

Contents lists available at ScienceDirect

# **Cleaner Engineering and Technology**



journal homepage: www.sciencedirect.com/journal/cleaner-engineering-and-technology

# Drivers and barriers to a green economy. A review of selected balkan countries

# Antonio Licastro<sup>a</sup>, Bruno S. Sergi<sup>b,\*</sup>

<sup>a</sup> Department of Economics, University of Messina, Messina, Italy
 <sup>b</sup> Harvard University, USA & University of Messina, Italy

#### ARTICLE INFO

Keywords: Green economy Organic food Social responsibility Green energy Waste management Bosnia and Herzegovina Croatia Serbia Slovenia National experts

#### ABSTRACT

Balkan countries typically share remarkable similarities in culture and history. However, this specific region received little academic attention and produced fewer scholarly deals with the green economy. Our intended purpose is to gather the most recent literature on the green economy about Slovenia, Croatia, Serbia and Bosnia and Herzegovina, which are also produced in local Universities and show that these countries possess the potential for an easy green conversion despite barriers and lack of sufficient motivation; The first two countries as mentioned above are members of the EU, while the other two have an EU candidate status. We obtained national experts' opinions and policy recommendations through a Scopus database search (mostly) 2015–2020. Through a SWOT analysis matrix, we gather evidence of both internal and external pushes. The first push is the role of national institutions and consumers; the latter is the EU's considerable influence, which provides essential incentives to carefully foster alignment with European regulatory standards. The internal push typically bears more social responsibility in shaping domestic policies and going green. In Croatia and Slovenia, the transition towards a greener economy goes ahead positively; in Bosnia and Herzegovina, Serbia and Slovenia, the lack of adequate policies and awareness (among people and companies) and the inefficient allocation of external resources remain barriers to such a greener transition. These Balkan countries deserve more attention in the academic literature, both theoretical and empirical, thanks to their unexploited green potential, which could help policymakers make their countries greener.

## 1. Introduction

Countries in Southeast Europe face multiple challenges: weak governance (Börzel and Grimm, 2018), brain drain (Bagatelas and Sergi, 2017), severe levels of youth unemployment (Dabrowski and Myachenkova, 2018) and rampant corruption (Sanfey and Milatovic, 2018). In addition, these countries feel less connected with the EU to some extent, even though they have regained importance in the EU's eyes (Lange et al., 2017). Although this problematic context, the Balkans spur interest in scientific research on green policies. Protecting the environment is now a priority worldwide; the green economy results from a process that can reduce inequality and scarcity of resources and environmental risks (UNEP, 2010). Both private (Taghizadeh-Hesary and Yoshino, 2019) and public capital should generously support green investments (Lindenberg, 2014). However, economic actors are reluctant to supply adequate financial support to green projects, primarily because of the modest return (Yoshino et al., 2019). Another probable cause might rest on the apparent lack of political willingness or political unsustainability (Lockwood, 2015). These significant barriers reveal conflicting priorities and cultural backgrounds that acerbate the general political process and economic betterment. (see Tables 1–4)

The most recent reviews concerning the Balkan region's green economy comprise two books written by "national experts." Radovic-Markovic et al. (2015) collected primarily local literature to point out how much the Balkan region has progressed in terms of green policies as well as to show which results have been achieved and what are the current barriers to the transition to a green economy; the authors admit the book covers an extensive topic range: which comprehend green tourism, green firms and jobs (more broadly corporate social responsibility), waste management, organic food/sustainable agriculture and green energy. Renko and Peštek (2017) point out the lack of literature on the Balkan region's green issues. They aim to "expand the current knowledge base" concerning the challenges that such a region faces in its transition towards a greener economy. The authors address

\* Corresponding author *E-mail addresses:* dinini@hotmail.it (A. Licastro), bsergi@fas.harvard.edu (B.S. Sergi).

https://doi.org/10.1016/j.clet.2021.100228

Received 3 November 2020; Received in revised form 22 July 2021; Accepted 30 July 2021 Available online 2 August 2021 2666-7908/© 2021 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license

(http://creativecommons.org/licenses/by-nc-nd/4.0/).

#### Table 1

Summary SWOT matrix - B&H

STRENGTHS	WEAKNESSES
<ul> <li>Organic farms and arable land are increasing.</li> <li>Low-income consumers even buy organic food.</li> <li>The theoretical potential for solar energy is 1.25 greater than the country's total demand for energy.</li> </ul>	<ul> <li>Inadequate resource allocation and insufficient infrastructures.</li> <li>Insufficient information and knowledge on organic production</li> <li>Insufficient information and knowledge on waste hazards</li> </ul>
• Enormous potential for rural tourism	<ul> <li>Organic production lacks support from municipalities and other public institutions</li> </ul>
<ul> <li>Massive potential for biomass and biogas</li> </ul>	Weak Free market
	<ul> <li>Lack of investment and promotion in Green Entrepreneurship</li> <li>Subsides not used</li> </ul>
OPPORTUNITIES	THREATS
•Branding B&H as a fully green energy country	•Green Entrepreneurship is perceived as riskier
•Accessing EU funding and membership	•Widespread corruption are obstacles to renewable energy plans
•Renewable energy is a climate change mitigation instrument	•Risk-averse mentality
•Harmonising the regulation and law with European standards is critical in attracting foreign investments in the renewable energy sector	•Three-in-one Country
•Rural Residents can transform their	
households into tourist destinations	
and reap the benefits over time	

Source: Authors. 3.2 Croatia.

#### Table 2 Summary SWOT matrix - Croatia.

#### STRENGTHS WEAKNESSES · There is a willingness to buy organic · The supply chain for organic is not food well-conceived · Organic food is socially desirable Few funds have been distributed for environmental improvements • Organic food farms are small but well · Small enterprises do not engage in established green activities Two-thirds of Croatian companies Incomplete waste management emphasise a commitment to green system processes Citizen's willingness to take part in · Croatia lacks proper industrial design waste separation protection Croatia has EU membership A weak approach towards green transportation Outperformed the European average of Bureaucratic inefficiency gross renewable energy usage Enormous potential for green energy usage OPPORTUNITIES THREATS Encouraging partnership and · The supply chain for organic food association among organic producers make it expensive Information and education of organic Recent economic Recession

- consumers Making Croatia the greenest country in
- the Balkan region · Increasing renewable energy
- production (biogas and biofuel)
- High land biocapacity

Source: Authors.

#### Table 3

mary SWOT matrix Sorbia Sum

immary SWO1 matrix - Serbia.	
STRENGTHS	WEAKNESSES
<ul> <li>Agriculture can provide a reliable production of biodiesel</li> <li>Defined laws, conditions and incentives for investments in solar energy</li> </ul>	<ul> <li>Lack of environmental consciousness and awareness</li> <li>Insufficient funds for organic agriculture and green policies</li> </ul>
<ul> <li>Renovation of Law on Microcredit and improvements of the legal framework</li> </ul>	Consumers' low purchasing power for organic food
<ul> <li>Significant effort towards waste management</li> </ul>	<ul> <li>Lack of supply chain and poor infrastructure</li> </ul>
• There is a demand for sustainable tourism	<ul> <li>Firms have a poor understanding of Social responsibility.</li> </ul>
OPPORTUNITIES	THREATS
Higher education is a positive driver	<ul> <li>Political Turmoil</li> </ul>
Green Jobs could decrease the unemployment rate	• Green Finance is perceived as too risky
• Access to EU membership and funds	• Most companies focus on economic benefits rather than on environmental

- High potential for green energy
- · Serbia could become and a hub for e-waste recycling
- Law on Microcredit Organizations allows financing green SMEs
- Biowaste can be converted into renewable energy
- The organic for potential

Source: Authors.

3.4 Slovenia.

#### Table 4

Summary SWOT

ood market has		
matrix – Slovenia		

impacts

tourism

 Low international competitiveness and low-quality accommodations for rural

Oil is still too competitive for biodiesel

· Organic food remains a niche market

#### STRENGTHS WEAKNESSES · Positive trend regards organic food • The number of electric cars production remains lower than the EU average · Increasing willingness to buy organic food Eco-Innovation is costly among younger and more educated people Organic farms create green jobs Poor Legislation Outstanding level of green competitiveness Oppressive bureaucracy Top Managers are aware of the Companies are reluctant to be environment socially responsible Better developed rural tourism Eu membership

#### **OPPORTUNITIES**

- · Major sports events might be a driver towards sustainability
- Moving in line with the EU
- Benefits from increased Eco-Innovation
- Cooperation between local government
- and local stakeholders · High land biocapacity

Source: Authors.

- Lack of Trust in Institutions
- Loans for green cars remain unused THREATS
- Regulations can be an inhibitor of Eco-Innovation
- · Companies are Profit oriented
- Increasing corruption
- Public administration incompetence

- There is no coordination with other hotels in encouraging greening practices
- The size of firms prevents them from implementing green practices
- Economic agents are ignorant in terms of green knowledge
- · Fear of Change

the same topics and claim that the book can be considered a "systematic and holistic overview."

There is no further current review exploring the same subjects and/

at least partially by the institutional context (Merino-Saum, 2020). Therefore, we precisely define it according to local understanding

or the same region besides these two books. Therefore, we aim to retrace

the path of these previous works and show if the specific situation is still

the same, which are currently the barriers and the opportunities and

show the potential of this region and the area to which the national

academic expert can guide domestic policymaking. Through a systematic review, we want to point out that the specific topics covered by the

literature and the research areas demonstrate the most significant potential for development in the Balkan region. Typically, the green

economy is a widely used concept; it is multidimensional and influenced

and experience. From our extensive research, emerges that Balkan authors use the term "green" and "sustainable" more than synonyms, although there is an academic difference (Weick, 2016), green economy describes the pathway towards sustainability (UNEP, 2011). In our research, we will use the keyword interchangeably "green and "sustainable." CSR and green entrepreneurship are conceptually different (Demirel et al., 2017); green entrepreneurship addresses environmental problems with innovative entrepreneurial ideas. CSR is a business model that encourages the company to be socially accountable. However, one essential core of CSR is environmental conservation. We will employ both concepts interchangeably as they are interconnected.

We reviewed the scientific literature on Croatia, Slovenia, Bosnia, and Herzegovina (B&H) and Serbia. The first two countries are members of the EU, while the other two are EU candidates. We have gathered the latest scholarly articles (i.e., 2015–2020) on the green economy indexed in the Scopus database. Our compelling research interest was on the national experts' opinions and policy recommendations about green policies and relative challenges in policy changes.

Therefore, the specific research question we want to address are:

- 1) What represent national experts' roles in shaping green policies, and to what extent are they listened by the policymakers?
- 2) What remain the sectors with the most significant potential in the Western Balkans?
- 3) Are there any internal and external drivers for the green economy?
- 4) What are the significant barriers and challenges that Western Balkan countries are facing?

Notably, instead of addressing the academic literature per se without carefully distinguishing between native and non-native researchers' scholarly works, we employed the other approach by picking up only national experts' articles. Therefore, this paper highlights their leading role as national experts in pointing out how to faithfully implement a greener future. Our comprehensive approach comprises country-specific research, which is broken down by economic sectors in order to address relevant policy recommendations.

After this introduction, it follows the methodology section, which provides a descriptive review of the scholarly papers and examines the extant scientific research by intentionally breaking down the analysis into areas. Namely organic food production and companies/services, the first additionally includes a review on consumer behaviour towards organic food purchase, the latter highlights the approach of the private sector in green entrepreneurship (and corporate social responsibility), green energy, rural (or sustainable) tourism and social responsibility along with waste management. At the end of each country section, we propose a SWOT matrix that summarises the reviewed research's valuable information. The third section revises policy recommendations provided by "national experts" and our insights. Finally, the fourth section concludes this review.

#### 2. Methodology

In tentatively suggesting the steps for properly conducting a systematic literature review, Tranfield et al. (2003) proposed a three-stage process that consists of planning, executing, and reporting. A more thorough approach has been given by Mayring (2008). Regarding this latter, we followed a slightly distinct path starting with the first phase in which we carefully collect the research material, precisely defining the boundaries. The second phase amply supplies a descriptive review of the gathered articles. A third phase extrapolates the collected information and summarises the findings.

#### 2.1. Phase one: material collection

Scopus research bar included keywords like organic food, waste management, green entrepreneurship, green firms, green economy,

clean energy or green energy, rural tourism, sustainable tourism, social responsibility, and green finance, all accompanied each time by the relative country. When typing the specific keywords, we often used the additional keyword of sustainable/sustainability to fear missing other works. We do not limit such particular topics to a specific scientific journal but carefully conducted our search process using keywords (Webster and Watson, 2002). Our Scopus search showed that most relevant papers were published between 2007 and 2020, although the overwhelming majority started in 2015. Thus, this review focuses more on those scholarly papers that have been published from 2015 to 2020. The rule is relaxed whenever necessary: a lack of current and specific topic papers or the same topic is typically covered by the same author but in less recent time. However, there were very few exceptions.

We carefully picked articles that autochthonous researchers wrote. Even in this case, the notable exceptions are few and are made because of an apparent lack of national experts' research on that topic. It also was uneasy to find more general articles on the green economy about the Balkans. We intentionally broke down the review into issues where the national experts have given more proper attention. Here, the topics covered mostly by national research are organic food and consumer behaviour. According to the criteria mentioned above, we included issues concerning the private sector in green entrepreneurship (or CSR), green firms, or their future commitment to green policies and choices involving waste management or carrying out sustainability reports. It also covers other topics concerning public services about green energy, public waste management. Finally, the national experts had given paramount importance to rural and tourism. It is viewed here as a green and sustainable activity. As stated above, we are aware of the abstract difference between sustainability and green economy and green entrepreneurship and corporate social responsibility; however, here are used interchangeably to sufficiently emphasise their intrinsic connection. A flow chart succinctly summarises collection and selection and the descriptive review (see Fig. 1).

#### 2.2. Phase two - descriptive review

We selected 115 scholarly papers descriptively reviewed to summarise the article's distribution by year, country, and topic. It provides below the distribution across time and space (Fig. 2 and Fig. 3). The most productive timeframe was 2015–2020 and the most productive year is 2020. Scholarly papers on Croatia and Serbia are numerous and distinguished scholars' most discussed topics are Organic Food (also Sustainable Agriculture), followed by Corporate Social Responsibility (or green entrepreneurship) and Sustainable (Green) Tourism (see Fig. 4).

#### 3. Review articles

#### 3.1. Bosnia and Herzegovina

#### 3.1.1. Organic food and consumers behaviour

Organic food is "the product of a farming system which avoids the use of manmade fertilisers, pesticides, growth regulators and livestock feed additives" (Hoefkens et al., 2009). Bicikliski, Trajkova and Mihajlov (2018) argue that organic farms follow a positive trend in B&H and the number of certified arable land increased from 292 ha in 2013 to 992 ha in 2016. In 2017 the organic farmland increased by 28% (Willer, Schaack and Lernoud, 2017). However, it is reported that budget allocations for agricultural support and structure are inadequate and do not encourage farmers to invest in production to be more efficient (Makaš et al., 2018). Vaško and Kovačević (2020) found out that organic farms are economically viable, but farmers do not use subsidies.

B&H can support certified organic production (primary and processing), namely crop, livestock, fruit growing, vegetable production and collection of medicinal and spice herbs and forest fruits and processing. That is a characteristic of the geographical and ecological

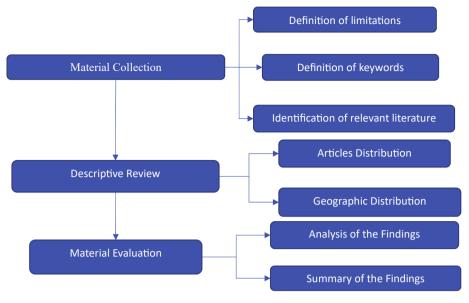
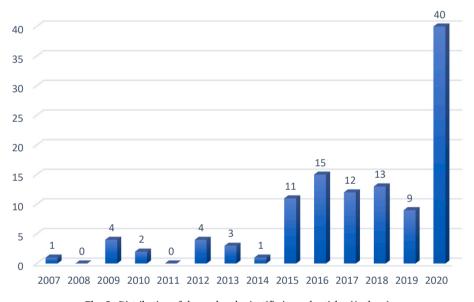
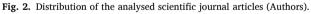


Fig. 1. Literature review process (Authors).





properties of that given area. However, we notice a lack of a strategic approach to developing the organic output, namely insufficient information, and knowledge on organic production, among all stakeholders (decision-makers, farmers, producers, and consumers). This results in the absence of this strategic approach to developing organic production, inadequate support measures and an uncoordinated institutional legal framework (Jugović et al., 2019). Vulnerability to climate change can harm crop yields and production and by odd agrarian policies, mismanagement of financial resources and lack of adequate access to the market. Zurovec Vedeld and Sitaula (2015) argued that B&H needs to implement proper reforms to keep pace with other European countries, same results are found in Mujčinović et al. (2017). Although the country has all the preconditions for organic farming, the sector stays underdeveloped; therefore, healthy food and environmentally sound agriculture receive low attention from the government, NGOs, processing industry. Luketina et al. (2018) propose following a transition towards a sustainable agro-food system by reducing policy inconsistencies, changing priorities towards sustainable practices, improving the provision of knowledge regarding sustainable agriculture, and strengthening institutional capacity. Definitively a better organisation at the state level would be needed to protect organic producers' interests. Another step is reducing certification costs and securing premium prices for natural products, improving market access.

Results in Peštek, Agić and Činjarević (2017) show that Bosnians tend to draw from their collectivist<sup>1</sup> culture (although Dabić et al. (2015) found evidence of a gradual shifting towards individualism, with Tipurić et al. (2007) previously confirming that) when buying organic food and rely on the opinion of their referents. However, the authors also show discrepancies in consumers' attitudes and level of purchase and counterintuitive relationships; for instance, low education and low income translate into a positive propensity towards organic food purchases. High social and moral status has less to do with natural food purchasing behaviour. We point out the necessity of more empirical

<sup>&</sup>lt;sup>1</sup> According to Hofstede-Insights (2019), B&H has a 22 in Individualism score, meaning that the culture is overall collectivist. See https://www.hofst ede-insights.com/country-comparison/bosnia-and-herzegovina/.

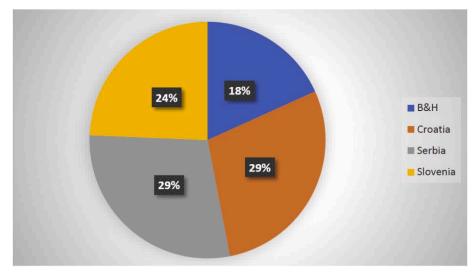


Fig. 3. Distribution of the analysed scientific journal articles per country (Authors).

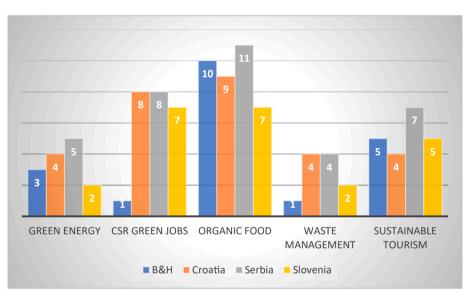


Fig. 4. Distribution of the analysed scientific journal articles per topic (Authors).

research about the rationale behind such actions; there is a lack of trust in advertising claims and quality certification.

Mangafić et al. (2017) show that the opinions of the most influential people in their lives influence consumers' behaviour towards organic food. Also, consumers who know more about organic food will buy organic food because they believe it has a higher quality than conventional food.

The authors found that consumers' innovativeness positively moderates the attitude towards organic food purchases. Innovative consumers have a more assertive attitude intention than those with a low level of innovativeness. Age and sex also influence buying organic food; females and older people are more inclined to buy organic food and more educated people (Cerjak et al., 2010).

#### 3.1.2. Companies and services

Silajdžić et al. (2015) have highlighted the role of green entrepreneurship, which is risky and does not receive much financial attention. The legacy of the earlier state-planned economy hampers the creation of free markets and inherits a risk-averse mentality. Despite the enormous potential, local governments should supply enough support to overcome SMEs' economic barriers by providing the right reforms and diverting green initiatives' financial resources. In addition, information campaigns and eco-labelling can be used for green business promotion.

Regarding the potential of renewable energy usage, B&H can rely on an average of 1840.9 solar hours and 2352.5 h per year. Therefore, the theoretical potential for solar energy is 74.65 PWh, which is 1.25, more than that required for the country (Perčo and Ilgun, 2012). Therefore, harmonising the regulation and law with European standards is critical in attracting foreign investments in the renewable energy sector.

Gvero et al. (2010) investigate the potential for renewable energy in B&H as a climate change mitigation instrument, starting with biomass produced by wood mass (annual production of wood is around a total of 6.907.423 cubic meters), biogas from livestock (total yearly biogas estimated for 2007 was 853.175,80 cubic meters), to achieve the benefits of energy potential. The needs pointed out by the authors lie in improvements of the legal framework in the renewable energy production field, better infrastructures, the need for more financial resources as subsidies and more coordination with competent institutions.

Bosnia is planning to increase the current capacity of small Hydropower Plants. Currently, there are 266 (Hudek et al., 2020). However, over-ambitious planning, complicated administrative features, a lack of funding opportunities and definitive corruption are obstacles to

Cleaner Engineering and Technology 4 (2021) 100228

hydropower usage (Dogmus and Nielsen, 2019), even if the plant are small (Dogmus and Nielsen, 2020a).

The country has extraordinary potential for rural tourism in the region of Semberija (Drakul et al., 2019) and extremely attractive (Puška et al., 2020). Also, Bučar (2017) states that Bosnia has excellent potential for rural tourism. Ethno-villages are also a driving force for community development (Prevolšek et al., 2020). Despite that, it did not take part in any ecolabelling program (while other Balkan countries, yes) and "eco-certificate programs for accommodation" are missing.

Even the local level of tourism remains the lowest in the Balkan Region. Expansion of the supply of products, services and local involvement authorities through subsidies and incentives or education of the rural population on the circumstances of this type of tourism. Another appropriate step is to inform the residents about transforming their households into tourist destinations and managing the resources needed to expand their work and adopt new knowledge and skills. Furthermore, it is essential to invest in the construction of roads to villages with the potential to deal with rural tourism and enable public waste management in communities. Finally, Dogmus and Nielsen (2020b) argue that allowing local stakeholders to decide their sustainability can empower local rural touristic villages.

When addressing waste management, Djekic et al. (2019) showed how ethical dimensions are associated with food waste: Bosnians consider discarding food a horrible act and convey a genuine feeling of guilt. However, the study showed that Bosnians are not keenly aware of the danger that food wastes pose to the environment. Eres (2019) compared Croatia and Bosnia to manage their waste correctly and showed that both countries are identical, while Croatia is moderately better at managing waste. Bosnia performs as the equal of Croatia. The author suggests Bosnia dearly needs a competent and operative centre for waste management.

#### 3.1.3. Agriculture

There is a growing concern about conventional agricultural practices (Renko and Bošnjak, 2009) and a thriving organic food market is taking root. Pavlic (2016) revealed that from 2010 to 2016, organic food production expanded from 16,000 to 91,000 ha. The primary reason for going over to organic farming is lifestyle-related (Blace et al., 2020). Croatians perceive organic food as definitively healthier: they are more willing to pay more for it (Petljak et al., 2017). Up to the present time, people also purchase organic food for altruistic reasons (Mesić et al., 2020). However, the results also indicate a positive relationship between the household income and the willingness to pay more for organic food, meaning that such products are not yet in the low classes' grasp. Conventional food is inexpensive, and organic food is not because the price of typical food does not include indirect ecological, social, and other costs. The supply chain should be better conceived to reduce the cost of organic food. The distance between organic producers and the number of products causes added supply chain transportation costs. Consumers know that this behaviour is socially desirable, thereby the willingness to pay more for organic food and boost their social identity by demonstrating an unconventional lifestyle (Ham et al., 2018).

Most of the ecological farms are small and family conducted. Direct channels sell most organic food products in Croatia through local fairs or directly to the consumer and a few specialised retail stores distribute products (Gajdić et al., 2018). The authors pointed out that the Ministry of Agriculture should inform the consumers, encourage partnership and association among producers, and develop regulations and laws to improve this situation. Slavuj Borčić (2020) showed that cooperation with local groups of solidary exchange ("Grupe solidarne razmjene" in Croatian) had a series of advantages for producers and can guarantee fair and stable prices and more extensive autonomy for producers.

Horvatinčić et al. (2016) recommend increasing the knowledge of the design and implementation of technological investments, of project management and general management knowledge, an understanding of agricultural-ecological measures and current official regulations, awareness about the benefits of networking of produce organizations and on marketing, branding and emerging new markets. Croatian policymakers must deliver changes in the education system and school curricula related to the agriculture and forestry sector toward increasing professional competence, awareness, and knowledge transfer. Innovation and education, as well as training in agriculture, would improve the economic performance of farms.

#### 3.1.4. Companies and services

In their promotional activities, two-thirds of Croatian companies emphasise a commitment to green components, readiness to install expensive and eco-friendly elements, improve business processes to cut pollution and maximum waste reuse, Paliaga et al. (2009) state. To better understand how companies participate in sustainable shifting, researchers have implemented sustainability reports as a proxy. Because of the increasing demand from their stakeholders, companies are slowly shifting toward sustainable development. As a result, sustainability reports are becoming a regular practice to make companies environmentally and socially responsible. Krivačić (2017) showed, however, that this is only a prerogative of more prominent companies. Smaller companies do not implement this kind of reporting because they lack adequate resources, both material and immaterial.

Croatian enterprises differ from each other in green activities. Larger enterprises (Kovac et al., 2020), meaning those with more employers and higher revenues, undertake green activities (e.g., saving water, saving energy, recycling, etc.) and presents a higher level of ecological responsibility. In comparison, smaller enterprises do not engage in those activities, nor will over the next two years, Turjak et al. (2018) state. Krivačić and Janković (2017) found that managers believe environmental information is part of corporate social responsibility. Therefore, companies assume it is ethical to collect and report environmental data. However, managerial attitudes on environmental reporting are positive and statistically significant concerning the industry of the company.

In contrast, the size of the company seems not relevant to environmental reporting. Ljubojev et al. (2019) show that Croatia and Serbia exhibit the same piracy and counterfeiting problems, which is harmful to sustainable development; Croatia lacks proper industrial design protection.

Megwai et al. (2016) explored green economy strategies and policies in developing countries; concerning Croatia, they emphasised that one of this country's successes is how it outperformed the European average gross renewable energy usage. Croatia performed at 15.7% in 2011 (the EU average was 13%) and is ready to achieve the 20% total final energy target in the EU 2020 (Stubbs, 2013). However, Croatia lacks the legal framework and no standard definition for Renewable Energy Communities, places where consumers produce more energy than they consume (i.e., prosumers) and have to face regulatory challenges for implementing such green energy platforms (Inês et al., 2020).

However, suppose Croatia has outperformed the EU average in renewable energy. Unfortunately, it is not the case for waste management (as shown in the earlier section by Eres, 2019). Luttenberger Runko (2020) shows that Croatia's waste management plants direly need a technological update. The author views the author's actual condition as a financial burden that can only drain and depauperate public and private resources. Instead of relying on landfilling, the author proposed to exploit the country's territory (small communities scattered across the country and few big cities) by instructing the citizens to apply home composting that can also be used for agricultural purposes. The other barriers to better waste management are lack of financial support, insufficient citizen awareness (and fear of change.<sup>2</sup>) and commitment

<sup>&</sup>lt;sup>2</sup> According to Hofstede-Insight (2019), the value for Uncertainty Avoidance for Croatia is very high (80), which implies a society that finds unpleasant the introduction of innovative ideas (see Rajh et al., 2016). See also https://www.hofstede-insights.com/country-comparison/croatia/.

from the political perspective and administrative and bureaucratic burdens (Voca and Ribic, 2020).

A solution is to use the direct biowaste towards biofuel production and showed that, for the case of Zagreb, explicitly, if the issues presented by the foul smell and the insufficient space are solved, most citizens would happily commit to separate organic waste (Voca and Ribic, 2020). The authors estimate that the biofuel potential is around "1900 t of biomethane" for public transport. Kulišić, Radić and Njavro (2020) showed how implementing agrarian pruning and plantation removal (APPR) can alleviate energy poverty in secluded areas as well as if used as solidi biofuel, it can generate positive state income. Croatia presents a good feedstock potential, and it is viewed as a driving force for biogas development and biogas/biomethane production. However, the significant barriers lie in farmers' and producers' lack of knowledge and expertise (Petravić-Tominac et al., 2020).

New policies are targeting the sector of tourism and transports. Ružić and Demonja (2015) analyse how tourism is developing in Istria and show that the primary driver of development was to create as many accommodations as possible, ignoring the concept of sustainability completely. Only after that, sustainable tourism was gaining importance and local communities and local stakeholders foster such an innovative approach. Bučar and Matas (2016) pointed out how hotels are involved in renewable energies, waste management and local organic food; hotel managers educate their staff on how energy conservation can reduce environmental effects and financial cost, Renko and Bucar (2015) state. However, continuous education is still required (Smolčić Jurdana et al., 2020).

Employees are instructed on waste management strategies, recycling, energy consumption, etc. Although there is no coordination with other hotels in encouraging greening practices, their findings also showed cooperation among hotels and local traders. As a result, they want to get involved in shaping how tourism resources are used.

In Vukusic and Peronja (2018), respondents claim that banks' social responsibility is essential in the banking system. Banks need more involvement in social responsibility, more investments and awareness from the public. Doing so might bring a swell reputation for the banks. Social responsibility in the Croatian system bank rests on foreign ownership (Ivanisevic and Stojanovic, 2015). Therefore, larger banks present more propensity towards social responsibility.

A more active approach has not been implemented concerning green transportation yet (Renko et al., 2017). However, a biofuel market share of 10% in the Croatian transport sector is expected by 2020 (Ivanović et al., 2016).

In conclusion, we should keep in mind that Croatia underwent an economic recession from 2008 until 2014, which hurts investments, including those in green technologies. Moreover, recession implies fewer funds for environmental improvements, research, and development in the environmental technologies sector.

#### 3.2. Serbia

#### 3.2.1. Agriculture

The production of organic food in Serbia is modest, although there is room for expansion (März et al., 2012). It shows an opportunity to manufacture and sell such products on the EU market, give its increasing demand (Pupovac et al., 2013). We can say that organic food in Serbia could be considered an emerging market. In 2014, the number increased and therefore 1281 producers were cultivating 9548 ha of organic agricultural land; it was a 0.2% agrarian country (Vehapi and Dolićanin, 2016). Consumers' awareness is still low; a few consumers regularly: mostly are mature female individuals (Grubor and Djokic, 2016) and are more educated and care more about their health (Sekovska et al., 2013); a higher level of income has a positive influence on their willingness to pay more for organic food, but the major problem lies in its insufficient availability (Grubor and Djokic, 2016). Perić, Vasić-Nikčević and Vujić (2017) explained the cause of little awareness in the lack of trust in advertising and the media in general. Even though Serbians have access to cheaper organic food than other developed countries, the price is still too high for their low purchasing power (Vehapi, 2015). Moreover, as noted recently by Vapa-Tankosić et al. (2018), the level of education remains a positive driver (see also Vapa-Tankosić et al., 2020). Kuzman et al. (2017) conclude that funds are not adequate for more dynamic agriculture development.

### 3.2.2. Companies and services

Environmental awareness comes from the bottom and from employees of companies who adopt the same environmental protection attitude as their companies (Janković and Jovkić, 2016). They found that most companies focus on their businesses' economic benefits rather than on environmental impacts. The solution suggested is raising ecological consciousness in companies. Employees must be able to know and understand how the environment can be affected by their decisions. In Serbia, social responsibility in areas of employee's relations as well as women's equality has roots in the past because Socialism defended social responsibility for workers' interests; social responsibility rooted only recently in other areas such as customer protection, environment, and ethical business (Mijatovic et al., 2015). Stakeholders' activism and public awareness are the basis for a modern concept of social responsibility. From the customers' point of view, despite the socialist past, it is perceived that companies practice CSR programs primarily with the motive to ensure market success (Vuković et al., 2020), even if such programs are carried out only by larger companies (Vuković et al., 2016).

The number of people employed in green jobs is about 2000 and 30.000 more people rely on the green economy indirectly (Vukadinović and Ješić, 2018). Considering that green jobs comprise an excellent economic growth opportunity, their number could soar through sustainable and massive investments in the public and private sectors, Vukadinović and Ješić (2018) say.

Serbia lacks a properly developed financial system. Innovative firms find it hard to have access to credit. Young companies have limited credit access because of high country risk because of unnecessary bureaucracy, inefficient judiciary and the weak rule of law (Trbovich et al., 2018). These companies rely more on internal financing sources or chase grants, subsidised bank loans and equity investments. Even if resorting to equity finance prevents excessive exposure to the risk of defaulting, financial reforms and subsidised government programs would be welcome a less gap between equity and venture capital financing. To finance SMEs' survival, the country should set up a new financial institution and perfect the legal framework (Radovic-Markovic and Radovic, 2016). For instance, the Law on Microcredit Organizations allows financing green SMEs.

Serbia has made significant improvements concerning waste management (national waste management strategy); however, financial resources still are limited (Ilić and Nikolić, 2016). The barriers stay at a low level of reuse and recycling and a lack of innovative technologies and incentives. Domazet and Simović (2015) pointed out that there is good potential for the electronic waste industry. Since Serbians produce e-waste with an increasing trend, the authors suggest that by creating and developing proper recycling centres that can extract electronic material from non-recyclable goods, there is potential to create new green jobs. The same model is suggested to other Balkan countries that share the same socioeconomic environment. Vujovic et al. (2020) showed that biomass from agricultural waste and biodegradable waste from households presents the highest potential for renewable energy. Unfortunately, it is currently transmitted directly into the soil due to inadequate disposal in existing landfills. With such negligible treatment of biodegradable waste, Serbia remains far from achieving the EU landfill directive's goals.

On waste management in the banking industry, Knežević et al. (2018) concluded that circular economy and waste management reporting remain behind the European standards. Only one-third of

commercial banks (35.7%) have a waste management report, while banks are still unwilling to finance green projects. The National Bank of Serbia includes all WM (waste management) indicators (quantitative and qualitative) in its social responsibility report; only three commercial banks report qualitative indicators. The remaining banks have no information about waste whatsoever. The authors finally denounce a lack of government policies and regulations. This is a significant barrier if we consider Serbia as a candidate for EU membership.

Serbia shows excellent potential for using solar energy. There are the conditions (clearly defined laws, conditions, and incentives) for investments in solar energy plants (Pavlović and Milosavljević, 2017). Young Serbian consumers are motivated to take part in new smart grid services because their attitudes towards environmental protection and green energy and interest depend on the fact that they are more aware of environmental problems (Radenković et al., 2020).

Durišić-Mladenović et al. (2018) explored the biodiesel and the indigenous oil-based feedstock potential. They concluded that agriculture could supply alternative usages of fuel and reach 98,000 t of biodiesel in 2020. However, a significant problem is the lack of incentives and the still higher profitability of the oil sector. Biogas from agriculture waste has good potential for small farms and underdeveloped regions (Martinov et al., 2020). However, renewable energy from biomass is a neglected opportunity in Vojvodina and only 5% of the total biomass potential is being utilised (Zezelj et al., 2020).

Serbia natural beauty sparks interest in sustainable tourism as sustainability is the principal reason for tourists' attraction regardless of gender (Pavlović et al., 2020). Socio-cultural impacts are considered necessary for the sustainable development of Serbia's tourist destinations (Petrevska et al., 2020). The most important forms of tourism are ecotourism and adventure tourism, and it is shown that wine tourism in Vojvodina and sustainable rural tourism, Trišić et al. (2020) noted. Tešin et al. (2020) state that to achieve full sustainable tourism, it is imperative to ensure local communities' involvement in addressing their needs; without considering residents, sustainable and prosperous tourism would be impossible to achieve, the authors argue. Comparing the rural tourism development between Serbia and Slovenia, Serbia cannot match global competitors due to low international competitiveness and low-quality accommodations (Petrović et al., 2018); this can be associated with the lack of adequate private financial resources, which topple investments in rural development (Radenković et al., 2020). Rural development is a top priority for the government.

Remarkable findings are pointed out in Nikolic et al. (2020), where is it noted that one major push for a more sustainable future comes from the youth; however, young Serbians feel marginalised from society and do not feel their responsibility nor higher responsibility regarding sustainable development, while they recognise the role of the media in increasing the widespread awareness.

#### 3.2.3. Agriculture

Along with Croatia, Slovenia is affected by the general European trend about producing and expanding organic food. Vukasovič (2009) showed that this trend had begun in the early 1980s due to increased concern for health and preferences for diet purposes. Vukasovič (2016) confirms (as seen in Croatia) that Slovenian consumers perceive organic products as healthy, especially women. Gender, age, residential area, presence of children and food habits may affect organic food's willingness. Therefore, it is recommended continuous information about organic food. Social norms construct positively impact organic food purchasers. Slovenians respond positively to the so-called "feedback loop" (Ogorevc et al., 2020): the more people endorse a particular behaviour, the more the behaviour becomes expected.

For Perpar and Udovč (2019), the readiness for conversion from traditional to organic farms increases if organic farming payments increase. Higher direct and rural development payments and climate measures would improve efficiency and organic farming selling products directly in loco. Agri-Environmental actions (AEM) can affect rural development (Gailhard and Bojnec, 2015). Small farms' probabilities of taking part in AEMs are higher if productivity is higher. Subsidies in such areas have no real impact. Despite so, subsidies could help achieve agri-environmental policy objectives (Baráth et al., 2020); here, policymakers should revise the "subsidy investment design." Access to AEM is easier for farms that took part in such measures (which are larger farms); the other farms suffer from transaction costs. Small and medium farms that have adopted AEMs show significant green job creation, contrary to large crop fields and dairy farms (Unay-Gailhard and Bojnec, 2019).

#### 3.2.4. Companies

The primary drivers of companies for eco-innovation are internationalisation and competitive pressure, according to Hojnik and Ruzzier (2016). International companies face more competition for entering markets in which ecological orientation is essential. Strukelj et al. (2020) stress that major drivers to sustainable policies and corporate responsibility are organisational values. Managers who are more sensitive to environmental protection could use subsidies to hire "green" human resources to contribute to a company's eco-innovation implementation. Another finding stresses that a third primary driver is environmentally conscious customers' demands; this leads to companies choosing to either adapt and become eco-friendly or lose their customers. Hojnik, Ruzzier and Manolova (2020) stressed that the key to purchasing eco-products lies in consumers' intention, driven by their level of environmental commitment, perception of eco-products and perceived obstacles to become green.

Eco-innovation positively affects efficiency when firms are more innovative and more significant; however, less innovative companies but older can exploit their experience to keep up the pace (Hojnik et al., 2018). On the other hand, more innovative companies are prone to eco-innovation and help more from diverse types of eco-innovation.

Slovenia presents an excellent green economy potential. Kasztelan (2016) classifies Slovenia as a country with an outstanding green competitiveness level and countries like Estonia, Austria, Lithuania, the Netherlands, and Spain. Slovenia can become one of Europe's best environmental and circular economy performers (Giannakitsidou et al., 2020). The authors suggest Slovenia should transform its industrial recycling methods to exploit the recycled materials better. Also, the Slovenian Smart Specialization Strategy 2014-2020 allocates "approximately 80% of the ERDF funds on RDI, competitiveness, ICT and low-carbon society and 70% of the ESF funds on employment and lifelong learning, as well as 20% of the funds to climate change adaptation, better environmental status and biodiversity, the establishment of an infrastructure for sustainable mobility and social inclusion and institutional capacity".<sup>3</sup> In 2015 the share of renewable energy production is 0.7% for geothermal energy, while for hydropower the share was 4.9% (Bórawski et al., 2019). Concerning the willingness to pay for green energy, Zorić and Hrovatin (2012) found out that suggest young and well-educated consumers and high-income individuals have a higher propensity to pay more for green energy services considered a target for awareness-raising campaigns by green marketers.

Slovenia's macroeconomic stabilisation level positively affects manufacturing enterprises' sustainable development, Pieloch-Babiarz et al. (2020) found out. EU structural funds play a positive role in financing sustainable development in Slovenia (Lapinskaite et al., 2020). Slovenian consumers responded positively to energy-producing companies' loyalty programs that offer integrated energy services such as energy efficiency and green energy, favouring the national environmental sustainability targets (Dolšak et al., 2019).

Despite good intentions, Slovenia suffers critical barriers. First, Slovenia, given its central location in Europe, cannot achieve a self-

<sup>&</sup>lt;sup>3</sup> https://s3platform.jrc.ec.europa.eu/documents/20182/90055/SI

<sup>-</sup>Background+report+4+14.pdf/d3a22663-61d1-425a-b41b-196a153ca364.

sufficient energy production with photovoltaic systems, because during winter, snow covers the panels and shut down the energy production, so to overcome this barrier, Lokar and Virtič (2020) suggest integrating local photovoltaic panels with hydrogen fuel cells. However, the initial investment is high but economically accessible. Companies are more reluctant to engage in socially responsible and profit-oriented behaviours (Golob and Bartlett, 2007). Embracing socially responsible practices is slow in Slovenia. It is considered that such slow progress lies in a low level of trust in institutions among the public and increasing corruption and malpractices by managers and public authorities. Čater et al. (2009) found that the Slovenian manufactory company engages in green policies to reflect top management and public concern. Still, such implementations are, mostly, a prerogative of more prominent companies. Moreover, Hojnik and Ruzzier (2016) view financial factors of Eco-Innovation implementation costs, legislation and hard-to-get permits as significant barriers to Eco-Innovation implementation, while the capable drivers are a company's internal awareness, competition, customer, and regulatory pressures. Their study revealed the dual role of regulations - as a motivator (EU regulations) and, simultaneously, as an inhibitor to EI implementation.

Concerning tourism, Mihalič (2015) found out that environmental management is becoming a competitiveness factor. However, hotel managers are less critical than quality and image factors. The awareness of making eco-friendly and more sustainable the tourism sector is gaining momentum, which will lead to an increase of more significant standards for environmental and economic sustainability. Hotel employees find it crucial to be employed in a socially responsible company (Planinc et al., 2020).

When comparing rural tourism between Slovenia and Serbia, Slovenia shows a better developed rural tourism, considering that local and local stakeholders have joined the forces to achieve European standards (Petrović et al., 2018). Ljubljana presents good potential for sustainable urban tourism as residents demand the cultural and green type of tourism increases (Grah et al., 2020). Even sports events can contribute to developing a more sustainable and greener economy. Major sports events, such as the Ljubljana marathon (the most successful in sustainability implementations), the events of Povežimo soline and Eurofest are drivers of sustainability, Golob et al. (2015) found.

Concerning green transportation and thanks to the EU's accession, Slovenia has adhered to the EU guidelines for electric vehicles (Knez, 2017). However, the number of electric cars remains lower than the EU Commission expects it; Slovenians consider price one of the significant barriers, Knez et al. (2020) notice. Subsidies from the Eco Fund and loan schemes are available for application, guidance and grants available only for battery electric vehicles and plug-in hybrid vehicles. However, these grants are still unused (Purgar, 2012) because of low electric car circulation.

In terms of waste management, only two of the seven waste management centres in Slovenia are considered acceptable, Pažek et al. (2020), but there is ample room for improvement. Malinauskaite et al. (2020) state that even if Slovenian municipal waste recycling rates are among the highest in Europe (59% according to the Annual Report 2019;<sup>4</sup>), the various municipalities' performance differs. One suggestion for further improvements might introduce a tax on the landfill or a residual waste tax on non-recycled output from Mechanical Biological Treatment (MBT).

#### 4. Comparative analysis of the SWOT tables

All four countries we analysed share the same strengths: organic farming and rural tourism are all pointed out as the principal areas focusing attention and investments. Another area worth considering is the potential for renewable energy, namely biogas and biodiesel and solar; such high potential could quickly make the Balkans one of the few places where it has achieved 100% renewable energy production. It is also visible the not-so granted level of commitment expressed by the local economic actors: private and public actors show interest in executing green choices. Therefore, there is no reason to conclude that the Northern Balkans ignore environmental problems. However, B&H put less efforts than other countries. The major push in commitment and willingness comes from the youth and more educated people. Despite the good intentions and potentially available, the Balkans still lack the means to fully embrace the green economy.

Even in this case, all four countries have (almost) the same weaknesses: the central problem remains the inadequate financial resources allocation, insufficient or inefficient infrastructure, vague regulations, and uselessly oppressive bureaucracy. All these problems are interdependent. A weak government makes ineffective laws and therefore allocate poorly the already scarce resources.

When it comes to making green choices, Balkan people weigh more the risk<sup>5</sup> then the opportunities. Using Hofstede (2019) Compare-Countries tool, we note all remarkably high values of "Uncertainty Avoidance": 87 (Bosnia), 80 (Croatia), 92 (Serbia) and 88 (Slovenia). This might come from the transition from a centrally planned economy to an open-market economy with its challenges, opportunities, and threats (Kustin, 2006; Yarashevich and Karneyeva, 2013); a profoundly inefficient banking system (Kukić, 2017); high youth unemployment rate and low self-esteem (CSF Policy Brief, 2018). Corruption and lack of institutional trust are common threats to the green economy in the Balkans (Gomes, 2019) and economic development (Feruni et al., 2020), with Serbia and B&H ranked as the worst in terms of the weak rule of law and control of corruption (Hoxhaj, 2020). Here, we notice risks outweigh the opportunities. Firms are too small to implement green policies and big firms are much profit-oriented to care about the environment. New entrepreneurs are risk-averse and innovative entrepreneurship is obstructed by a firm-adverse climate: turning green is expensive and insufficient help from the government, mainly because of corruption and incompetence. Once again, there is currently a vicious circle that needs to be broken. A top-down solution comes from the EU influence starting with the new enlargement strategy for the Balkans, adopted in 2018. Reformed "accession talks" framework (one of the six flagship initiatives is "Green Agenda and Sustainable Connectivity") aims to strengthen the rule of law and cast away corruption in Serbia, Bosnia, and other Western Balkan countries; however, selected studies claim that the power of EU incentives is meagre (Elbasani and Šabić, 2018), lack of credibility (Stojarová, 2020), has no strong correlation (Popova and Post, 2018). Therefore, further research on the matter is advisable.

Whether accession to the EU and full Europeanization might speed up, we readily observe much needed structural reforms and reform delays in the region. However, the fundamental problem lies in public preference and political preferences (Besimi and Monastiriotis, 2019). When general preference and political (from the government) preferences are met, then the reforming process is sped up. From one side, Europe can press for reforms, if realistic and from the other side, local government can change their structural preference to meet with that of the people.

#### 5. Policy implications

Our selected countries (i.e., B&H, Croatia, Serbia, and Slovenia) received more focused attention in the academic literature. B&H and Serbia are candidates to enter the EU. From our extensive research cautiously emerges that "national experts" prioritise similar areas

<sup>&</sup>lt;sup>4</sup> See https://www.stat.si/StatWeb/File/DocSysFile/11117/lprs\_2019\_ang. pdf.

<sup>&</sup>lt;sup>5</sup> See https://www.hofstede-insights.com/country-comparison/bos nia-and-herzegovina,croatia, serbia,slovenia/.

typically depending on the country under investigation. For instance, B&H naturally produces more organic food and sustainable agriculture, followed by sustainable/green tourism. Croatia typically focuses on organic food too, but then follows CSR; the same can adequately apply to Slovenia. Serbia gives lesser importance to CSR, tourism, and agriculture. The least covered topics are green/renewable energy and waste management. The most covered areas are all profit-related; this suggests the national academics prioritise turning green areas to lead to potential profitability.

We notice there are two kinds of pushes, one external and one internal. Internal force is more responsible for implementing green choices. It naturally depends on the conscious awareness of people and their necessary political will and how private companies find it essential to be socially responsible and profitable. We weigh the barriers that restrict the push, as mentioned above. Most of the national scientists highlight the lack of profitability in turning green. Private companies find green investments expensive and do have limited incentives. Small businesses (especially in Serbia and B&H) find corruption, competition, insufficient access to financial resources and unreliable infrastructures the major obstacle to a greener transition (Sanfey and Milatovic, 2018). More incentives can come nothing but in subsidies or legal coercion through regulations and local consumers, whose "green" demand has not reached the critical mass that would trigger the transformation into a circular economy. These barriers are common in all four countries, despite Croatia and Slovenia being more virtuous (in all likelihood because they are more affluent and gain more access to EU investments). The lack of incentives must be traced back to a political will and a lack of proper financial resources. Without the operational definition of a correct and precise budget, it is challenging to define regulations (from waste management to financial institutions) and subsidies (primarily addressed to organic food companies) as most of the experts ask to do. For the specific case of waste management Olofsson (2020) argues citizens can play a critical role in implementing waste management policies. Still, such active involvement is shaped by the creative process of negotiations through which is carved out as an "environmental citizen." This process implies initially targeting school and kindergarten children and introducing a more exorbitant fee for waste disposal services or persuading people that "sorting municipal waste will make your bill cheaper."

Local consumers are more prone to spend more on organic food and rural tourism implants that are eco-friendly. This course is present only among women, youngers, and well-educated people, shrinking the internal demand and reducing traditional farms' incentives to turn into eco-friendly organic farms. It would be possible to increase awareness, carefully foster the demand for organic food and green products and adopt more responsible behaviour towards the environment by improving education and distributing them efficiently. Another recommendation is to operate subsidies to help organic farms become more competitive. However, governments should collect more financial resources and efficiently implement a spending review by cutting financial support. Although securing foreign aid access could lead to political inertia for the spending review, another financial source might obtain international funds. One must generously support public intervention as a general response in common is a valuable way to advance toward a circular economy. To solve the lack of profitability and socially responsible behaviour, companies must direct their resources in managing innovative technologies to develop their products more competitive. This would stimulate the demand for eco-friendly products and a promotion campaign to increase awareness. However, entrepreneurs are not prone to divert considerable investments towards a greener production because it is perceived as not profitable or too risky.

Along with the internal push, supranational entities' external drive fulfils a significant role in shaping and fostering the transition to a greener economy. Slovenia and Croatia enjoyed membership in the EU and have access to virtually "unlimited" funds created for developing countries in Europe. Having access to EU funds, they are compelled to implement European regulations about the environment and sustainability; despite that Croatia and Slovenia need further improvements with their respective waste management systems, thanks to EU funds the former has more and better infrastructures (like the one<sup>6</sup> in the counties of Zadar and Lika-Senj) in order to meet with the standards provided in Croatia's Accession Treaty, the latter enjoys a new upgraded waste management system in central Slovenia.<sup>7</sup> This typically provides a robust and political incentive to promptly turn into a greener country; such a process in "which countries adopt EU rules" is called "Europeanization" (Schimmelfennig and Sedelmeier 2005). Its instrument to such a process adopts the name of "conditionality." Having external drives or pushes (Sergi et al., 2020) is not new in the scholarly literature: studies like Grabbe (2015) showed how consistent EU's external incentives are shaping up national policies (see also Schimmelfennig and Sedelmeier, 2004). Lu et al. (2020) showed that Croatian and Slovenian companies typically present a more elevated level of corporate social responsibility (because of political factors) than Montenegro (which is not in the EU) and such a level of CSR is linked to accession to the EU. We posit this is an incentive for Serbia and B&H to speed up membership into the EU.

However, as Schimmelfennig and Sedelmeier (2020) indicated that also if the EU has been indeed a confident driver and "incentives are strong in principle," they lose power if the intended target of conditionality sense that such incentives (including sanctions) are not credible. Moreover, the same scientists have pointed out that B&H and Serbia typically suffer from "identity costs" along with "domestic adoption costs." This might explain why such countries are far from green and far from having access to EU membership.

Despite its present natural resources, we do not perceive Croatia as a green country and lags in recycling activities. A survey reveals the respondents experienced acceptable environmental practices in Croatia's business entities (Renko et al., 2017). However, further analysis showed they were not completely satisfied with energy usage in hotels/hostels and accommodation. Food and drink in restaurants, bars/pubs and clubs are surveyed as organic, natural, and eco-friendly.

Along with Croatia, Slovenia is on its way to becoming greener and shares the same barriers and the corresponding significant drivers. One remains the unexploited land biocapacity for bioeconomic purposes (Liobikiene et al., 2020) and even outperformed old members of the EU in terms of goals reached in the comprehensive framework of the "Europe 2020 strategy" (Fedajev et al., 2020). Another acute problem in Slovenia could represent a distinct lack of infrastructure and transport connections, especially in areas where sustainable and green tourism is the only suitable solution (Trček and Koderman, 2018). The imperfectly developed rail transport on the Adriatic coast is a primary concern for green transport chains (Beškovnik et al., 2020). Nevertheless, there is room for marked improvement resulting from increasing widespread awareness, better education, human capital, and political willingness. Serbia's situation is slightly more complicated than Croatia and Slovenia; nonetheless, remaining a potential candidate makes Serbia more motivated to adapt to European standards and regulations. Serbia's major plus might lie in biodiesel production, which, if correctly implemented, could unlock its potential and pave the road to a swifter transition to a green economy.

B&H undoubtedly possesses an enormous potential that is blocked by cultural and political forces: B&H must deal with the spectre of its socialist past and corruption (Budak and Rajh, 2014; Warf, 2018) and sophisticated administrative practices. These barriers typically prevent the transition to a greener economy. The harmonisation with the EU

<sup>&</sup>lt;sup>6</sup> See https://ec.europa.eu/regional\_policy/en/projects/Croatia/croatia/enj oys-a-cleaner-environment-thanks-to-new-waste-management-system-in-za dar-and-lika-senj-counties.

<sup>&</sup>lt;sup>7</sup> See https://ec.europa.eu/regional\_policy/en/projects/slovenia/upgraded -waste-management-facilities-for-central-slovenia.

legislation can accurately represent a valid driver towards more vigorous policies and socially responsible corporate measures (Lu et al., 2020).

Agacevic and Xu (2020) claim that Chinese tourists to ex-Yugoslavia countries can be considered assets for sustainable tourism, with minor impact only for Croatia and Slovenia.

#### 6. Conclusions

Grounded on an extensive Scopus literature review, we have found the most recent recommendations about the green economy supplied by "national experts" in Slovenia, Croatia, Serbia, Bosnia and Herzegovina. Slovenia and Croatia perform slightly well and better than Serbia and B&H. Even now, their potential is to be unlocked. We also notice that most published authors come with similar recommendations and prioritise more economic realms than social areas. However, about the direct impact of local academia on the policymaking process, we found there is no firm evidence of significant impact, it is needed more time to produce more academic works in the light of the relative novelty of the topics covered and comparing with other regions, the Balkans are by far the least in contributing the expansion of green economy literature (see Merino-Saum et al., 2020). Without empirical evidence of other rationales on the negligible impact on policymaking, is left to considerable speculation.

We suggest empirical research into the desired effects of local academia across Balkan countries and the cost for policymakers and ordinary people to become credibly informed. Despite national academics' role, it is possible to instantly recognise the alternative to a green economy. We can sum up an internal motivation and an external stimulation: public institutions and consumers find with the first; the considerable influence exercised by the EU identifies the external stimulus. Routinely, the inner drive is more responsible for implementing green policies and the actors that trigger such force are interdependent. Without a satisfactory level of potential profitability, efficient regulations or interventions, or investments in education, companies become reluctant to adopt green policies. However, local consumers are still unaware of green products without private investments in innovative technologies or a robust advertising campaign. The proper balance of these actors naturally depends on the political process of each country. It would interest research in achieving the best balance between private and public in the Balkan region and a comprehensive examination to understand if a barrier could be the Balkan entrepreneurs' risk aversion a cultural base.

There is a fundamental difference between sustainable development and the green economy (Merino-Saum et al., 2020). Balkan experts employ them interchangeably with a more propensity to apply the concept of sustainability in the corporate area and tourism, while "green" is referred to energy and waste management. The only scientific area in which sustainable development and "green concept" are unified is organic food. Published authors use their standard definition of "green economy" and are often used interchangeably with "sustainable economy." Still, we suggest further research to determine how Balkan non-EU members and EU members perceive the difference between green economy and sustainable development and if being in the EU influences such concepts.

We thoroughly address further research to measure the relationship between risk-aversion and green entrepreneurship potential in the Balkan area and explain the roots of this problem and how to overcome it.

Whereas the external push's strength rests on the EU membership, candidates to membership provide a significant motivation to align with European standards. In conclusion, it would be essential to grasp the best way to balance these two types of pushes. Foreign intervention is not always enough to carefully foster the transition towards a greener economy; it could lead to moral hazards. Therefore, the responsibility stays in the eager hands of people and their governments.

#### Acknowledgements

We would like to thank the Associate Editor and three reviewers for their valuable time and specific comments, whose inputs have helped enhance the manuscript's current version.

#### References

- Agacevic, A., Xu, M., 2020. Chinese tourists as a sustainable boost to low seasons in exyugoslavia destinations. Sustainability 12 (2), 449. https://doi.org/10.3390/ sti12020449.
- Bagatelas, W.T., Sergi, B.S., 2017. The Balkans 'brain drain'-its meaning and implications. In: South-East Europe Review for Labour and Social Affairs (Migration Waves in Eastern Europe [1990-2015]: A Selection from 16 Years of SEER), pp. 93–98. https://doi.org/10.5771/9783845279398.
- Baráth, L., Fertő, J., Bojnec, S., 2020. The effect of investment, LFA and agrienvironmental subsidies on the components of total factor productivity: the case of slovenian farms. J. Agric. Econ. (3), 853–876. https://doi.org/10.1111/1477-9552 12374
- Besimi, F., Monastiriotis, V., 2019. The role of EU integration in accelerating structural reforms in the western Balkans: evidence, theory and policy. LEQS Paper 140. https://doi.org/10.2139/ssrn.3330553.
- Beškovnik, B., Zanne, M., Dlabač, T., Ivošević, Š., 2020. Green transport chains analysis: pollution vs. Price and time elements on asia–eastern adriatic trade. NAŠE MORE: znanstveni časopis za more i pomorstvo 67 (1), 36–44. https://doi.org/10.17818/ NM/2020/1.6.
- Bicikliski, O., Trajkova, F., Mihajlov, L., 2018. Evaluation of the status in organic agricultural production in Republic of Macedonia and European countries. Journal of Agriculture and Plant Sciences 16 (1), 27–35. https://eprints.ugd.edu. mk/20389/.
- Blaće, A., Čuka, A., Šiljković, Ž., 2020. How dynamic is organic? Spatial analysis of adopting new trends in Croatian agriculture. Land Use Pol. 99, 105036. https://doi. org/10.1016/j.landusepol.2020.105036.
- Bórawski, P., Beldycka-Bórawska, A., Szymańska, E.J., Jankowski, K.J., Dubis, B., Dunn, J.W., 2019. Development of renewable energy sources market and biofuels in the European Union. J. Clean. Prod. 228, 467–484. https://doi.org/10.1016/j. jclepro.2019.04.242.
- Börzel, T.A., Grimm, S., 2018. Building good (enough) governance in post conflict societies & areas of limited statehood: the European Union & the Western Balkans. Daedalus 147 (1), 116–127. https://doi.org/10.1162/DAED\_a\_00478.
- Bučar, K., 2017. In: Renko, S., Pestek, A. (Eds.), Green Orientation in Tourism of Western Balkan Countries, Green Economy in the Western Balkans. Emerald Publishing Limited, Bingley, pp. 175–209. https://doi.org/10.1108/978-1-78714-499-620171006.
- January Bučar, K., Matas, M., 2016. The importance of tourism green orientation for the customer loyalty. In: Trade Perspectives 2016: Safety, Security, Privacy and Loyalty.
- Budak, J., Rajh, E., 2014. Corruption as an obstacle for doing business in the Western Balkans: a business sector perspective. Int. Small Bus. J. 32 (2), 140–157. https:// doi.org/10.1177/0266242613498882.
- Čater, T., Prašnikar, J., Čater, B., 2009. Environmental strategies and their motives and results in Slovenian business practice. Econ. Bus. Rev. 11 (1), 55–74.
- Cerjak, M., Mesić, Ž., Kopić, M., Kovačić, D., Markovina, J., 2010. What motivates consumers to buy organic food: comparison of Croatia, Bosnia Herzegovina, and Slovenia. J. Food Prod. Market. 16 (3), 278–292. https://doi.org/10.1080/ 10454446.2010.484745.
- CSF Policy Brief, CSF Policy, 2018. Economic Stability Issues in the Western Balkans. Civil Society Forum of the Western Balkan Summit Series.
- Dabić, M., Tipurić, D., Podrug, N., 2015. Cultural differences affecting decision-making style: a comparative study between four countries. J. Bus. Econ. Manag. 16 (2), 275–289. https://doi.org/10.3846/16111699.2013.859172.
- Dabrowski, M., Myachenkova, Y., 2018. The western Balkans on the road to the European union (No. 2018/04). In: Bruegel Policy Contribution. http://hdl.handle.net/104 19/208011.
- Demirel, P., Li, Q.C., Rentocchini, F., Tamvada, J.P., 2019. Born to be green: new insights into the economics and management of green entrepreneurship. Small Bus. Econ. 52 (4), 759–771. https://doi.org/10.1007/s11187-017-9933-z.
- Djokic, N., Grubor, A., Milicevic, N., Petrov, V., 2018. New market segmentation knowledge in the function of bioeconomy development in Serbia. Amfiteatru Economic 20 (49), 700–716. https://doi.org/10.24818/EA/2018/49/700.
- Dogmus, Ö.C., Nielsen, J.Ø., 2019. Is the hydropower boom taking place? A case study of a South East European country, Bosnia and Herzegovina. Renew. Sustain. Energy Rev. 110, 278–289. https://doi.org/10.1016/j.rser.2019.04.077.
- Dogmus, Ö.C., Nielsen, J.Ø., 2020a. The on-paper hydropower boom: a case study of corruption in the hydropower sector in Bosnia and Herzegovina. Ecol. Econ. 172, 106630. https://doi.org/10.1016/j.ecolecon.2020.106630.
- Dogmus, Ö.C., Nielsen, J.Ø., 2020b. Defining sustainability? Insights from a small village in Bosnia and Herzegovina. Geojournal 1–17. https://doi.org/10.1007/s10708-020-10181-9.
- Dolšak, J., Hrovatin, N., Zorić, J., 2019. Can loyalty programs be effective in promoting integrated energy services? Evidence from Slovenian electricity consumers. Energy Research & Social Science 48, 246–256. https://doi.org/10.1016/j. erss.2018.10.011.
- Domazet, I., Simović, V., 2015. In: Radović Marković, M., et al. (Eds.), Creation of Green Jobs: Opportunity to Reduce High Unemployment in Western Balkans. Toward Green

#### Cleaner Engineering and Technology 4 (2021) 100228

Economy: Opportunities and Obstacles for Western Balkan Countries. Xlibris LLC, USA, pp. 82–100. http://ebooks.ien.bg.ac.rs/id/eprint/1023.

- Drakul, M., Berjan, S., Zheliaskiv, A., Demirović, D., Radosavac, A., 2019. MEЖДУНАРОДНОЕ ??????????? КАК ВЕКТОР РАЗВИТИЯ АГРАРНОЙ НАУКИ (international cooperation as a development vector in agrarian science). In: A 265 Агротехнологии XXI века (Agrotechnologies of the XXI Century), vol. 5. *Материалы*.
- Elbasani, A., Šabić, S.Š., 2018. Rule of law, corruption and democratic accountability in the course of EU enlargement. J. Eur. Publ. Pol. 25 (9), 1317–1335. https://doi.org/ 10.1080/13501763.2017.1315162.
- Eres, Z., 2019. A Comparative Study of Waste Management in EU and Non-EU Country Capitals: Zagreb (Croatia) and Sarajevo (Bosnia and Herzegovina) (*Master's Thesis*. Norwegian University of Life Sciences, Ås. https://hdl.handle.net/11250/2642775.
- Fedajev, A., Stanujkic, D., Karabašević, D., Brauers, W.K., Zavadskas, E.K., 2020. Assessment of progress towards "Europe 2020" strategy targets by using the MULTIMOORA method and the Shannon Entropy Index. J. Clean. Prod. 244, 118895. https://doi.org/10.1016/j.jclepro.2019.118895.
- Feruni, N., Hysa, E., Panait, M., Rădulescu, I.G., Brezoi, A., 2020. The impact of corruption, economic freedom and urbanization on economic development: western Balkans versus EU-27. Sustainability 12 (22), 9743. https://doi.org/10.3390/ su12229743.
- Gailhard, İ.U., Bojnec, Š., 2015. Farm size and participation in agri-environmental measures: farm-level evidence from Slovenia. Land Use Pol. 46, 273–282. https:// doi.org/10.1016/j.landusepol.2015.03.002.
- Gajdić, D., Petljak, K., Mesić, Ž., 2018. An exploration of distribution channels: challenges and opportunities for organic food producers in Croatia. Ekonomika poljoprivrede 65 (4), 1461–1482. https://doi.org/10.5937/ekoPolj1804461G.
- Giannakitsidou, O., Giannikos, I., Chondrou, A., 2020. Ranking European countries on the basis of their environmental and circular economy performance: a DEA application in MSW. Waste Manag. 109, 181–191. https://doi.org/10.1016/j. wasman.2020.04.055.
- Golob, U., Bartlett, J.L., 2007. Communicating about corporate social responsibility: a comparative study of CSR reporting in Australia and Slovenia. Publ. Relat. Rev. 33 (1), 1–9. https://doi.org/10.1016/j.pubrev.2006.11.001.
- Golob, A., Lesjak, M., Fabjan, D., Jere-Jakulin, T., Stamenković, I., 2015. Assessment of sustainability of sports events (Slovenia). Turizam 19 (2), 71–83. https://doi.org/ 10.5937/Turizam1502071G.
- Gomes, T.M.R.C., 2019. The European union accession and climate change policies in the western balkan countries. In: Climate Change and Global Development. Springer, Cham, pp. 153–173. https://doi.org/10.1007/978-3-030-02662-2 8.
- Grabbe, H., 2015. Eu's Transformative Power. Palgrave Macmillan, London. https://doi. org/10.1057/9780230510302.
- Grah, B., Vlado Dimovski, Judita, P., 2020. Managing sustainable urban tourism development: the case of Ljubljana. Sustainability 12 (3), 792. https://doi.org/ 10.3390/su12030792.
- Grubor, A., Djokic, N., 2016. Organic food consumer profile in the Republic of Serbia. Br. Food J. 118 (1), 164–182. https://doi.org/10.1108/BFJ-06-2015-0225.
- Gvero, P.M., Tica, G.S., Petrović, S.I., Papuga, S.V., Jakšić, B.M., Roljić, L.M., 2010. Renewable energy sources and their potential role in mitigation of climate changes and as a sustainable development driver in Bosnia and Herzegovina. Therm. Sci. 14 (3), 641–654. https://doi.org/10.2298/TSCI1003641G.
- Ham, M., Pap, A., Stanic, M., 2018. What drives organic food purchasing? –evidence from Croatia. Br. Food J. 120 (4), 734–748. https://doi.org/10.1108/BFJ-02-2017-0090.
- Hoefkens, C., Verbeke, W., Aertsens, J., Mondelaers, K., Van Camp, J., 2009. The nutritional and toxicological value of organic vegetables: consumer perception versus scientific evidence. Br. Food J. 111 (10), 1062–1077. https://doi.org/ 10.1108/0007070092092916.
- Hofstede, G., 2019. Compare Countries. Hofstede insights.
- Hojnik, J., Ruzzier, M., 2016. The driving forces of process eco-innovation and its impact on performance: insights from Slovenia. J. Clean. Prod. 133, 812–825. https://doi. org/10.1016/j.jclepro.2016.06.002.
- Hojnik, J., Ruzzier, M., Manolova, T.S., 2018. Internationalization and economic performance: the mediating role of eco-innovation. J. Clean. Prod. 171, 1312–1323. https://doi.org/10.1016/j.jclepro.2017.10.111.
- Hojnik, J., Ruzzier, M., Manolova, T.S., 2020. Sustainable development: predictors of green consumerism in Slovenia. Corp. Soc. Responsib. Environ. Manag. 27 (4), 1695–1708. https://doi.org/10.1002/csr.1917.
- Horvatinčić, K., Demonja, D., Tišma, S., 2016. Green jobs for green food: new knowledge and skills for family farms in food production in Croatia. Quality-Access to Success 17 (154).
- Hoxhaj, A., 2020. The EU rule of law initiative towards the western Balkans. Hague Journal on the Rule of Law 1–30. https://doi.org/10.1007/s40803-020-00148-w.
- Huđek, H., Žganec, K., Pusch, M.T., 2020. A review of hydropower dams in Southeast Europe–distribution, trends and availability of monitoring data using the example of a multinational Danube catchment subarea. Renew. Sustain. Energy Rev. 117, 109434. https://doi.org/10.1016/j.rser.2019.109434.
- Ilić, M., Nikolić, M., 2016. Drivers for development of circular economy–A case study of Serbia. Habitat Int. 56, 191–200. https://doi.org/10.1016/j.habitatint.2016.06.003.
- Inês, C., Guilherme, P.L., Esther, M.G., Swantje, G., Stephen, H., Lars, H., 2020. Regulatory challenges and opportunities for collective renewable energy prosumers in the EU. Energy Pol. 138, 111212. https://doi.org/10.1016/j.enpol.2019.111212.
- Ivanisevic Hernaus, A., Stojanovic, A., 2015. Determinants of bank social responsibility: case of Croatia. Econ. Manag. https://doi.org/10.15240/tul/001/2015-2-009.
- Ivanović, M., Glavaš, H., Gantner, R., 2016. Biofuels in Croatia. Journal of Microbiology & Microbial Technology 1 (2), 5. https://doi.org/10.13188/2474-4530.1000009.

- Janković, R., Jovkić, J., 2016. October). Environmental awareness in companies of Eastern Serbia. In: 6th International Symposium on Environmental and Material Flow Management–EMFM, ISBN 978-86-6305-050-1, pp. 183–192.
- Jugović, M., Jakišić, T., Perković, G., Milić, V., Berjan, S., Gpvedarica, B., Durđić, I., 2019. The importance of organic agriculture for the development of rural areas in Bosnia and Herzegovina. Материалы 36. Agrotechnologies of the XXI century), A 265 Агротехнологии XXI века.
- Kasztelan, A., 2016. May). Green competitiveness of the EU countries. In: International Conference on European Integration, pp. 415–424.
- Knez, M., 2017. Sustainable transport, electric vehicle promotional policies, and factors influencing the purchasing decisions of electric vehicles: a case of Slovenia. Electric Vehicles: Prospects and Challenges. Elsevier, pp. 207–244. https://doi.org/10.1016/ B978-0-12-803021-9.00006-9.
- Knez, M., Jereb, B., Gago, E.J., Rosak-Szyrocka, J., Obrecht, M., 2020. Features Influencing Policy Recommendations for the Promotion of Zero-Emission Vehicles in Slovenia, Spain, and Poland. *Clean Technologies and Environmental Policy*, pp. 1–16. https://doi.org/10.1007/s10098-020-01909-9.
- Knežević, G., Pavlović, V., Stevanović, S., 2018. Upgrading waste management and sustainability reporting in banking industry: evidence from Serbia. Industrija 46 (3), 163–183. https://doi.org/10.5937/industrija46-17380.
- Kovac, I., Vuletic, A., Mlinarić, D., 2020. Environmental responsibility of Croatian road freight transport enterprises. Int. J. Retail Distrib. Manag. 48 (9), 1023–1035. https://doi.org/10.1108/IJRDM-07-2019-0248.
- Krivačić, D., 2017. Sustainability reporting quality: the analysis of companies in Croatia. J. Account. Manag. 7 (1), 1–14. https://hrcak.srce.hr/194710.
- Krivačić, D., Janković, S., 2017. Managerial attitudes on environmental reporting: evidence from Croatia. Journal of Environmental Accounting and Management 5 (4), 321. https://doi.org/10.5890/JEAM.2017.12.005.
- Kukić, L., 2017. Regional development under socialism: evidence from Yugoslavia. http://eprints.lse.ac.uk/id/eprint/85078.
- Kulišić, B., Radić, T., Njavro, M., 2020. Agro-pruning for energy as a link between rural development and clean energy policies. Sustainability 12 (10), 4240. https://doi. org/10.3390/su12104240.
- Kustin, R., 2006. A study of Hofstede's culture value survey in a post-Soviet country: perspectives from Belarus. J. Transnat. Manag. 11 (4), 3–17. https://doi.org/ 10.1300/J482v11n04\_02.
- Kuzman, B., Djurić, K., Mitrović, L., Prodanović, R., 2017. Agricultural budget and agriculture development in Republic of Serbia. Economics of Agriculture 64 (2), 515–531. https://doi.org/10.5937/ekoPolj1702515K.
- Lange, S., Nechev, Z., Trauner, F. (Eds.), 2017. Resilience in the Western Balkans. EU Institute for Security Studies. https://doi.org/10.2815/9786.
- Lapinskaite, I., Skvarciany, V., Janulevicius, P., 2020. Impact of investment sources for sustainability on a country's sustainable development: evidence from the EU. Sustainability 12 (6), 2421. https://doi.org/10.3390/su12062421.
- Lindenberg, N., 2014. Public instruments to leverage private capital for green investments in developing countries. In: German Development Institute/Deutsches Institut für Entwicklungspolitik (DIE) Discussion Paper, 4. Available at: SSRN. htt ps://ssrn.com/abstract=2405468.
- Liobikiene, G., Chen, X., Streimikiene, D., Balezentis, T., 2020. The trends in bioeconomy development in the European Union: exploiting capacity and productivity measures based on the land footprint approach. Land Use Pol. 91, 104375. https://doi.org/ 10.1016/j.landusepol.2019.104375.
- Ljubojev, N., Dukić-Mijatović, M., Zakin Kavalić, M., Stanisavljev, S., Cvijić, M., 2019. Protection of design in the textile industry in order to improve the economic aspect of sustainable development of Serbia—comparative overview of the laws of the European union and Croatia. Sustainability 11 (7), 2126. https://doi.org/10.3390/ su11072126.
- Lockwood, M., 2015. The Political Dynamics of Green Transformations. The Politics of Green Transformations, pp. 86–101.
- Lokar, J., Virtič, P., 2020. The potential for integration of hydrogen for complete energy self-sufficiency in residential buildings with photovoltaic and battery storage systems. Int. J. Hydrogen Energy 45 (6), 34566–34578. https://doi.org/10.1016/j. ijhydene.2020.04.170.
- Lu, J., Ren, L., Zhang, C., Qiao, J., Kovacova, M., Streimikis, J., 2020. Assessment of corporate social responsibility and its impacts on corporate reputation of companies in selected Balkan Countries former Yugoslavia States. Technol. Econ. Dev. Econ. 26 (2), 504–524. https://doi.org/10.3846/tede.2020.12069.
- Luketina, R., El Bilali, H., Berjan, S., Wurzinger, M., 2018. Sustainability transitions in Bosnian agro-food system. Poljoprivreda i Sumarstvo 64 (4), 29. https://doi.org/ 10.17707/AgricultForest.64.4.04.
- Luttenberger, L.R., 2020. Waste management challenges in transition to circular economy–Case of Croatia. J. Clean. Prod. 256, 120495. https://doi.org/10.1016/j. jclepro.2020.120495.
- Makaš, M., Bajramović, S., Erjavec, E., Rednak, M., 2018. Assessment of overall support to agriculture in Bosnia and Herzegovina. Agriculture & Forestry/Poljoprivreda i Sumarstvo 64 (4). https://doi.org/10.17707/AgricultForest.64.4.18.
- Malinauskaite, J., Jouhara, H., Egilegor, B., Al-Mansour, F., Ahmad, L., Pusnik, M., 2020. Energy efficiency in the industrial sector in the EU, Slovenia, and Spain. Energy 208, 118398. https://doi.org/10.1016/j.energy.2020.118398.
- Mangafić, J., Pilav-Velić, A., Martinović, D., Činjarević, M., 2017. Consumer innovativeness and organic food purchase intentions. In: Green Economy in the Western Balkans: towards a Sustainable Future. Emerald Publishing Limited, pp. 285–319. https://doi.org/10.1108/978-1-78714-499-620171010.
- Martinov, M., Scarlat, N., Djatkov, D., Dallemand, J.F., Viskovic, M., Zezelj, B., 2020. Assessing sustainable biogas potentials—case study for Serbia. Biomass Conversion and Biorefinery 10 (2), 367–381. https://doi.org/10.1007/s13399-019-00495-1.

März, U., Stolz, T., Kalentic, M., Mišković, N., 2012. Organic Agriculture in Serbia 2012: at a Glance. Serbia Organica.

Mayring, P., 2008. Qualitative Inhaltanalyse–Grundlagen und Techniken (qualitative content analysis).

Megwai, G., Njie, N.I., Richards, T., 2016. Exploring green economy strategies and policies in developing countries. Int. J. Green Econ. 10 (3–4), 338. https://doi.org/ 10.1504/IJGE.2016.081905.

Merino-Saum, A., Clement, J., Wyss, R., Baldi, M.G., 2020. Unpacking the Green Economy concept: a quantitative analysis of 140 definitions. J. Clean. Prod. 242, 118339. https://doi.org/10.1016/j.jclepro.2019.118339.

Mesić, Ž., Petljak, K., Borović, D., Tomić, M., 2020. In: Segmentation of Local Food Consumers Based on Altruistic Motives and Perceived Purchasing Barriers: a Croatian Study. Economic Research-Ekonomska Istraživanja, pp. 1–22. https://doi. org/10.1080/1331677X.2020.1782243.

Mihalič, T., 2015. Environmental resources and the hotel industry: the case of Slovenia. Destination competitiveness, the Environment and sustainability: Challenges and cases. CABI Series in Tourism Management Research 2, 101. https://doi.org/10.1079/ 9781780646978.0000. ISBN: 9781780646978.

Mijatovic, I., Miladinovic, S., Stokic, D., 2015. Corporate social responsibility in Serbia: between corporate philanthropy and standards. In: Corporate Social Responsibility in Europe. Springer, Cham, pp. 333–350. https://doi.org/10.1007/978-3-319-13566-3 18.

Mujčinović, A., Nikolić, A., Uzunović, M., 2017. Investigating relationship between financial leverage and financial performance: case study-Bosnia and Herzegovina beverage industry, 67 (2. In: Radovi Poljoprivrednog Fakulteta Univerziteta U Sarajevu/Works of the Faculty of Agriculture University of Sarajevo, vol. 62, pp. 613–624.

Nikolic, V., Vukic, T., Maletaski, T., Andevski, M., 2020. Students' attitudes towards sustainable development in Serbia. Int. J. Sustain. High Educ. 21 (4), 733–755. https://doi.org/10.1108/IJSHE-11-2019-0336.

Ogorevc, M., Primc, K., Slabe-Erker, R., Kalar, B., Dominko, M., Murovec, N., Bartolj, T., 2020. Social feedback loop in the organic food purchase decision-making process. Sustainability 12 (10), 4174. https://doi.org/10.3390/su12104174.

Paliaga, M., Franjić, Z., Flego, M., 2009. January). Green marketing in Croatia–research of experience and effects on the establishment of environmentally and socially responsible business. In: Proceedings of the 34th Annual Macromarketing Conference

Pavlic, V., 2016. Organic food market growing in Croatia. https://www.total-croati a-news.com/business/14925-organic-food-market-growing-in-croatia. (Accessed 26 November 2019). Accessed.

Pavlović, T.M., Milosavljević, D.D., 2017. Current state and prospects of solar energy in Serbia. Zbornik Međunarodne konferencije o obnovljivim izvorima električne energie–MKOIEE 5 (1), 51–58.

Pavlović, S., Belij, M., Vesić, M., Jovanović, S.S., Manojlović, I., 2020. Improvement of the Relationship between Environment and Tourism: Case Study of the National Park Đerdap in Serbia.

Pažek, K., Prišenk, J., Bukovski, S., Prevolšek, B., Rozman, Č., 2020. Multicriteria assessment of the quality of waste sorting centers—a case study. Sustainability 12 (9), 3780. https://doi.org/10.3390/su12093780.

Perčo, A., Ilgun, E., 2012. Bosnia and Herzegovina. Ecol. Econ. 68 (6), 1667–1675.

Perić, N., Vasić-Nikčević, A., Vujić, N., 2017. Consumers attitudes on organic food in Serbia and Croatia: a comparative analysis. Economics of Agriculture 64 (3), 1049–1064. https://doi.org/10.5937/ekoPolj1703049P.

Perpar, A., Udovč, A., 2019. Organic farming: a good production decision for slovenian small size farms and farms in the areas with restrictions/limitations or natural obstacles for agriculture?. In: Multifunctionality and Impacts of Organic Agriculture. IntechOpen. https://doi.org/10.5772/intechopen.89716.

Peštek, A., Agic, E., Cinjarevic, M., 2018. Segmentation of organic food buyers: an emergent market perspective. Br. Food J. 120 (2), 269–289. https://doi.org/ 10.1108/BFJ-04-2017-0215.

Petljak, K., Štulec, I., Renko, S., 2017. Consumers' willingness to pay more for organic food in Croatia. Ekonomski vjesnik/Econviews-Review of Contemporary Business, Entrepreneurship and Economic Issues 30 (2), 441–455. https://hrcak.srce.hr/ojs/i ndex.php/ekonomski-vjesnik/article/view/5316.

Petravić-Tominac, V., Nastav, N., Buljubašić, M., Šantek, B., 2020. Current state of biogas production in Croatia. Energy, Sustainability and Society 10 (1), 1–10. https://doi. org/10.1186/s13705-020-0243-y.

Petrevska, B., Terzić, A., Andreeski, C., 2020. More or less sustainable? Assessment from a policy perspective. Sustainability 12 (8), 3491. https://doi.org/10.3390/ su12083491.

Petrović, M.D., Vujko, A., Gajić, T., Vuković, D.B., Radovanović, M., Jovanović, J.M., Vuković, N., 2018. Tourism as an approach to sustainable rural development in postsocialist countries: a comparative study of Serbia and Slovenia. Sustainability 10 (1), 54. https://doi.org/10.3390/su10010054.

Pieloch-Babiarz, A., Misztal, A., Kowalska, M., 2020. An Impact of Macroeconomic Stabilization on the Sustainable Development of Manufacturing Enterprises: the Case of Central and Eastern European Countries. Environment, Development and Sustainability, pp. 1–30. https://doi.org/10.1007/s10668-020-00988-4.

Planinc, T., Medarić, Z., Bogataj, K., 2020. Hotel employees and corporate social responsibility: the case of portorož, Slovenia. Academica Turistica 13 (1), 111–116.

Popova, M., Post, V., 2018. Prosecuting high-level corruption in eastern Europe. Commun. Post Commun. Stud. 51 (3), 231–244. https://doi.org/10.1016/j. postcomstud.2018.06.004.

Prevolšek, Boris, Maksimović, Aleksandar, Puška, Adis, Pažek, Karmen, Žibert, Maja, Rozman, Črtomir, 2020. Sustainable development of ethno-villages in Bosnia and Herzegovina—a multi criteria assessment. Sustainability 12 (4), 1399. https://doi. org/10.3390/su12041399.

Pupovac, L., Sudarevic, T., Salai, S., 2013. The study of supply and demand of organic products in the European Union and Serbia. Journal of Food Science and Engineering 3 (1), 40. https://open.uns.ac.rs/handle/123456789/5642.

Purgar, Z., 2012. Ljubljana is overtaking Slovenia in the area of electric mobility. Available from: http://www.delo.si/novice/ljubljana/ljubljana-pri-elektricni-mobi lnostiprehiteva-drzavo.html. November 26, 2019. in Slovenian language (translated in English).

Puška, A., Šadić, S., Maksimović, A., Stojanović, I., 2020. Decision support model in the determination of rural touristic destination attractiveness in the Brčko District of Bosnia and Herzegovina. Tourism Hospit. Res. 20 (4), 387–405. https://doi.org/ 10.1177/1467358420904100.

Radenković, M., Bogdanović, Z., Despotović-Zrakić, M., Labus, A., Barać, D., Naumović, T., 2020. April. An IoT approach to consumer involvement in smart grid services: a green perspective. In: World Conference on Information Systems and Technologies. Springer, Cham, pp. 539–548.

Radovic-Markovic, M., Radovic, G., 2016. Opportunities for small business growth in green economy and sustainable development in Serbia. Entrepreneurship: Types, Current Trends and Future Perspectives, pp. 415–428.

Radovic-Markovic, M., Nikitovic, Z., Jovancevic, D., 2015. Toward Green Economy: Opportunities and Obstacles for Western Balkan Countries. Xlibris Corporation.

Rajh, E., Budak, J., Anić, I.D., 2016. Hofstede's culture value survey in Croatia: examining regional differences. Društvena Istraživanja: časopis za opća društvena pitanja 25 (3), 309–327. https://doi.org/10.5559/di.25.3.02.

Renko, S., Bošnjak, K., 2009. The actual situation and the perspectives for development of organic food market in Croatia. Ekon. Pregl. 60, 7–8, 369-395. https://hrcak.srce. hr/40483.

Renko, S., Bucar, K., 2015 January. Environmental aspect of the relationship between tourism and trade: the case of Croatia. In: 4th IASTEM International Conference.

Renko, S., Peštek, A. (Eds.), 2017. Green Economy in the Western Balkans: towards a Sustainable Future. Emerald Group Publishing, ISBN 978-1-78714-499-6. https:// doi.org/10.1108/9781787144996.

Renko, S., Petljak, K., Stulec, I., 2017. The basic postulates of the green image of a country: the case of Croatia. In: Renko, S., Pestek, A. (Eds.), Green Economy in the Western Balkans. Emerald Publishing Limited, Bingley, pp. 1–39. https://doi.org/ 10.1108/978-1-78714-499-620171001.

Ružić, P., Demonja, D., 2015. Contribution to the research of sustainable tourism Development concept in the example of Istria (Croatia). Ann. Alexandru Ioan Cuza Univ. - Econ. 62 (2), 191–207. https://doi.org/10.1515/aicue-2015-0013.

Sanfey, P., Milatovic, J., 2018. The Western Balkans in Transition: Diagnosing the Constraints on the Path to a Sustainable Market Economy. European Bank for Reconstruction and Development. Background paper for the Western Balkans Investment Summit hosted by the EBRD, 26.

Schimmelfennig, F., Sedelmeier, U., 2004. Governance by conditionality: EU rule transfer to the candidate countries of Central and Eastern Europe. J. Eur. Publ. Pol. 11 (4), 661–679. https://doi.org/10.1080/1350176042000248089.

Schimmelfennig, F., Sedelmeier, U. (Eds.), 2005. The Europeanization of Central and Eastern Europe. Cornell University Press.

Schimmelfennig, F., Sedelmeier, U., 2020. The Europeanization of Eastern Europe: the external incentives model revisited. J. Eur. Publ. Pol. 27 (6), 814–833. https://doi. org/10.1080/13501763.2019.1617333.

Sekovska, B., Branislav, V., Bunevski, G., 2013. Consumption of organic food in Macedonia and Serbia: similarities and differences. In: Consumer Attitudes to Food Quality Products. Wageningen Academic Publishers, Wageningen, pp. 239–245. https://doi.org/10.3920/978-90-8686-762-2 18.

Sergi, B.S., Arkoh, P., Batta, C., Drissi, R., Licastro, A., Rodà, A., 2020. Greening the economy: EU membership as a driver for change in south-east Europe. SEER Journal for Labour and Social Affairs in Eastern Europe 22 (2), 145–180. https://doi.org/ 10.5771/1435-2869-2019-2-145.

Silajdžić, I., Kurtagić, S.M., Vučijak, B., 2015. Green entrepreneurship in transition economies: a case study of Bosnia and Herzegovina. J. Clean. Prod. 88, 376–384. https://doi.org/10.1016/j.jclepro.2014.07.004.

Slavuj Borčić, L., 2020. Short food supply chains in Croatia: perspectives of organic food producers involved with groups of solidary exchange. Hrvat. Geogr. Glas. 82 (1), 5–33. https://doi.org/10.21861/HGG.2020.82.01.01.

Smolčić Jurdana, D., Šverko Grdić, Z., Krstinić Nižić, M., 2020. Managers' informedness of energy issues in tourism. Sustainability 12 (17), 6733. https://doi.org/10.3390/ su12176733.

Stojarová, V., 2020. Moving towards EU membership and away from liberal democracy. Southeast European and Black Sea Studies 20 (1), 221–236. https://doi.org/ 10.1080/14683857.2019.1709723.

Štrukelj, T., Nikolić, J., Zlatanović, D., Sternad Zabukovšek, S., 2020. A strategic model for sustainable business policy development. Sustainability 12 (2), 526. https://doi. org/10.3390/su12020526.

Stubbs, P., 2013. The prospects for a green economy in Croatia. Green European Journal 6.

Taghizadeh-Hesary, F., Yoshino, N., 2019. The way to induce private participation in green finance and investment. Finance Res. Lett. 31, 98–103. https://doi.org/ 10.1016/j.frl.2019.04.016.

Tešin, A., Kovačić, S., Jovanović, T., Vujičić, M.D., Obradović, S., 2020. Ecotourism constraints: What prevents domestic tourists in Serbia from visiting ecodestinations? J. Geogr. Inst. " Jovan Cvijic", SASA 70 (3), 255–271. https://doi.org/ 10.2298/JJGI2003255T.

- Tipurić, D., Podrug, N., Hruška, D., 2007. Cultural differences: results from empirical research conducted in Croatia, Slovenia, Bosnia and Herzegovina and Hungary. The Business Review Cambridge 7 (1), 151–157.
- Tranfield, D., Denyer, D., Smart, P., 2003. Towards a methodology for developing evidence-informed management knowledge by means of systematic review. Br. J. Manag. 14 (3), 207–222. https://doi.org/10.1111/1467-8551.00375.
- Trbovich, A.S., Nešić, S., Subotić, J., 2018. Access to finance for young innovative enterprises in Serbia: assessment and recommendations for policymakers. Ekonomika preduzeća 66 (1–2), 121–136. https://doi.org/10.5937/ EKOPRE1802121T.
- Trček, U., Koderman, M., 2018. The role of tourism in sustainable development of mountainous border region—the case of bovec municipality, Slovenia. In: Nature, Tourism and Ethnicity as Drivers of (De) Marginalization. Springer, Cham, pp. 93–107. https://doi.org/10.1007/978-3-319-59002-8\_6.
- Trišić, I., Štetić, S., Maksin, M., 2020. The significance of protected natural areas for tourism in the Vojvodina Province (Northern Serbia)-analysis of sustainable tourism development. Spatium 2020 (43), 1–7. https://doi.org/10.2298/SPAT2043001T.
- Turjak, S., Unukić, I., Liović, D., 2018. January). SMEs, resource efficiency and green markets–aspects of the transition of SMEs in the republic of Croatia. Book of Proceedings 14 (2), 616–625. ISSN 2620-0597.
- Unay-Gailhard, İ., Bojnec, Š., 2019. The impact of green economy measures on rural employment: green jobs in farms. J. Clean. Prod. 208, 541–551. https://doi.org/ 10.1016/j.jclepro.2018.10.160.
- Unep, U., 2011. In: Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. UNEP, Nairobi, Kenya. Available at: https://sustainabled evelopment.un.org/content/documents/126GER\_synthesis\_en.pdf.
- United Nations Environment Programme, 2010. Annual Report 2010, ISBN 978-92-807-3149-1. Available at: https://wedocs.unep.org/handle/20.500.11822/7915.
- Vapa-Tankosić, J., Ignjatijević, S., Kranjac, M., Lekić, S., Prodanović, R., 2018. Willingness to pay for organic products on the Serbian market. Int. Food Agribus. Manag. Rev. 21 (6), 791–801. https://doi.org/10.22004/ag.econ.274994.
- Vapa-Tankosić, J., Ignjatijević, S., Kiurski, J., Milenković, J., Milojević, I., 2020. Analysis of consumers' willingness to pay for organic and local honey in Serbia. Sustainability 12 (11), 4686. https://doi.org/10.3390/su12114686.
- Vaško, Ž., Kovačević, I., 2020. Comparison of economic efficiency of organic versus conventional farming in the conditions of Bosnia and Herzegovina. Agriculture & Forestry/Poljoprivreda i Sumarstvo 66 (2), 554–5579. https://doi.org/10.17707/ AgricultForest.66.2.16.
- Vehapi, S., 2015. A study of the consumer motives which influence the purchase of organic food in Serbia. Economic Themes 53 (1), 102–118. https://doi.org/10.1515/ ethemes-2015-0007.
- Vehapi, S., Dolićanin, E., 2016. Consumers behavior on organic food: evidence from the Republic of Serbia. ЕконоМика пољопривреде 63 (3), 871–889. https://doi.org/ 10.5937/ekoPolj1603871V. ISSN 2334-8453.
- Voca, N., Ribic, B., 2020. Biofuel production and utilization through smart and sustainable biowaste management. J. Clean. Prod. 259, 120742. https://doi.org/ 10.1016/j.jclepro.2020.120742.
- Vujovic, S., Stanisavljevic, N., Fellner, J., Tosic, N., Lederer, J., 2020. Biodegradable waste management in Serbia and its implication on P flows. Resour. Conserv. Recycl. 161, 104978. https://doi.org/10.1016/j.resconrec.2020.104978.

- Vukadinović, S.D., Domazet, S.S., Ješić, J.S., 2018. Employment and unemployment of youth in the Republic of Serbia, current state and prospects. Poslovna ekonomija 12 (1), 20–32. https://doi.org/10.5937/poseko13-17158.
- Vukasovic, T., 2009. Consumer perception of poultry meat and the importance of country of origin in a purchase making process. World Poultry Sci. J. 65 (1), 65. https://doi. org/10.1017/S0043933909000051.
- Vukasovič, T., 2016. Consumers' perceptions and behaviors regarding organic fruits and vegetables: marketing trends for organic food in the twenty-first century. J. Int. Food & Agribus. Mark. 28 (1), 59–73. https://doi.org/10.1080/08974438.2015.1006974.
- Vuković, A., Mihić, S., Miletić, L., Čurčić, R., 2016. Corporate social responsibility as a part of corporate public relations in Serbia. Industrija 44 (4), 159–174. https://doi. org/10.5937/industrija44-12689.
- Vuković, A., Miletić, L., Čurčić, R., Ničić, M., 2020. Consumers' perception of CSR motives in a post-socialist society: the case of Serbia. Bus. Ethics Eur. Rev. 29 (3), 528–543. https://doi.org/10.1111/beer.12271.

Vukusic, A., Peronja, I., 2018. Corporate social responsibility in commercial banking sector in Croatia. In: Economic and Social Development: Book of Proceedings, pp. 350–360. Available at: https://bib.irb.hr/datoteka/931245.8. Zbornik\_radova\_konferencija\_Rim.pdf#page=361.

- Warf, B., 2018. World regional geographies of corruption. In: Handbook on the Geographies of Corruption. Edward Elgar Publishing, pp. 67–105. https://doi.org/ 10.4337/9781786434753.00010.
- Webster, J., Watson, R.T., 2002. Analyzing the past to prepare for the future: writing a literature review. MIS Q. 26 (2), 13–23. http://www.jstor.org/stable/4132319.
- Weick, V., 2016. Green Economy and sustainable development. In: Waste Management and the Green Economy. Edward Elgar Publishing, pp. 121–150. https://doi.org/ 10.4337/9781783473816.00016.
- Willer, H., Schaack, D., Lernoud, J., 2019. Organic farming and market development in Europe and the European Union. In The World of Organic Agriculture. Statistics and Emerging Trends vol. 2019, 217–254. Research Institute of Organic Agriculture FiBL and IFOAM-Organics International. Available at: http://www.organic-world.net/ye arbook/yearbook-2019.html.
- Yarashevich, V., Karneyeva, Y., 2013. Economic reasons for the break-up of Yugoslavia. Commun. Post Commun. Stud. 46 (2), 263–273. https://doi.org/10.1016/j. postcomstud.2013.03.002.
- Yoshino, N., Taghizadeh–Hesary, F., Nakahigashi, M., 2019. Modelling the social funding and spill-over tax for addressing the green energy financing gap. Econ. Modell. 77, 34–41. https://doi.org/10.1016/j.econmod.2018.11.018.
- Zezelj, B., Maksimovic, R., Todorovic, T., Djatkov, D., 2020. Analysis of the possibilities for using renewable energy sources in the autonomous province of Vojvodina. Sustainability 12 (14), 1–17. https://doi.org/10.3390/su12145645.
- Zorić, J., Hrovatin, N., 2012. Household willingness to pay for green electricity in Slovenia. Energy Pol. 47, 180–187, https://doi.org/10.1016/j.enpol.2012.04.055.
- Surovec, O., Vedeld, P., Sitaula, B., 2015. Agricultural sector of Bosnia and Herzegovina and climate change—challenges and opportunities. Agriculture 5 (2), 245–266. https://doi.org/10.3390/agriculture5020245.
- Đurišić-Mladenović, N., Kiss, F., Škrbić, B., Tomić, M., Mićić, R., Predojević, Z., 2018. Current state of the biodiesel production and the indigenous feedstock potential in Serbia. Renew. Sustain. Energy Rev. 81, 280–291. https://doi.org/10.1016/j. rser.2017.07.059.