a sector related to it, but far beyond that, if handled properly (Famanta, Randhawa, and Yajing 2024).

The green transition in the Western Balkans requires reforms primarily in the energy sector to make the region healthier and more attractive for investment. At the heart of all investments is the profit that accompanies investments, and the higher the investments, the higher the productivity. In the long term, a greener trajectory for the region is realised through a broad transformation. In addition to the energy sector, green investments also mean more efficient ways of working with resources and completely new production and service activities. The new circumstances of green investment require modernisation in many sectors, education, and skills, which lead to innovation. The WBR will achieve the desired level of green transformation only through the processes of implementation of EU environmental policies. The process of green transformation is a living process that requires continuous adjustments, and the EU regularly raises its ambitions for the green transition (OECD 2022). GFDI makes available to host countries sustainable technologies, practices, and skilled personnel, all of which have a positive impact on growth and the environment (Ibid.). Johnson sees GFDI in energy projects, energy-efficient infrastructure, waste management systems, and sustainable agricultural practices, while Chipalkatti et al. see it in tackling climate change and fostering sustainable development (Johnson 2017; Chiplkatti, Vu Le, and Rishi 2021). An important aspect is also the support for employment in the context of creating green jobs and the growing demand on the labour market driven by the green transition (World Bank 2025).

The WBR faces many green challenges. They correspond to an average of 36 EBRD countries, while there is a large gap compared to developed economies or Euro Area countries. The region faces a high level of CO_2 emissions, high dependence on fossil fuels, insufficiently organised waste management, and inadequate protection of certain areas, all of which require the introduction of concrete mitigation measures to stop climate change and enhance the greening of the energy sector. Additionally, these measures will make the region more resilient and improve competitiveness. The regulatory framework and institutional capacity are underdeveloped, unreliable, and inefficient. The corporate sector and management are also lagging behind best practices. Shortcomings in property rights, including intellectual property, corruption,

lack of transparency, and low labour productivity, deter investors. All of these are limitations of the WBC for faster adoption of the green transition.

Results and recommendation

Across the Western Balkans, Serbia and North Macedonia lead in green FDI efficiency, thanks to clear regulatory frameworks, industrial alignment, and effective use of EU funds. Serbia has attracted substantial investment in wind energy and the integrated local industries, boosting both GDP and employment. North Macedonia, while receiving moderate inflows, ranks high in efficiency due to transparent auctions and targeted policies that maximise green returns per euro invested. Albania, with its hydropower dominance, shows strong green FDI inflows but is limited by climate vulnerabilities and grid issues. Montenegro and Kosovo, though smaller markets, have leveraged EU-funded micro-projects and tourism-focused sustainability strategies to generate high per capita benefits. Bosnia and Herzegovina, on the other hand, struggles with fragmented governance and weak investor confidence, limiting the realisation of its considerable renewable potential.

The table below compares six countries based on green FDI volume, elasticity with GDP, and investment efficiency, defined as the economic and environmental return per euro of investment. Serbia and North Macedonia exhibit high elasticity values (0.5-0.6), meaning green FDI significantly boosts GDP. Montenegro and Albania follow, though with smaller markets and sectoral concentration. Bosnia follows with low elasticity (0.2), due to regulatory barriers and underutilisation of green potential. EU fund leverage refers to each country's ability to blend public investment with FDI to amplify impact, with Serbia and North Macedonia again showing leadership.

Table 3. Comparative Table: Green Investment Efficiency Index

Country	***Green FDI Volume (est.)***	***FDI/GDP Impact (Elasticity)***	***Efficiency Score****	***EU Fund Leverage***
Serbia	High	0.6	High	Strong
North Macedonia	Medium	0.5	Very High	Strong
Albania	Medium-High	0.4	Moderate	Medium
Montenegro	Low	0.5	High	High
Bosnia & Herzegovina	Low	0.2	Low	Weak
*Kosovo**	Low	0.3	Emerging	Medium

Source: Authors'elaboration

Note: Efficiency Score based on output per euro of green FDI: employment created, emissions reduced, GDP impact.

Overall, among the WB6, Serbia emerges as the best overall performer in green FDI attraction and impact. It not only attracted the highest volume of green investments but also translated them effectively into economic growth, industrial modernisation, and employment. That is a reflection of its relatively stable macroeconomic environment, proactive industrial policies (especially in wind and solar energy), and good absorption of EU pre-accession funds. North Macedonia achieved the highest efficiency per euro of green investment, meaning it reached higher GDP and more green jobs out of fewer resources. It met and, in some areas, exceeded expectations due to a strong legal framework, clear incentive structures, and success in leveraging green innovation. At the opposite end, Bosnia and Herzegovina had the weakest performance, both in volume and impact of green FDI. Political fragmentation, regulatory uncertainty, and underutilisation of donor funding created a high-risk environment that discouraged investors. The country fell short of expectations despite having strong hydropower potential and considerable EU assistance. Albania, while benefiting from large-scale hydropower-related FDI, faces limitations due to climate vulnerability (e.g., droughts), energy grid inefficiencies, and under-diversification. While it partially met expectations in terms of FDI volume, the quality and resilience of that investment remain concerns. Montenegro and Kosovo exceeded expectations relative to their size and constraints. Despite small economies, both made significant progress in attracting targeted green projects (solar, off-grid renewables), with strong per capita impacts in energy access, SME support, and sustainable tourism. However, sustainability and scalability remain open challenges.

To improve green investment outcomes, countries should streamline permitting procedures, improve governance transparency, and align green FDI with industrial policy. The EU integration instruments (e.g., IPA III, Green Agenda for the Western Balkans) should be used more strategically to de-risk private investment and enhance municipal-level capacities. Bosnia and Kosovo should prioritise regulatory reform and cross-entity coordination, while Montenegro and Albania could benefit from diversification into solar and wind. Overall, absorptive capacity building, better policy targeting, and leveraging EU funds remain the key to scaling green transition efforts efficiently across the region.

Conclusions

A crucial element of the success of the green transition occurs when a country's social and political component is improved. It is evident that in the WB region, the social responsibility of individuals has been significantly improved. Political accountability is improved through the introduction of regulation and market liberalisation. This analysis contributes from an economic point of view and shows that financing the green transition is crucial for sustainable development and the capacities in the WBR are obvious. In this

context, regarding the economy, policy recommendations include incentivising green investments, public-private partnerships, and regional cooperation.

The foundation of green investments in the WBR, both public and private investments, is based on the business environment, economic policies, and institutions. Experience shows that green investments should predominantly come from private capital, with governments playing a complementary role. That would be reflected in sectoral reforms, which can become the basis for reducing the gap in investments in the green economy. According to the WB, these would be the transport and energy sectors (to produce solar, wind, and hydroelectric power) (World Bank 2024).

The EU has a clear target for the WBR's energy market. It is an extension of the rules and principles of the EU's internal energy market by adapting and adopting current regulations. The WBR countries are increasingly active in the introduction and implementation of sustainable finance policies. The measures introduced are mainly aimed at developed economies and financial centres.

The benefits of green FDI and development assistance offer strong support for the greening of the region to achieve the goals of the green transition. With greater investments, flexible and efficient greening models can be developed. For example, adopting development concepts in the direction of a green economy can raise the level of development significantly, improving the efficiency of investments. Creating a data system can aid in de-risking future investments, creating a uniform regional approach, and conducting real-time analyses.

The improvement of the WBR's results can be achieved to the greatest extent and percentage through cross-border cooperation. The regional concept enables the achievement of economies of scale and the prospect of return on investment. The region's comparative advantage lies in the available resources and their joint use. Experience has shown that regional cooperation has yielded sporadically good results. This research shows the scope of more efficient management of cross-border resources. It can serve as the basis for greater economic, environmental, and social benefits for the WB6 in the future.

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