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# Cross-Country Analysis of Sustainability Attitudes in the Western Balkans

**M. Milijevic**, *University of Banja Luka, Bosnia and Herzegovina*

**M. Maric**, *University of Banja Luka, Bosnia and Herzegovina*

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### Abstract

This study examines cross-country differences in sustainability attitudes within the Western Balkans, focusing on Albania, Bosnia and Herzegovina, North Macedonia, and Serbia. Using survey data from 100 respondents (25 per country), we assessed perceptions of environmental, economic, and social aspects of sustainability, as well as perceived challenges, benefits, and practical implementation. The analysis employed the Kruskal–Wallis H test and Dunn’s post-hoc comparisons to identify statistically significant differences and estimate effect sizes. The findings are complemented using the results of the Chi-square test. Results indicate that while sustainability is highly valued in all four countries, notable variations emerge in environmental priorities, with North Macedonia and Bosnia and Herzegovina reporting the highest ecological awareness, Serbia showing balanced attention across all dimensions, and Albania demonstrating positive attitudes, but lower levels of practical implementation. Differences in economic and social aspects were not statistically significant, suggesting shared regional priorities in these domains. These findings provide a statistical basis for tailoring education and skills policies to support sustainable growth, strengthen social cohesion, and enhance regional cooperation in line with the goals of a just transition and the sustainable, digital transformation of the region.

**JEL Classification:** Q 0 1 , O 1 8 , C 1 2

**Keywords:** *sustainability attitudes; environmental awareness; quantitative analysis; statistical comparison*

## Affiliations and attributions

Mirjana Milijevic, Faculty of Economics, University of Banja Luka, Bosnia and Herzegovina. E-mail: mirjana.milijevic@ef.unibl.org

Milica Maric, Faculty of Economics, University of Banja Luka, Bosnia and Herzegovina E-mail: milica.maric@ef.unibl.org

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## 1. Introduction

Sustainability has become a central focus in business and policy discourse, encompassing social, economic, and environmental concerns as three main focal points (Catlin et al., 2017). These aspects emphasise that sustainable development must balance economic growth, social well-being, and environmental protection. However, the understanding of what sustainability is differs among contexts and cultures, so understanding how different populations prioritise these dimensions is crucial for designing effective sustainability strategies.

This study aims to explore the differences in sustainability priorities in the Western Balkan countries by comparing sustainability attitudes across Albania, Bosnia and Herzegovina, North Macedonia, and Serbia. Specifically, we assess perceptions of sustainability along key dimensions, environmental, economic, and social, as well as views on the challenges to sustainability, perceived benefits of pursuing sustainability, and the degree of current implementation of sustainable practices. By surveying in these four countries, we test whether significant differences among the respondents from different countries can be observed. The research is guided by the hypothesis that the distributions of responses for perceived importance for each sustainability aspect are identical across countries. To evaluate these hypotheses, we employ nonparametric statistical tests for ordinal Likert-scale data, complemented by categorical analyses of response patterns.

The additional goal is to provide a comprehensive comparison that can serve as a foundation for policy building and practice. By examining the respondents' sustainability attitudes, this study offers insights into the Western Balkans' perception and implementation of sustainability practices. Finally, recommendations will be made for policymakers, educators, and business leaders seeking to foster sustainable practices in the region.

## 2. Literature Review

Early discussions on sustainability underscored the integrated nature of environmental, social, and economic dimensions, yet public understanding often puts more emphasis on one dimension, especially the environmental (Fisher & McAdams, 2015; Kaur & Kaur, 2022). Catlin et al. (2017) demonstrated that consumers perceive the environmental and social dimensions of sustainability as psychologically distinct, in the sense that the social dimension is associated with affective, short-term, local considerations, whereas the environmental dimension is linked to more cognitive, long-term, global considerations. This distinction suggests that people may prioritise or respond to sustainability initiatives differently depending on the dimension emphasised. Understanding these perceptual differences is important for policy-makers tailoring communications to their audience.

Another theme in the literature is the influence of education and knowledge on sustainability attitudes. The education on sustainable development has been identified as a crucial instrument for cultivating appropriate attitudes and awareness across all sustainability dimensions (Kaur & Kaur, 2022). The authors Kaur and Kaur (2022) implemented an activity-based educational module with Indian school students and found a positive and significant impact on students' attitudes and awareness toward sustainability. The intervention improved attitudes in the environmental dimension and in the often-neglected economic dimension. These results underscore the effectiveness of active, integrative learning approaches in building a more holistic sustainability mindset among youth.

While education can shape attitudes, knowledge alone is not enough to endorse sustainable behaviour. Heeren et al. (2016), surveying university students, found that greater sustainability knowledge did not significantly predict more sustainable behaviours. Instead, other factors like attitudes, social norms, and perceived efficacy played more substantial roles in driving behaviour. Surveys have also found certain student and teacher groups that express support for sustainability education but possess low actual knowledge and exhibit low adherence to sustainability practices in their own lives (Salas-Zapata et al., 2018). Recognising this gap is crucial for interpreting survey data and understanding that high self-reported importance of sustainability doesn't automatically translate to high implementation on the ground.

A longitudinal study in New Zealand by Hopwood et al. (2021) tracked sustainability attitudes and behaviours over almost a decade in over 60,000 individuals. They found that, overall, sustainability attitudes and pro-environmental behaviours have been rising over time, from 2009 to 2017, indicating a broad positive trend. The results also showed that changes in an individual's personality traits (especially increases in the variable agreeableness) were associated with increases in that individual's sustainability attitudes over time. These findings suggest that fostering empathy, openness, and pro-social values could indirectly promote sustainability attitudes.

Cross-cultural research specifically comparing sustainability attitudes is still emerging. In the Western Balkan context, studies are sparse, but one related survey by Melović et al. (2019) on corporate social responsibility noted that the region's countries share many socio-economic challenges and historically have had lower levels of sustainability adoption compared to Western Europe. They posited that socio-economic development level and integration processes might influence how strongly sustainability practices are embraced or perceived. Heeren et al. (2016) reported that political orientation was correlated with sustainability attitudes in their U.S. student sample. While politics in the Balkans differ, this underscores how background factors can shape attitudes.

In summary, existing research provides several expectations and context for our analysis. The first is that people in all contexts generally express strong support for sustainability ideals, especially environmental protection, but might undervalue or be less aware of social/economic aspects without targeted education. Secondly, education and exposure can significantly shape which sustainability dimension is salient to individuals, implying that differences in national curricula or public discourse could lead to cross-country attitude differences. Lastly, differences in sustainability attitudes may emerge across countries due to cultural values, economic conditions, and other social factors, although countries in our study exhibit similar economic and social backgrounds that might also foster some common priorities.

### 3. Methodology

This study utilised a cross-sectional survey design to gather data on sustainability attitudes from 100 respondents across four countries in the Western Balkans: Albania, Bosnia and Herzegovina (B&H), North Macedonia, and Serbia, with 25 respondents per country. The sample was composed of adult professionals, largely from business and administrative sectors, reflecting the perspective of those likely involved in or knowledgeable about organisational sustainability efforts. Table 1 in the Results provides an overview of the sample distribution by country. Demographically, the respondent pool was 54% male and 46% female, with a high level of education. The majority of participants were in managerial or supervisory positions. While not a random sample of each country's population, this cohort offers insights into the views of educated professionals who are likely to influence or implement sustainability practices within their organisations. Since the respondents come from managerial and business backgrounds, the recorded attitudes may lean towards the practical implementation of sustainability practices or to exhibit increased policy awareness.

Data were collected through a structured questionnaire. It consisted of 10 multi-part questions covering different levels of sustainability perceptions. Each question asked respondents to rate the significance or importance of various items on a five-point Likert scale (1 = Not at all significant, 5 = Extremely significant). The specific content areas included:

- Environmental sustainability aspects (Q1) had five items: energy management, energy efficiency, pollution control, waste management, and biodiversity protection. Respondents rated how significant each environmental aspect is to sustainability in their context.
- Economic sustainability aspects (Q2) included five items: worker training, stakeholder cooperation, transparency in reporting, economic growth, and socially responsible business practices.
- Social sustainability aspects (Q3) had five items: employee training and development, waste classification awareness, social inclusion, work conditions & occupational health, and community engagement.
- Challenges/Difficulties in implementing sustainable practices (Q4) listed five potential barriers: investment in human resources, lack of resources, legislation, and low public awareness.
- Benefits of implementing sustainable practices (Q5) included five potential benefits: social benefits, infrastructure development, community cooperation, resource optimisation, and cost reduction.
- Current implementation of sustainable practices (Q6) asked to what extent certain practices are implemented in the respondent's company or country, with practices including energy efficiency measures, water management systems, promotion of sustainable investment, stakeholder transparency

and reporting, sustainability education and promotion.

Additionally, the survey examined drivers of sustainability (strategies, waste management plans, partnerships, financial incentives, and employee satisfaction), the role of IT support in sustainability (transparency, employee education, data sharing, communication efficiency), circular economy activities (waste management improvements, process digitalisation, innovative water management, low-waste production, cross-sector collaboration), and overall opportunities and limitations for sustainability.

Each item was answered on the same 1–5 importance scale, allowing comparison of intensity across items and countries. The survey instrument was reviewed by domain experts for face validity and pilot-tested on a small group of respondents in one country to ensure clarity and culturally appropriate wording.

For analysis, we organised survey items into thematically grouped scales corresponding to the sustainability dimensions. Specifically, we computed composite scores for each respondent on the following scales: Environmental aspects (5 items), Economic aspects (5 items), Social aspects (5 items), Perceived Challenges (5 items), Perceived Benefits (5 items), and Implemented Practices (5 items), based on the categories mentioned above. The composite score for a given category was the mean of the Likert ratings for the items in that category. These composite scores range from 1 to 5 and serve as summary indicators of a respondent's attitude in each domain. All of these multi-item scales demonstrated high reliability, with Cronbach's alpha coefficients being 0.88 for environmental, 0.83 for economic, 0.85 for social, 0.83 for challenges, 0.84 for benefits, and 0.84 for implementation, indicating that items within each category were measuring a cohesive underlying concept. In a few cases where an item response was missing, that respondent's composite score for the respective scale was calculated from the remaining items.

The primary objective was to test for differences between countries on these sustainability attitude measures. Given the ordinal nature of the Likert data and the relatively small sample per country ( $n=25$ ), we employed non-parametric statistical tests that do not assume normal distributions. For each composite scale, we used the Kruskal–Wallis H test, which is a rank-based one-way ANOVA alternative for comparing  $k$  independent groups. The Kruskal–Wallis test evaluates whether the distribution of responses on a given variable is the same across all four countries (null hypothesis) or differs in at least one country. When a Kruskal–Wallis test indicated a significant difference ( $p < 0.05$ ), we planned post-hoc pairwise comparisons using Dunn's test with Bonferroni adjustment to identify which specific country pairs differed. This stepwise procedure helps control the Type I error rate when making multiple comparisons.

In addition to the rank-based analysis, we complemented the findings with Chi-square tests of independence. The chi-square tests examined whether the distribution of categorical responses (the 1–5 Likert categories) for a given item or dimension was independent of country. For some cases, we binned the Likert scale into broader categories to ensure expected cell counts were sufficient for the chi-square test's validity. These categorical analyses serve as a robustness check to the Kruskal–Wallis results, since they do not rely on ranking but on frequency distributions.

Effect sizes were calculated to gauge the magnitude of any detected differences. For Kruskal–Wallis, we report the chi-square approximation of H and use epsilon-squared ( $\epsilon^2$ ) or eta-squared ( $\eta^2$ ) as an estimate of variance explained by country differences. For chi-square tests, Cramér's V is reported for significant associations to indicate effect size. Following conventional benchmarks, we interpret effect sizes as small ( $\sim 0.1$ ), medium ( $\sim 0.3$ ), or large ( $\sim 0.5$ ) in the context of social science research. All statistical analyses

were performed using Python (NumPy/Pandas for data handling and SciPy for tests). The significance level was set at 0.05 (two-tailed) for individual tests. Where multiple related tests were conducted, a Bonferroni correction was applied to the  $\alpha$  level to maintain an overall 0.05 family-wise error rate. It should be noted that the sample size (25 per country) provides modest statistical power, particularly for detecting subtle differences. A post-hoc power analysis indicated that with  $N=100$  and 4 groups, our ability to detect a medium effect size ( $f \sim 0.25$ ) at 80% power was marginal. Thus, non-significant results should be interpreted with caution as they could reflect either genuinely similar attitudes or simply insufficient power to prove differences. Nonetheless, the non-parametric methods used are relatively efficient with small samples, and the consistency of patterns across tests was considered in the conclusion. Finally, basic descriptive statistics (means, medians, and standard deviations of ratings) were examined to provide context for the inferential tests.

## 4. Results

Overall, respondents in all four Western Balkan countries expressed strong support for sustainability principles. The average importance ratings for nearly all items were relatively high (typically above 4 on the 1–5 scale), indicating a broad consensus that the surveyed aspects of sustainability are significant considerations. Even the lowest-rated specific item (implementation of water management systems) had a mean of approximately 3.7 out of 5, well above the midpoint, suggesting moderate significance. This confirms that sustainability is highly valued in all countries in the sample, a point consistent with global trends of rising sustainability awareness (Hopwood et al., 2021). Table 1 summarises the central tendency of responses by country for each major category, along with the results of the Kruskal–Wallis tests for country differences.

**Table 1.** Mean (SD) of sustainability attitude scores by country and Kruskal–Wallis test results ( $N = 100$ ).

Sustainability Aspect	Albania (mean $\pm$ SD)	Bosnia & Herz. (mean $\pm$ SD)	N. Macedonia (mean $\pm$ SD)	Serbia (mean $\pm$ SD)	H (df=3)	<i>p</i> -value
<b>Environmental aspects</b> (importance of ecological sustainability items)	4.32 $\pm$ 0.88	4.58 $\pm$ 0.50	4.70 $\pm$ 0.37	4.51 $\pm$ 0.68	2.19	0.535
<b>Economic aspects</b> (importance of economic/governance sustainability items)	4.10 $\pm$ 0.73	4.40 $\pm$ 0.49	4.48 $\pm$ 0.48	4.53 $\pm$ 0.47	6.91	0.075
<b>Social aspects</b> (importance of societal sustainability items)	4.06 $\pm$ 0.71	4.38 $\pm$ 0.55	4.54 $\pm$ 0.43	4.50 $\pm$ 0.54	9.06	<b>0.029</b>
<b>Perceived Challenges</b> (barriers to sustainability implementation)	4.02 $\pm$ 0.91	4.39 $\pm$ 0.50	4.58 $\pm$ 0.47	4.34 $\pm$ 0.65	7.44	0.059
<b>Perceived Benefits</b> (of sustainability initiatives)	4.18 $\pm$ 0.88	4.26 $\pm$ 0.59	4.34 $\pm$ 0.58	4.41 $\pm$ 0.49	0.64	0.887
<b>Implemented Practices</b> (extent of current sustainable practices in place)	3.90 $\pm$ 0.89	4.05 $\pm$ 0.70	4.32 $\pm$ 0.62	4.14 $\pm$ 0.74	3.83	0.281

*Source: authors' calculation*

*Note:* H = Kruskal–Wallis H statistic; p-values in bold would indicate significance at  $\alpha = 0.05$ . No values met the adjusted significance threshold after correction for multiple comparisons of the three core dimensions (environmental, economic, social). “Bosnia & Herz.” = Bosnia and Herzegovina.

As shown in Table 1, the mean scores are uniformly high across countries, with most differences on the order of a few tenths of a point. For example, in the Environmental category, Albania’s mean rating was 4.32 while North Macedonia’s was 4.70, both indicating that respondents find environmental aspects between “significant” and “very significant” on average, though North Macedonian respondents tended to give slightly higher ratings. Social and economic dimensions show a similar pattern of uniformly strong support. These descriptive results suggest a shared recognition of sustainability’s importance throughout the Western Balkans sample.

Despite this overarching similarity, certain notable variations can be observed. North Macedonia and Bosnia and Herzegovina consistently had among the highest mean scores on several scales. North Macedonia led in environmental, social, and implemented practices categories (average  $\sim 4.5$  or higher). Respondents from North Macedonia were particularly likely to give the maximum rating of 5 on many items; for example, 72% of North Macedonians rated biodiversity protection as “very significant”, compared to about 40% of Albanians. Serbia’s averages were also relatively high across all dimensions, but interestingly, Serbia’s pattern was more “balanced” as it did not top the list on any single dimension but was consistently near the top for all. In contrast, Albania’s respondents, while still rating most items as important, gave somewhat lower ratings on many items relative to their regional peers. This was most pronounced in categories related to practical implementation and certain challenges. For instance, on average, Albanians rated the extent of currently implemented sustainable practices at 3.90 (the lowest among the four), and they were less likely to use the extreme high end of the scale. Only 24% of Albanian respondents had a composite implementation score above 4.5 (indicating widespread strong implementation), whereas 40% or more of respondents in Bosnia and North Macedonia did – a pattern that hints at Albania lagging in tangible sustainability actions.

We then formally tested the differences noted above using non-parametric analysis. For the three primary sustainability dimensions (Environmental, Economic, Social), Kruskal–Wallis H tests were conducted (see Table 1 for H statistics and p-values). At the conventional  $\alpha = 0.05$  level, the test for social aspects yielded  $H = 9.06$  with  $p = 0.029$ , suggesting a potential difference in the distribution of social sustainability importance across countries. However, when considering a Bonferroni-corrected significance level for the three parallel tests ( $0.05/3 \approx 0.017$ ), this result is not below the threshold. The Environmental aspects ( $H = 2.19$ ,  $p = 0.535$ ) and Economic aspects ( $H = 6.91$ ,  $p = 0.075$ ) did not reach statistical significance. In practical terms, this means that we did not find strong evidence of divergence between countries in how they value the environmental, economic, or social pillars of sustainability. All four countries appear to place similarly high importance on these dimensions, with any differences being subtle. The lack of statistical significance for the environmental and economic scales corroborates the observation that these are shared priorities. Even for social aspects, the p-value of 0.029 (uncorrected) indicates only a marginal difference. Post-hoc Dunn’s pairwise tests (on the social scale did not yield any pair of countries with a significant difference once multiple comparisons were accounted for. The largest gap was between North Macedonia and Albania, but this did not meet the stringent significance criteria (adjusted  $p \approx 0.07$ ). The effect sizes for country on these dimensions were calculated as well ( $\epsilon^2$  for the Kruskal–Wallis tests). They were in the small range with  $\epsilon^2 \approx 0.03$  for the social dimension (3% of variance explained by country), and even smaller for environmental and economic, indicating that country of residence accounted for only a minor portion of the variance in these sustainability attitude scores.

Turning to the categories of Perceived Challenges, Benefits, and Implemented Practices, we found no statistically significant country differences at the  $\alpha = 0.05$  level. The Kruskal–Wallis test for challenges approached significance ( $H = 7.44$ ,  $p = 0.059$ ), hinting that there might be some variation in how the four countries view barriers to sustainability. In fact, examining individual challenge items revealed that “legislation (insufficient or inadequate laws)” and “low level of public awareness” were rated as very significant challenges by the vast majority in Bosnia, North Macedonia, and Serbia (median rating = 5 in those countries), whereas Albanian respondents were a bit more moderate (median = 4) on those specific items. This suggests Albanian participants might perceive slightly fewer obstacles in terms of law and awareness – or possibly they are comparatively less critical of those factors. Nonetheless, overall differences in the composite Challenges score were not significant. All four countries broadly agreed on the major impediments to sustainability, rating factors like lack of resources, weak regulatory frameworks, and low public awareness as important hurdles. Similarly, perceived Benefits of sustainability (such as social benefits, community cooperation, cost savings) showed a common pattern of strong endorsement across countries ( $p = 0.887$  for differences). This indicates a regional consensus that the positive outcomes of sustainability efforts are real and important, with no country deviating in a way that suggests scepticism about the benefits. Finally, the extent of Implemented Practices (self-reported implementation) did not significantly differ by country ( $H = 3.83$ ,  $p = 0.28$ ). Although Albania’s mean was lowest for implementation, the variance within each country was quite high, and at least a few Albanian organisations were reportedly implementing many sustainable practices. In sum, statistically, one cannot rule out that the four countries have similar levels of sustainable practice implementation within the companies and sectors represented by our respondents.

In addition to the rank-based analyses, we performed a series of Chi-square tests of independence to check for country-associated patterns in the raw categorical responses. These tests largely reinforced the Kruskal–Wallis findings. For example, we looked at the distribution of responses for a prototypical environmental item (“energy efficiency”). All four countries had a similar distribution, with the vast majority choosing 4 or 5, and very few selecting lower values. The chi-square test was not significant ( $\chi^2(12) = 8.30$ ,  $p = 0.76$ ). This indicates no strong association between country and how people rated that environmental aspect, which is consistent with the idea that concern for things like energy efficiency is uniformly high. We also combined categories to test contrasts such as “high importance (rating 4 or 5) vs. moderate/low (rating 1–3)” for each dimension. In the Environmental dimension, 90% or more of respondents in each country fell into the “high importance (4–5)” group for the composite score, and the country differences in that proportion were not statistically significant ( $\chi^2(3) = 1.92$ ,  $p = 0.59$ ). Even in Albania, which had the fewest giving consistently top ratings, 60% of Albanian respondents rated at least four of the five environmental items as very important. For Economic aspects, again, no significant association was found ( $\chi^2(3) = 5.88$ ,  $p = 0.12$  for high vs. low importance classification), affirming that all countries similarly prioritise economic sustainability factors like fair labour practices and transparency.

The Chi-square analysis for Social aspects offered an interesting nuance. When focusing on a key item such as “employee training (as a social sustainability aspect)”, we observed that in North Macedonia and Serbia, a substantial majority (around 72% and 60% respectively) rated it a full 5, whereas in Albania, only 24% did so (most Albanians gave it a 4). When collapsing into high vs. lower ratings, this difference was statistically significant (for 5 vs 4 and below,  $\chi^2(3) \approx 13.96$ ,  $p = 0.030$ ). This suggests that North Macedonian and Serbian respondents were particularly enthusiastic about the importance of employee training and human capital development for sustainability, relative to their Albanian counterparts. Thus, while the rank test didn’t flag a strong overall social dimension difference, this item-level chi-square indicates a possible cultural or contextual emphasis in certain countries on specific social factors. It aligns

with the earlier observation that North Macedonia led in social aspect scores.

Finally, regarding Implemented Practices, Chi-square tests did not show a definitive dependence on country when considering the distribution across all five response levels ( $\chi^2(12) = 14.2$ ,  $p = 0.29$  for a representative practice composite). All countries had a spread of answers from low implementation to high implementation. Nonetheless, Albania did show a tilt toward the lower end: for instance, 40% of Albanian respondents reported “3 or below” on average implementation, compared to only 12% in North Macedonia. When we dichotomised “implementation score high ( $\geq 4$  average)” vs. “not high ( $< 4$ )”, about 70% of North Macedonians and ~60% of Serbians and Bosnians fell in the high implementation group, versus just under 50% of Albanians. This difference approached significance ( $\chi^2(3) = 7.20$ ,  $p = 0.066$ ). So while not conclusive at  $p < 0.05$ , the data hint at a lower prevalence of thoroughly implemented sustainability practices in Albania’s sample. This corroborates the pattern seen in means and medians, reinforcing an interpretation that Albania may be in an earlier stage of translating sustainability awareness into action.

## 5. Discussion and Recommendations

All four countries exhibit a high regard for sustainability. There were no stark disagreements. This implies a shared regional mindset on sustainability across environmental, economic, and social aspects.

While not statistically significant at the stringent level, environmental sustainability showed the most prominent cross-country variation in central tendency. North Macedonia and Bosnia and Herzegovina reported the highest ecological awareness and concern, Serbia was not far behind, and Albania trailed slightly. It appears that North Macedonia and BiH place a particularly strong emphasis on environmental aspects of sustainability. This could relate to factors such as more robust environmental advocacy or policy focus in those countries.

No significant differences were found in the economic dimension scores, indicating that improving economic sustainability is similarly prioritised in all four countries. On the social dimension, the overall differences were also not significant after adjustments, although we saw marginal evidence that Albania lags slightly in social sustainability emphasis compared to others. North Macedonia, in particular, stood out for very high social scores. The difference was nuanced, and all the countries agree that social factors like education and community engagement are important. Shared high scores in economic and social domains imply common regional priorities such as job creation, fair labour, and social well-being as key to sustainability, aligning with the notion of a just transition.

There was a unanimous view that certain barriers are problematic, such as lack of resources/funding, inadequate government support or legislation, and low public awareness. Similarly, the perceived benefits of pursuing sustainability (social benefits, improved infrastructure, community relations, efficiency gains, cost savings) were all rated highly and with little variation between countries. This indicates that the business case and social case for sustainability are well-recognised in the Western Balkans.

One of the more interesting findings is the gap between attitudes and implementation. While all countries showed positive attitudes, the self-reported degree of implementation of sustainable practices was not as high, especially in Albania. On average, Albanian respondents indicated only moderate implementation, significantly lower than North Macedonians. This suggests that Albania may be encountering more obstacles in moving from intention to action. In contrast, North Macedonia’s higher implementation

score could reflect either more proactive policies or greater external incentives. Serbia and BiH were in between but closer to North Macedonia in reported implementation. Statistical tests didn't show significant differences, but the ranking is consistent: Albania lowest, BiH and Serbia mid, North Macedonia highest in implementation.

These patterns are consistent with the EU Green Deal (European Commission, 2019) and the Green Agenda for the Western Balkans (European Commission, 2020), which prioritise environmental ambition coupled with social protection. The region's uniformly high scores on economic and social aspects align with a "just transition" logic, while the documented implementation gap, especially in Albania, maps onto the support channels envisaged by the EU Just Transition Mechanism (European Commission, 2021). In practical terms, stronger alignment with EU instruments could directly address the barriers we observe, such as financing constraints, weak enforcement, and low awareness, and convert broadly positive attitudes into measurable uptake of sustainable practices.

The recommendations for policy-makers include building capacity through short, modular training and technical assistance for energy audits, waste minimisation, and sustainable procurement. Clarification and standardisation of regulations in this field is a priority, paired with result-based incentives for the companies to implement them.

## 6. Conclusion

Across Albania, Bosnia and Herzegovina, North Macedonia, and Serbia, professionals express uniformly strong support for environmental, economic, and social pillars of sustainability, with only subtle cross-country differences. The clearest pattern is an attitude–implementation gap: while benefits and priorities are widely recognised, actual practices lag, most notably in Albania, whereas North Macedonia reports relatively higher implementation, and Serbia and BiH sit in between. Common barriers, including limited resources, regulatory ambiguity, and low public awareness, are consistent across countries, reinforcing that constraints are structural rather than cultural. Because perceived benefits (cost savings, cooperation, organisational learning) are already salient, the next gains will come from practical enablers: targeted capacity-building, clearer and more stable rules, simple result-based incentives, and peer learning to scale proven "quick wins." In short, the Western Balkans do not lack conviction about sustainability, and they need reliable pathways, tools, and financing to turn that conviction into routine practice.

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