



SUSTAINABILITY ACCOUNTING AND REPORTING: ENHANCING SUSTAINABILITY IN PUBLIC CONSUMER BEHAVIOR

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Abstract:

In response to global sustainability challenges, such as climate change, social inequality, and environmental degradation, businesses are increasingly required to disclose sustainability-related financial information. This conference article delves into the growing importance of environmental accounting and reporting for companies globally, and consumers' environmental behavior focusing on a case study in Montenegro. This study posits the hypothesis that there exists a positive correlation between the escalating standards and demands for Environmental, Social, and Governance (ESG) reporting by companies and the active engagement of consumers in understanding and fostering a more eco-friendly and sustainable future. The research objective of this paper is to examine by applying interdisciplinary approach whether there is a relationship between the increasing stringency of ESG reporting standards for businesses and the heightened awareness among consumers regarding the significance of sustainability, leading to their active participation in advancing a more environmentally responsible future.

Keywords:

sustainability, accounting, reporting.

1. INTRODUCTION

Environmental accounting and reporting have become increasingly prominent in times as both businesses and governments acknowledge the significance of adopting practices and being environmentally responsible (UN, 2020). This conference article seeks to address a research gap by exploring the alignment between robust environmental accounting and reporting frameworks, along with their associated requirements, and users' comprehension of their significance as integral elements of a comprehensive sustainability strategy: case study in Montenegro. The paper posits the hypotheses that there is a positive correlation between the rising standards and requirements for Environmental, Social, and Governance (ESG) reporting by companies and the role of consumers in comprehending and contributing to the creation of a more environmentally friendly and sustainable future. This research seeks to explore consumer awareness of sustainability as an important factor in understanding and using disclosed sustainability-related financial information.

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2. SUSTAINABILITY ACCOUNTING AND REPORTING: LITERATURE REVIEW

Environmental challenges, including climate change, pollution, and resource depletion, have necessitated a paradigm shift in how businesses and governments approach their environmental responsibilities (UNEP, 2020). Environmental accounting and reporting are instrumental in this shift, enabling organizations to quantify, analyze, and communicate their environmental performance. Concurrently, environmental taxation has emerged as a potent policy instrument designed to internalize environmental costs and drive eco-efficient behavior (IFRS, 2023.)

Sustainability accounting, as discussed by Idowu et al. (2013), is a crucial system that enables organizations to gather and communicate sustainable information transparently, fostering accountability in decision-making processes. The measurement, disclosure, enforcement, standardization, definition of what is normal, and reliability and comparability of the reports are just a few of the problems that sustainability reporting faces. To increase acceptance and compliance with this reporting approach, several issues must be resolved. Scholars now view sustainability reporting as either standalone disclosures or a combination of two types of disclosures, frequently ignoring economic disclosure, as a result of the terminology's constant evolution, including Corporate Social Responsibility (CSR), ESG, environmental reporting, and others (Aifuwa, 2020). For sustainability reporting to be more successful and widely accepted, these problems must be resolved. Additionally, it is challenging to measure issues with accuracy, such as water contamination, changes in ecological structures, and environmental degradation (Jones, 2014). While there exist metrics to measure concerns, such as the biological integrity index and the watershed index, they frequently fail to fully capture the scope of a company's environmental impact (EPA, 2002). Furthermore, when it comes to sustainability reporting, both multinational corporations and domestic firms typically lack mandatory requirements for disclosure. Instead, multinational companies often feel pressure from stakeholders to release sustainability reports, while domestic companies may not face such external pressure, leading to a lack of motivation for disclosure (Aifuwa, 2020). However, contrasting research by Al-Gamrh and Al-Dharnari (2019) suggests that larger companies are driven to disclose sustainability reports as a strategy to gain a larger market share, particularly when compared to smaller companies. Additionally, there is a noticeable trend where newly-listed companies on stock exchanges tend to prioritize sustainability reporting as a means to enhance their competitiveness on the market, as observed by Shamil et al. (2014).

On the other hand, the research (Obarakpo, Olubukola, Ozordi, Osariemen, Gbenedio, Oluwagbemi, 2018), shows that Market Price per Share (MPS) and sustainability reporting have a significant adverse association. This demonstrates how investors on the stock market, who are primarily focused on boosting their returns, frequently exhibit little care for or contempt for sustainability issues.

Investors and financial experts have long expressed skepticism and criticism toward corporate environmental, social, and governance (ESG) data. According to them, it is deficient in qualitative characteristics like relevance, comparability, and credibility and fails to give consumers the information they need to make sound financial decisions (Abhayawansa et al., 2019; Arvidsson, 2014). Fink (2020) asserts that businesses who fail to address sustainability risks in response to stakeholders and refuse to disclose information in a transparent manner would face growing mistrust from the financial markets, potentially leading to higher capital costs. In the best-case scenario, these businesses will gradually transition to a low-carbon economy; in the worst-case scenario, they might struggle to survive. Therefore, research into the implications of corporate reporting and disclosures is a useful contribution accounting scholars can offer to help corporations navigate a world affected by dynamic climate change (Bebbington & Unerman, 2018).

Discussing and analyzing corporate ESG reporting quantity, quality and performance Arvidsson and Dumay (2021) suggest the need for additional study with a focus on consumers, investors, and politicians. Future research may examine the ways that changing consumer preferences are driving improvements in ESG (environmental, social, and governance) performance as well as the ways that changes in capital market allocations are affecting ESG performance.

Understanding the behavior of potential consumers is crucial for effective CSR policy development. Identifying target customer groups and meeting their expectations can give companies a competitive edge. Implementing CSR initiatives valued by consumers can also help establish long-term business relationships (Sawicka, Marcinkowska, 2023).

Climate change, pollution, and resource depletion are just a few of the urgent environmental issues that have forced governments and corporations to reevaluate their approaches to environmental responsibility. In order to quantify, assess, and convey environmental performance and promote eco-efficient behavior, environmental accounting, reporting, and taxes have become crucial instruments. Future studies should concentrate on investors, policymakers, and consumers to better understand how shifting investor priorities and adjustments to capital market allocations affect ESG performance.



This knowledge is essential for creating CSR plans that meet customer expectations and foster enduring commercial ties in an environmental and social environment that is always changing. Accounting scholars have a crucial role to play in providing insights and analysis in a world affected by dynamic climate change.

3. METHODOLOGY

This research utilizes a nationwide survey, administered through both online and phone interviews, to investigate how the public perceives its role in promoting sustainability. The survey covers various aspects, including environmental attitudes, behaviors, and knowledge. It particularly focuses on understanding how customers perceive the importance of ESG factors and the increasing requirements for ESG reporting set by global authorities. Through quantitative data analysis, this study aims to uncover connections and trends in public opinion within Montenegro regarding its research objectives, encompassing understanding, behavior, and willingness to grasp the environmental advantages. The primary objectives of this investigation are to assess public attitudes towards sustainability, evaluate the extent of awareness regarding environmental benefits, and pinpoint the factors that influence pro-environmental conduct. Ultimately, the research seeks to provide insights for public communication strategies aimed at promoting the environmental significance of sustainable resource management.

Data collection for this research study primarily relied on an online survey executed in the first part of 2023, which was conducted using a representative sample of 500 questionnaires, administered through a secure survey platform. To ensure a diverse and representative sample, we employed a combination of random sampling and targeted distribution. Multiple platforms, including social media, online forums, and email invitations, were used to spread the survey link. The survey was filled out willingly by participants throughout a predetermined time period, and their informed permission highlighted the confidentiality and anonymity of their answers. Reminders were

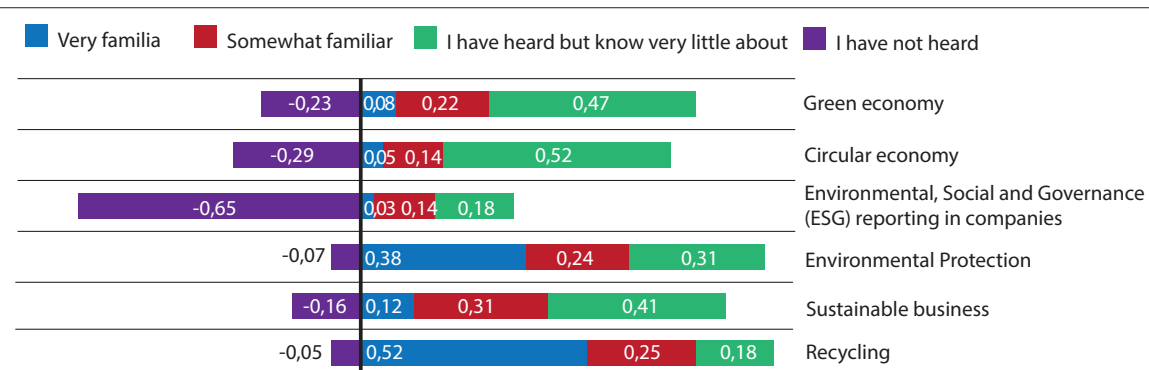
given to encourage participation, and several demographic groups were enlisted to get a diverse variety of opinions from the public. All survey responses were collected and stored securely, with strict adherence to data protection and privacy regulations.

Ethical considerations were at the forefront of our data gathering process. Informed consent was obtained from all survey participants, and their personal information was handled in accordance with data protection laws. The survey was designed: 1) to respect the privacy and rights of respondents, and no personally identifiable information was collected, and 2) to cover two important parts – general information about the respondent (such as gender, age, etc.) and 14 questions related to the topic with proposed answers (see appendix). Rigorous data validation and cleaning procedures were carried out to ensure the quality and accuracy of the collected data. This included identifying and addressing any outliers, incomplete responses, or data anomalies. The gathered data from the online survey were subjected to both quantitative and qualitative analysis. Quantitative analysis involved statistical techniques to identify trends and patterns in public perceptions and behaviors. Qualitative coding was used to analyze open-ended responses for deeper insights. It is important to acknowledge certain limitations associated with online data gathering, including potential response bias, self-reporting bias, and the inability to reach individuals without internet access. Efforts were made to mitigate these limitations, and the findings should be interpreted within these constraints. All data collected during the research were stored securely, and access was restricted to the authorized personnel only. Data protection measures were in place to safeguard the confidentiality and privacy of the respondents.

4. RESULTS AND DISCUSSION

At the start of the survey, participants were questioned about their familiarity with specific phrases linked to recycling and sustainability in order to gauge how familiar individuals are with ESG (Environmental, Social, and Governance) ideas.

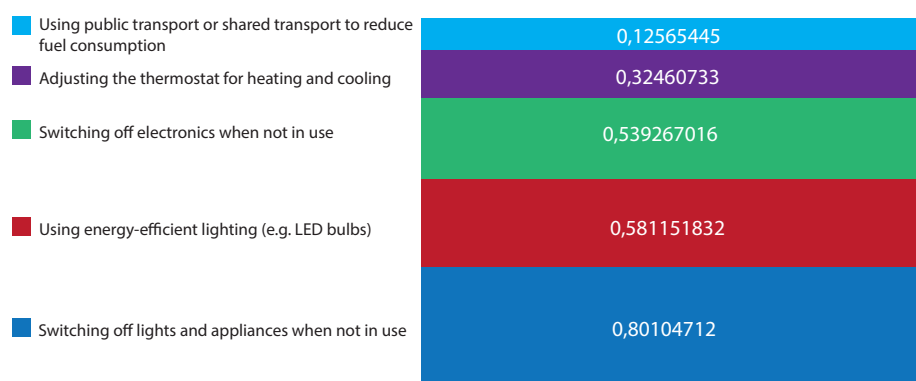
Figure 1. Which of the following terminology and activities are you most familiar with?



Source: Online survey.



Figure 2. Do you, and if yes, which of the following energy efficiency improvement practices are you currently implementing?



Source: Online survey.

According to the obtained data, it can be concluded that the public in Montenegro is most familiar with the concept of Environmental Protection (93%), while only 33% of citizens mention that they have heard to some extent about ESG, with 3% being very familiar.

As key measures for achieving energy efficiency, citizens most commonly mention turning off lights and appliances when not in use (80%) and using energy-efficient lighting such as LED bulbs (58%). Every third citizen adjusts thermostats for heating and cooling to increase energy efficiency. Slightly above the average, Generation Z (30%) mentions using public transportation as a measure to increase energy efficiency, while Generation BB stands out for more frequently using energy-efficient lighting (70%).

As the biggest challenge in the process of waste reduction and improving energy efficiency, citizens mention the following: lack of suitable facilities for recycling and composting (73%); lack of knowledge about effective waste reduction methods (47%); resistance to change and ingrained habits (32%); limited availability of energy-efficient products and technologies (29%); high initial costs for energy-efficient upgrades (27%). When it comes to waste reduction practices, Montenegrins prefer to avoid single-use plastics (38%), as well as plastic bags (42%), when shopping at stores. Compared to women (51%), men (34%) fix items more frequently than they do, whereas women (34%) avoid plastic bags at retail outlets. According to data on habits and behaviors, every other Montenegrin recycles to some level, and every third person has not recycled yet but plans to do so in the future. However, 40% of those who recycle say they only occasionally do so.

Among citizens who recycle, 50% belong to Generation X, 31% to Generation Y, and 13.3% to Generation Z. It can also be observed that women (60.2%) more frequently have the habit of recycling compared to men. Additionally, citizens with higher and advanced education (71.4%) and above-average incomes (48%) tend to recycle more. On the other hand, among citizens who mentioned that

they do not recycle and have no intention to do so, those with lower incomes (<€600) make up 44%. As the key reasons for choosing to recycle, citizens mention environmental protection (83%), the preservation of natural resources (42%), and waste reduction (40%). The key obstacles that citizens cite in the recycling process are the lack of suitable recycling facilities (76%), lack of awareness about the existence of recycling facilities (44%), insufficient awareness of the importance of recycling (38%), and a lack of knowledge about how to properly recycle (34%).

When it comes to the community's contribution to increasing recycling habits, it can be concluded that the effort is insufficient, as 67% of citizens state that their community does not provide enough recycling opportunities. Furthermore, 85.3% of them would recycle more if additional recycling services were provided. These services include improved access to facilities (61%), monetary rewards or discounts on products and services (40%), educational programs about the benefits of recycling (26%), and community recognition or rewards programs (18%). Monetary rewards would be a significant incentive for Generation Z (44%) and savers, while improved access to recycling facilities is more prevalent among others. Generation BB, more so than others, considers community recognition or rewards programs as a reason for increasing recycling habits (30%).

Information or resources that would motivate citizens to be more proactive in waste reduction and energy conservation include tips and guides for waste reduction and energy-saving practices (51%), incentives or discounts for adopting environmentally friendly technologies (48%), clear indicators of savings (42%), online tools for tracking and measuring personal waste and energy consumption (24%), and community workshops or events on sustainability (17%).



5. CONCLUSION

It is important to acknowledge certain limitations associated with online data gathering, including potential response bias, self-reporting bias, and the inability to reach individuals without internet access. Efforts were made to mitigate these limitations, and the findings should be interpreted within these constraints. The obtained data provides valuable insights into the level of familiarity with ESG concepts among the public in Montenegro and their recycling behavior, which can be linked to corporate ESG reporting, as suggested by Arvidsson and Dumay (2021).

The data show that only 33% of Montenegrin citizens have heard to some extent about ESG, with 3% being very familiar with it. This highlights a potential gap in public awareness of environmental, social, and governance factors in corporate reporting. It suggests that there may be room for improvement in raising awareness and understanding of ESG among the general public. Companies that prioritize ESG reporting may need to consider strategies for increasing awareness and educating their stakeholders about the importance of ESG initiatives. The data also reveals generational and gender differences in recycling behavior. For instance, 50% of recyclers belong to Generation X, 31% to Generation Y, and 13.3% to Generation Z. Women (60.2%) are more likely to engage in recycling compared to men. These demographic variations can be valuable for companies to consider when developing CSR (Corporate Social Responsibility) policies and ESG initiatives. Understanding the recycling habits of different generations and genders can help tailor sustainability efforts to specific target groups. Income plays a role in recycling behavior, with those with higher and advanced education (71.4%) and above-average incomes (48%) tending to recycle more. Conversely, lower-income individuals (<€600) make up 44% of those who do not recycle and have no intention to do so. This income-related variation in recycling behavior underscores the importance of affordability and accessibility of recycling programs. Companies can take this into account when designing CSR programs that are inclusive and accessible to all income groups. The key motivations for recycling cited by citizens include environmental protection (83%), preservation of natural resources (42%), and waste reduction (40%). On the other hand, the main obstacles to recycling include a lack of suitable recycling facilities (76%), lack of awareness about recycling facilities (44%), insufficient awareness of the importance of recycling (38%), and a lack of knowledge about how to properly recycle (34%). These findings emphasize the significance of addressing infrastructure challenges and providing education and awareness campaigns to promote recycling behavior. Companies committed to sustainability can collaborate with local authorities and communities to improve recycling facilities and raise awareness about recycling's benefits.

The data from Montenegro highlight the importance of public awareness, demographic factors, and motivations and obstacles related to recycling behavior. These insights can be valuable for companies looking to enhance their ESG reporting and CSR initiatives. By aligning their sustainability efforts with the preferences and behaviors of different consumer segments, businesses can not only improve their ESG performance but also build stronger and more enduring relationships with their target audiences.

6. LITERATURE

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APPENDIX

Questionnaire for online survey
Public Perceptions of Sustainability
Montenegro

A. Selection of participants

A.1. Age?

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STOP THE INTERVIEW IF THE PARTICIPANT IS UNDER 18 YEARS OLD!

RECORD AGE UNDER THE AGE CATEGORY

1. Under 18 years old - STOP
2. 20-34 years old
3. 35-44 years old
4. 45-54 years old
5. 55- 65 years old
6. Over 65 years old - STOP

Habits and knowledge of recycling

A.2. Which of the following terminology and activities are you most familiar with?

Responds	Very familiar	Somewhat familiar	I have heard but know very little about	I have not heard
Green economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Circular economy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental, Social and Governance (ESG) reporting in companies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental Protection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sustainable business	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recycling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

A.3. How often do you recycle household waste?

ONE ANSWER

1. Daily
7. Weekly
8. Monthly
9. Rarely
10. I do not recycle but intend to
11. I do not recycle and do not intend to

A.4. Which of the following items do you recycle?

MULTIPLE, RANDUMIZE

1. Paper and cardboard
12. Plastic packaging
13. Glass packaging



14. Aluminum packaging
15. Food waste/compost
16. Electronic waste (e-waste)
17. Batteries
18. OTHER, what [OPEN - ENDED _____]

A.5. What are the main reasons why you recycle or believe recycling should be done?

MULTIPLE ANSWERS POSSIBLE, ROTATE

1. Because of environmental protection
19. Fresursa or the preservation of natural resources
20. To reduce waste in landfills
21. To set a good example for others
22. Due to financial or other types of compensation
23. OTHER, what [OPEN - ENDED _____]

A.6. What are the main obstacles you face when it comes to recycling?

MULTIPLE ANSWERS POSSIBLE, ROTATE

1. Lack of suitable recycling facilities
24. Lack of awareness of the existence of recycling facilities
25. Insufficient awareness of the importance of recycling
26. Lack of knowledge about how to recycle properly
27. Laziness or lack of motivation
28. Insufficient incentives for recycling
29. OTHER, what [OPEN - ENDED _____]

A.7. Are you aware that there are recycling facilities available in your community?

ALL, ONE ANSWER

1. Yes, I'm aware of them, and I regularly use them.
30. I'm aware of them, but I haven't used them.
31. No, I'm not familiar with any recycling facilities in my community.

A.8. Do you believe that your community provides enough recycling opportunities?

ONE ANSWER

1. Yes, there are numerous recycling options
32. No, more recycling options are needed.
33. I don't know/No answer

A.9. Would you be willing to recycle more if additional recycling services were provided, easily accessible, such as recycling facilities by the roadside?

ONE ANSWER

1. Yes, I would recycle more with additional services
34. No, I wouldn't recycle more even with additional services.
35. I already recycle as much as I can.
36. I don't know/No answer

**A.10. What types of incentives would motivate you to recycle more?**

ALL, MULTIPLE ANSWERS POSSIBLE, ROTATE

1. Cash rewards or discounts on products/services
37. Community recognition or rewards program
38. Educational programs about the benefits of recycling
39. Improved access to recycling facilities
40. OTHER, what [OPEN - ENDED _____]

A.11. If yes, which of the following waste reduction practices are you currently implementing?

ALL, MULTIPLE ANSWERS POSSIBLE, ROTATE

1. Recycling
41. Composting food waste
42. Avoiding single-use plastics
43. Purchasing products with minimal packaging
44. Avoiding plastic bags and packaging when shopping at retail stores
45. Repairing items instead of discarding them
46. None of the above
47. OTHER, what [OPEN - ENDED _____]

A.12. If yes, which energy-saving practices do you follow?

ALL, MULTIPLE ANSWERS POSSIBLE

1. Turning off lights and devices when they are not in use.
48. Adjusting the thermostat for heating and cooling.
49. Using energy-efficient lighting (e.g., LED bulbs).
50. Turning off electronics when they are not in use.
51. Using public transportation or carpooling to reduce fuel consumption.
52. OTHER, what [OPEN - ENDED _____]

A.13. What do you consider the biggest challenges in waste reduction and increasing energy efficiency?

MULTIPLE ANSWERS POSSIBLE

1. Lack of suitable recycling and composting facilities.
53. Limited availability of energy-efficient products and technologies.
54. Lack of knowledge about efficient waste reduction methods.
55. High initial costs for energy-efficient upgrades.
56. Resistance to change and entrenched habits.
57. OTHER, what [OPEN - ENDED _____]

A.14. What information or resources would motivate you to be more proactive in waste reduction and energy conservation?

MULTIPLE ANSWERS POSSIBLE

1. Tips and guides for waste reduction and energy-saving practices.
58. Incentives or discounts for adopting environmentally-friendly technologies.
59. Clear indicators of savings.
60. Workshops or community events on sustainability.
61. Online tools for tracking and measuring personal waste and energy consumption.
62. OTHER, what [OPEN - ENDED _____]



B. Demographics

B.1. Gender of the participant

1. Male
2. Female
3. Other

B.2. What is your highest level of completed education?

1. Elementary school or less
2. Three-year high school
3. Four-year high school
4. College
5. University
6. Master's/Ph.D.

B.3. Which of the following categories best describes your current employment status?

1. Employer/Self-employed
2. Employed/full-time
3. Employed/part-time
4. Unemployed - looking for work
5. Unemployed - looking for work

B.4. What is your approximate monthly personal income?

1. do 100 euros
2. 101 – 200 euros
3. 201 – 350 euros
4. 351 – 550 euros
5. 551 – 700 euros
6. 701 – 800 euros
7. over 801 euros
8. No personal income
9. No answer/I don't know (do not read)

B.5. How many members are there in your household, including yourself?

WRITE THE NUMBER

B.6. Which of the following best describes the type of building you live in?

1. Detached house/individual family house
2. Semi-detached house / two apartments in a building
3. Building with 3-6 apartments
4. Building with 7-12 apartments
5. Building with 13-50 apartments
6. Building with more than 50 apartments
7. No answer

B.7. Region

1. Center
2. South
3. Nord

B.8. Type of settlement

1. City
2. Village