

CIRCULAR ECONOMY IN MANUFACTURING: A CASE STUDY ON ALTRNTV ECO LABEL

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Abstract: *The transition to a circular economy is concerned with changing the behaviour of both producers and consumers. A solution to support this shift are product labelling schemes since in recent years, many consumers tend to be concerned about green products and ways to identify them. Ecolabels are a mean of informing the consumer about more sustainable product choices and advising them of how to use the product more sustainably.*

This study provides an overview of evidence using a descriptive case study methodology, identifying how and why a Romanian startup in the circular economy, in the sector of production and consumption developed its own ecolabel. The data collection included in-depth interviews with four stakeholders (two staff members and two designers) and the analysis of more than 250 pages of both internal and external documents of the company. Data obtained showcased six-step process designers had to go through to obtain the ALTRNTV ecolabel. The ecolabel criteria are structured into four categories as follows: transparency, ethics, waste management and sustainability, and thirteen sub-categories and confirmed that ALTRNTV ecolabel operates in accordance with SDG 12, Responsible consumption and production and with SDG 13, Climate Action, status confirmed by the criteria comprised in the brand sustainability assessment. Finally features of the ecolabel are being described extensively.

Future research should aim to understand why the EU Ecolabel is not comprehensive enough for local manufacturers of sustainable items to adhere to it.

Keywords: *eco-design, ecolabel, circular economy, manufacturing, circular products*

JEL classification: *O21*

1. Introduction

Today we witness a constant demand for improved products, which entertain a trend of increasing unsustainable consumption (Arora and Mishra, 2023; Dagilienė et al., 2023; World Business Council for Sustainable Development, 2008). As a result, creating a circular economy (CE) has become a key focus for addressing this issue, as in a CE the notion of waste no longer exists, since products and materials are reused and cycled indefinitely (Korhonen et al., 2018; Lakatos et al., 2018; Geissdoerfer et al., 2017).

Governments and organisations are focused with action plans to foster the development of CE practices (Kleespies & Dierkes, 2022; Dragomir & Duțescu, 2022; Valverde & Avilés-Palacios, 2021). Going in this direction, United Nations formulated eleven targets and thirteen indicators for SDG 12 - Responsible consumption and production, and SDG 13 - Climate Action (Arora & Mishra, 2023; Our World in Data, 2023) which focus on developing resilience to climate risks, incorporating measures into national action plans, and raising awareness about reducing the negative impacts of climate change (Campbell et al., 2018). Furthermore, recommendations for aligning an economy to the CE practices, include enhancing raw material purity for easier recycling, promoting repair and remanufacture to boost employment, creating a supportive fiscal framework, introducing a local ecolabel, and establishing an online research hub for entities in the CE (Basarabă and Cojocaru, 2015).

As companies pay attention more to life cycle analysis of their products or reflect about sustainability issues relevant to their business, new business models that directly address these

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sustainability concerns are emerging (Staicu et al., 2024; Dagilienė et al., 2023; WBCS, 2008). Given the critical importance of eco-design in a CE, various tools are available to sustain the switch from linear to circular business models, and it provides product designers with a range of guiding principles, eco-design strategies, and methods (Rocha et al., 2023; Pigosso et al. 2015).

This paper investigates how and why a Romanian startup in the circular economy, in the sector of manufacturing, developed its own ecolabel to select designers of sustainable items to sell the on-site and online store.

This paper is organized as follows. First, we discuss findings from the ecolabel literature. Second, we describe the ecolabels available for Romania and important CE strategies and practices. Third, we describe the empirical analysis based on data collected directly from the business. Finally, conclusions are drawn from the startup's assessment system used to define a fitting ecolabel for the company.

2. Literature review

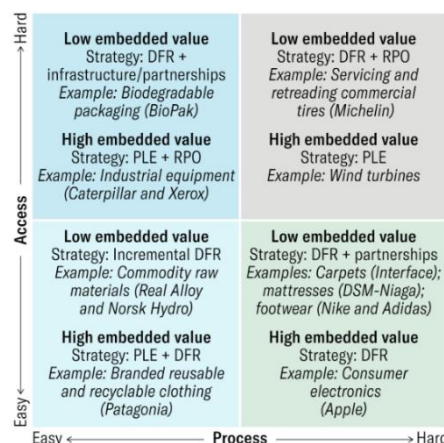
Globally, concerns over natural resource depletion are increasing, emphasizing the urgent need to shift from the traditional linear economy, which follows a take-make-consume-throw model, to a circular economy that focuses on reduce-reuse-recycle-redesign principles (Androniceanu et al., 2021; Dobre-Baron et al., 2022). The textile and apparel industry are among the heavily polluting the urgent need for production and consumption reconfiguration (Staicu & Pop, 2018).

Consumers engagement and adaptation of their conduct in line with CE practices, are crucial for a functional CE (Ungermaun & Dědkova, 2024; Staicu et al., 2024; Karpova et al., 2020). To support CE outcomes, product labelling schemes such as third-party certified labels, are recommended to help consumers make informed choices and incentivize producers (Akenji, 2015). Ecolabels are a mean of informing the consumer about more sustainable product choices and advising them of how to use the product more sustainably through communicating characteristics such as reusability, reparability or recyclability (Meis and Kashima, 2017) since in recent years, many modern consumers tend to be concerned about green products and ways to identify them (Prieto-Sandoval et al., 2016). Ecolabels are therefore a tool for changing consumers' behaviour by stirring them in the direction of more environmentally friendly purchases (Marrucci et al., 2019).

The increase in ecolabel use is driven by three key factors: their effective ecological role in society, extensive promotion by governments and institutions, and their strategic and innovative value to companies that adopt them (Meis-Harris et al, 2021). However, the creation of ecolabels remains an under-researched area.

For companies looking to create circular business models for their products, the right model will involve up to three basic strategies (Atasu et al, 2021): retain product ownership (RPO), product life extension (PLE) and design for recycling (DFR) as seen in the Circularity Matrix (fig. 1).

Figure 1: The Circularity Matrix



Source: Atasu et al. (2021)

Various certifications schemes have been created to help consumers quickly identify sustainable fashion and make responsible choices. (fig. 2, 3, 4).

Figure 2. Sustainable fashion certificates for material sourcing and environmental aspects



Source: <https://www.considerate-consumer.com/certified-fashion> (2024)

Figure 3. Sustainable fashion certificates for labor standards and trade



Source: <https://www.considerate-consumer.com/certified-fashion> (2024)

Figure 4. Sustainable fashion certificates for animal welfare



Source: <https://www.considerate-consumer.com/certified-fashion> (2024)

Concerns about carbon neutrality and zero emissions have driven the adoption of circular economy practices which has led to the initiation of platforms and plans dedicated to CE practices at the EU level (Banjerdpai boon & Limleamthong, 2023, Försterling et al., 2023) as seen in table 1.

Table 1. CE strategies which guide the development of businesses in manufacturing

| Organization | Document description |
|--|---|
| Romanian Government, Department of Sustainable Development | The Romanian Strategy for the Circular Economy is a roadmap for accelerating Romania's transition from a linear to a circular economic model. The implementation of the Action Plan will provide a framework for this transition. The strategy gives an overview of the 14 economic sectors and identifies the following as having the greatest circular potential: agriculture and forestry, automotive sector, construction, consumer goods (food and beverages), packaging, textiles, electrical and electronic equipment. |

| Organization | Document description |
|---|--|
| | <i>Link: https://circulareconomy.europa.eu/platform/en/strategies/national-strategy-circular-economy-romania</i> |
| Employers' Confederation Concordia | The "Circular Economy in Romanian Business" guide presents circular economy programs initiated by organizations belonging to various fields e.g. hospitality, retail, banking. |
| European Commission | Circular economy action plan: The European Commission adopted the new circular economy action plan in March 2020. The EU's transition to a circular economy will reduce pressure on natural resources and will create sustainable growth and jobs. It is focusing on focus on the sectors that use most resources and where the potential for circularity is high such as: electronics and ICT, batteries and vehicles, packaging, plastics, textiles, construction and buildings, food, water and nutrients. <i>Link: https://environment.ec.europa.eu/strategy/circular-economy-action-plan_en</i> |
| Directorate-General for Research and Innovation | This report "'Made in Europe': The future of European manufacturing?" reflects the inputs made by around one hundred manufacturing experts participating in a workshop organised in Brussels on 15 October 2019 on the rationale for a new Partnership, 'Made in Europe', under the upcoming Horizon Europe Framework Programme. The written and oral contributions affirmed that innovative manufacturing technologies are needed to ensure the partnership's contribution towards sustainable prosperity for all with reinforced strategic advantages in terms of increased productivity, enhanced job quality and reduced carbon footprint. <i>Link: https://research-and-innovation.ec.europa.eu/knowledge-publications-tools-and-data/publications/all-publications/made-europe_en</i> |
| European CE Stakeholder Platform | A platform which gathers good practices, strategies knowledge, and players in the circular economy at European level. <i>Link: https://circulareconomy.europa.eu/platform/en</i> |

Source: Author's own analysis (2024)

Compared to Germany, in Romania are available twenty-eight ecolabels (Ecolabelindex, 2024), compared to 103. Among these listed for Romania, only three (table 2) are related to manufacturing of textiles, accessories, home-deco and none of them to all type of products ALTRNTV sells from 140 Romanian designers, according to the ALTRNTV co-founder interviewed.

Table 2. Ecolabels Index for Romania: Ecolabels related to manufacturing of textiles, accessories, home-deco, beauty products

| No. | Ecolabel name | Description |
|-----|---------------------|--|
| 1 | Fairtrade | Fairtrade is an ethical trade system that puts people first. Fairtrade offers farmers and workers in developing countries a better deal, and the opportunity to improve their lives and invest in their future. Fairtrade gives consumers the opportunity to help reduce poverty and instigate change through everyday shopping. |
| 2 | EU Ecolabel | A voluntary scheme designed to encourage businesses to market products and services that are kinder to the environment and for European consumers - including public and private purchasers - to easily identify them. |
| 3 | Natrue-Label | The Natrue-Label is a guarantee for cosmetic products. Their goal is to promote and protect natural beauty and skin care products. Any product with the Natrue label is intended to be as natural as possible, using natural and organic ingredients, soft manufacturing processes and environmentally friendly practices. |

Source: Author's processing based on data available on <https://www.ecolabelindex.com/> (2024)

The scarcity of such labels for their domain of activity, determined ALTRNTV team create their own label following the standards of ISO 14024:2018 (ISO, 2018).

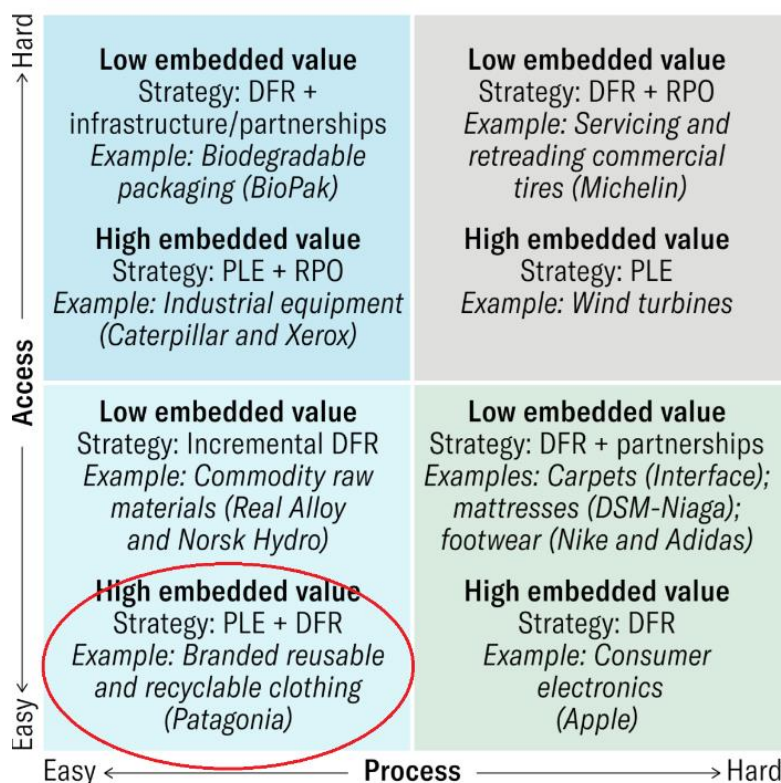
3. Research methodology

In line with the literature insights previously presented, the paper aims to answer to the following research question: “How and why a Romanian startup in the circular economy, in the sector of production and consumption developed its own ecolabel?”.

To achieve the objective of this research, the research methodology utilizes qualitative research methods of a descriptive case study (Yin, 2018) of small and medium enterprise ALTRNTV eco label created in 2021. According to Yin (2009), a case study is an empirical inquiry which investigates a phenomenon in its real-life context. Multiple methods of data collection were employed, as it involves an in-depth study of a phenomenon (Priya, 2021):

1. The case study involves a detailed study of the concerned unit of analysis “the store with over 1.000 sustainable items and more than 140 local designers”, within its natural setting. Moreover, the sub-units concerned by this study, the products designers belong to the second quadrant of the Circularity Matrix (fig. 5) and are concerned by product life extension (PLE) and design for recycling (DFR).

Figure 5. The Circularity Matrix applied to ALTRNTV product designers



Source: Atasu et al. (2021)

In addition, a contextual overview of the development of circular economy businesses in manufacturing in Romania was needed (table 1).

2. Since an in-depth study was conducted, case study research methodology gives the author the flexibility to use any data collection method that suits their aim of the study. The data collection techniques employed included in-depth interviews with four stakeholders (two staff members and two designers) and the analysis of both internal and external documents of the company, following a non-disclosure agreement between the parties (table 3).

The data was collected as follows:

1. March – April 2024: in-depth interviews with the staff
2. January – April 2024: internal and external data.

Table 3. In-depth interview questions

| No. | Question |
|-----|--|
| 1 | How does ALTRNTV selects the designers it chooses to exhibit in the shop? |
| 2 | What are the categories of criteria employed in the designers’ assessment? |
| 3 | What were the criteria most difficult to assess? Why? |
| 4 | What were the criteria easiest to assess? Why? |
| 5 | How many staff people are involved in the assessment? |
| 6 | Has the team noticed any changes in the assessment? |
| 7 | What are the benefits of the ALTRNTV eco label? |

Source: Author’s own processing (2024)

The interview (table 3) was structured into seven questions and two staff and two designers were interviewed: the store manager, one of the co-founders (all 7 questions) and two designers (questions 1, 2, 3, 4, 7 were addressed), which have been with ALTRNTV since its inception.

Table 4. Sources for data collection

| Year | Source type | Source |
|------------------|-------------|--|
| 2024 | Internal | ALTRNTV – Development strategy (2024-2027) |
| 2024 | Internal | Internal document “Green metrics for ALTRNTV” |
| 2023, 2024 | Internal | ISO 9001, ISO 14001, ISO 45001 ALTRNTV internal procedures |
| 2023, 2024 | Internal | ALTRNTV presentation brochure |
| 2022, 2023, 2024 | External | ZIARUL FINANCIAR (6 Articles) |
| 2022, 2024 | External | REVISTA IGLOO (2 articles) |
| 2022 | External | RETAIL.RO (2 articles) |
| 2023 | External | IMPACT HUB BUCHAREST (2 articles) |
| 2022 | External | GREEN-REPORT.ro (2 articles) |
| 2023 | External | REVISTA ATELIERUL (2 articles) |
| 2022, 2024 | External | THE WOMAN (2 articles) |
| 2023 | External | ROMANIAN GREEN STARTUPS (2 articles) |
| 2024 | External | BANISIAFACERI.RO (1 article) |

| Year | Source type | Source |
|------|-------------|----------------------------------|
| 2024 | External | YOUTUBE.COM (16 videos material) |

Source: Authors' own processing (2024)

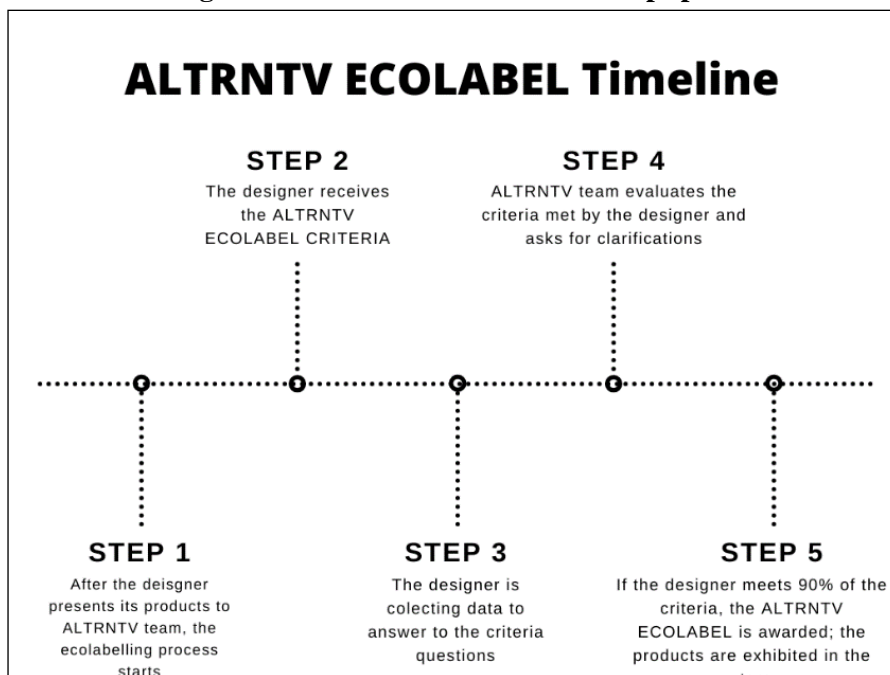
Data collection implied reading over 250 pages of internal and external documents. Data in tables 3 and 4 were triangulated and results are presented in the fourth section.

4. Main findings

Basarabă and Cojocaru (2015) proposed six directions for a country's economic policy to converge with circular economy, among which one of these is launching the Romanian ecolabel. Since such Romanian ecolabel does not exist so that ALTRNTV can align to its criteria, this research focused on describing how and why a Romanian startup in the circular economy, in the sector of manufacturing, developed an ecolabel, since it is a descriptive case study and seeks to describe the context within which the research event is situated, presenting a picture of the specific details of a situation, social setting, or relationship (Neuman, 1994; Stewart, 2001).

Data obtained showcased a six-step process all designers had to go through to obtain the ALTRNTV ecolabel (fig. 6).

Figure 6. ALTRNTV Ecolabel five steps process



Source: Author's own processing based on the data collected (2024)

The criteria are structured into four categories as follows: transparency, ethics, waste management and sustainability, and thirteen sub-categories (table 5).

Table 5. ALTRNTV Ecolabel criteria adapted after ISO 14024:2018

| IMPACT | SUB-CATEGORY | QUESTION | CRITERIA |
|---|-------------------------------------|---|---|
| TRANSPARENCY | PRODUCT | Where does the manufacturing take place? | Manufacturing locally more than 50%, the rest in the EU |
| | | | Manufacturing in the UE more than 50%, the rest locally |
| | | | Manufacturing in non-EU more than 50%, the rest locally |
| | FABRIC | What type of fabrics are being employed? | More than 95% natural and/or recycled materials (the 5% can come from accessories such as thread, buttons, etc.) |
| | | | More than 95% vegan and/or recycled materials (the 5% can come from accessories such as thread, buttons, etc.) |
| | | | Less than 95% natural or vegan materials |
| | | Where do the fabrics come from? | Local, more than 50% of the production, the rest EU |
| | | | EU more than 50% of production, the rest EU |
| | | | Non EU more than 50% of the production, the rest local or EU |
| | | Do the materials have certifications? Which ones? | More than 50% of the materials are certified |
| Less than 50% of the materials are certified | | | |
| Is the source of the material verified? To what extent do you have access to information about the origin of the material? (e.g. distributor, manufacturer) | No certification | | |
| ETHICS | FAIR TRADE | Are the staff paid a decent salary? | More or equal to the minimum wage |
| | WORK CONDITIONS | Do you offer a decent job? | Decent workplace (working hours according to legislation in force, safety at work, optimal conditions work according to the specificity of the field (light, etc.)) |
| | ANIMAL WELFARE | Are vegan materials used? | Artificial leather for more than 50% of production |
| | | Are innovative vegan materials used that do not use polluting substances or petroleum-based plastics such as polyurethane or polyvinyl chloride – PVC? | Innovative, eco-friendly materials for more than 50% of production |
| WASTE MANAGEMENT | RESPONSIBLE DESIGN | Does the company make an effort to reduce the amount of waste generated in the manufacture of products, through conscious design, zero waste, made-to-order products? | Design designed to minimize waste for more than 50% of production |
| | | Does the company have a program to extend the life of its products? | Design designed to minimize waste for less than 50% of production |
| | | Does the company have a program to extend the life of its products? | eg. free retouching/repair services or other program |
| | RECYCLE OR REUSE PRODUCTION WASTE | Does the company have a recycling or reuse program for production waste? | eg. another product made from waste or another program |
| | STOCK STRATEGY UNSOLD/ TRANSPARENCY | Does the company have a strategy for unsold inventory? | eg. donations or other strategies |
| | PACKAGING | What materials are used? | Ecological/recycled |
| | | What materials are used for deliveries? | Ecological/recycled |
| | DELIVERY | What type of transportation do you use? | We do not use any green means of transport for delivery |
| Less than 20% of the means of transport used are non-polluting (electric cars, bicycle, other green means of transport) | | | |
| More than 20% of the means of transport used are non-polluting (electric cars, bicycle, other green means of transport) | | | |
| SUSTAINABILITY | SUSTAINABILITY OBJECTIVES | Does the company have clear sustainability goals to which it contributes? | Sustainable development goals |
| | ADVOCACY | Does the company have projects to promote sustainability? | Developing sustainability projects for fashion/environment/advocacy campaigns |
| | SOCIAL IMPACT | Does the company have a partnership for social responsibility in the community? | What does the brand do to give back, to help the planet, the people? |

Source: Authors' own processing (2024)

Finally, the findings are in line with Arora and Mishra (2023) and Campbell et al. (2018), by proving that ALTRNTV ecolabel operates in accordance with SDG 12, Responsible consumption and production and with SDG 13, Climate Action, status confirmed by the criteria comprised in the brand sustainability assessment (table 6).

Table 6. Ecolabel assessment categories and sub-categories

| IMPACT | SUB-CATEGORY |
|------------------|-------------------------------------|
| TRANSPARENCY | PRODUCT |
| | FABRIC |
| ETHICS | FAIR TRADE |
| | WORK CONDITIONS |
| | ANIMAL WELFARE |
| WASTE MANAGEMENT | RESPONSIBLE DESIGN |
| | RECYCLE OR REUSE PRODUCTION WASTE |
| | STOCK STRATEGY UNSOLD/ TRANSPARENCY |
| | PACKAGING |
| | DELIVERY |
| SUSTAINABILITY | SUSTAINABILITY OBJECTIVES |
| | ADVOCACY |
| | SOCIAL IMPACT |

Source: Authors' own processing (2024)

Finally, ALTRNTV ecolabel is characterized by the following features:

“Defends” local products

This scheme assesses features of local green products developed in accordance to producers capabilities and market acceptance (for example no shoe or sunglasses yet within the ALTRNTV ecolabel because not enough demand or offer).

Transparent and reliable:

The label is a mark of green excellence and professional discipline thanks to strict criteria developed by ALTRNTV team and aligned to ISO 14024:2018.

Vast choice:

Whether clothing, accessories, cosmetics, books, there is a growing list of green product groups with this ecolabel.

Good for people and planet:

Consumers can rely on labelled goods and services for having a reduced environmental footprint, producing less waste and CO₂ during manufacturing, containing fewer hazardous chemicals, and being designed for longer durability and easier repair.

Strict criteria:

Awarded designer products must meet strict criteria to minimize environmental impact throughout their lifecycle, from raw material extraction to distribution and disposal. They also need to adhere to quality standards and often relevant social criteria.

Measurable and marketable:

For brands displaying 'the ALTRNTV logo on their products has a measurable impact on returns, measured in the sales recorded in the online and onsite shop.

ISO 14024 compliant:

ALTRNTV Ecolabel is compliant with ISO 14024 criteria which are set with a lifecycle approach through an open, transparent, multi-stakeholder process.

5. Conclusions and recommendations

This research aimed to answer to describe how and why a Romanian startup in the circular economy, in the sector of production and consumption developed its own ecolabel. This is, as far as we know, first research on Romanian based startup in the production and consumption in the CE, and describes the criteria employed by this ecolabel in assessment sustainability features of the designers exhibited in the onsite and online marketplace. In this case, the analysis allowed to describe ecolabeling process steps and requirements required to each of the 140-designer exhibited.

The research aims to fill an existing gap in the studies on the Romanian based startups in the circular economy, illustrating how a local business can create an ecolabel meant to guide the consumer toward more environmentally responsible choices.

A research limitation resides in the fact that at this moment, the scheme does not have an independent third party or competent body to ensure that products fully comply with the relevant ALTRNTV Ecolabel criteria, the assessment is performed by the startups team.

Future research should aim to understand why the EU Ecolabel is not comprehensive enough that such local brands of manufacturers of sustainable items do not see the benefits of adopting it and rather adhere to a local one, contextualized to the market capacity of adoption of these products.

References

- Akenji, L. (2015). *Sustainable Consumption and Production: A Handbook for Policymakers*. UNEP, United Nations Environment Programme.
- Androniceanu, A., Kinnunen, J., & Georgescu, I. (2021). Circular economy as a strategic option to promote sustainable economic growth and effective human development. *Journal of International Studies*, 14(1), 60-73.
- Arora, N.K., Mishra, I. Responsible consumption and production: a roadmap to sustainable development. *Environmental Sustainability* 6, 1–6 (2023). <https://doi.org/10.1007/s42398-023-00266-9>
- Atasu, A., Dumas, C., N. Van Wassenhove, L. (2021, June 15). The Circular Business Model. *Harvard Business Review*. Available at: <https://hbr.org/2021/07/the-circular-business-model>
- Banjerdpai boon, A., & Limleamthong, P. (2023). Assessment of national circular economy performance using super-efficiency dual data envelopment analysis and Malmquist productivity index: Case study of 27 European countries. *Heliyon*, 9(6), Article number e16584.
- Basarabă, A., & Cojocaru, M.-C. (2015). Methods for Converging the Romanian Economic Policy with the Circular Economy Model in the Context of Romania's European Integration. *Sfera Politicii*, 2(184), 49-57.
- Campbell, B.M., Hansen, J., Rioux, J., Stirling, C.M., Twomlow, S., & Wollenberg, E.(L.) (2018). Urgent action to combat climate change and its impacts (SDG 13): transforming agriculture and food systems. *Current Opinion in Environmental Sustainability*, 34, 13-20.
- Dagilienė, L., Bruneckienė, J., Varaniūtė, V., & Banionienė, J. (2023). *Circular Business Models in the Manufacturing Industry*. Springer Nature.

- Delmas, M. A., & Gergaud, O. (2021). Sustainable practices and product quality: Is there value in eco-label certification? The case of wine. *Ecological Economics*, 183, 106953. <https://doi.org/10.1016/j.ecolecon.2021.106953>
- den Hollander, Marcel & Bakker, C.A. & Hultink, Erik. (2017). Product Design in a Circular Economy: Development of a Typology of Key Concepts and Terms: Key Concepts and Terms for Circular Product Design. *Journal of Industrial Ecology*. 21. 10.1111/jiec.12610.
- Dobre-Baron, O., Nițescu, A., Niță, D., & Mitran, C. (2022). Romania's Perspectives on the Transition to the Circular Economy in an EU Context. *Sustainability*, 14(9), Article number 5324.
- Dragomir, V.D., & Duțescu, A. (2022). New business models in the Circular Economy. *Proceedings of the International Conference on Business Excellence*, 16(1), 792 – 804.
- European Commission (2024). EU Ecolabel: Guiding your sustainable choices. Available at: https://environment.ec.europa.eu/topics/circular-economy/eu-ecolabel_en
- Försterling, G., Orth, R., & Gellert, B. (2023). Transition to a Circular Economy in Europe through New Business Models: Barriers, Drivers, and Policy Making. *Sustainability*, 15(10).
- Geissdoerfer, M., Savaget, P., Bocken, N.M.P., & Hultink, E.J. (2017). The Circular Economy A new sustainability paradigm?. *Journal of Cleaner Production*, 143, 757-768.
- Karpova, S.V., Cherenkov, V.I., & Cherenkova, N.I. (2020). A sustainable consumers' consumption in the context of Arctic circular economy. *IOP Conf. Series: Materials Science and Engineering*, 940, Article number 012125.
- Kleespies, M.W., & Dierkes, P.W. (2022). The importance of the Sustainable Development Goals to students of environmental and sustainability studies—a global survey in 41 countries. *Humanities and Social Sciences Communications*, 9. volume
- Korhonen, J., Honkasalo, A., & Seppälä, J. (2018). Circular Economy: The Concept and its Limitations. *Ecological Economics*, 143, 37-46.
- Lakatos, E.S., Bacali, L., Ciomos, A.O., Rosca, M.G., & Mateiciuc, C. (2018). The behaviour of new generations consumers related to the circular economy. *Acta Technica Napocensis Series-Applied Mathematics Mechanics and Engineering*, 61(4), 727-734.
- Marrucci, L., Daddi, T., & Iraldo, F. (2019). The integration of circular economy with sustainable consumption and production tools: Systematic review and future research agenda. *Journal of Cleaner Production*, 240, 118268. <https://doi.org/10.1016/j.jclepro.2019.118268>
- Meis-Harris, J., Klemm, C., Kaufman, S., Curtis, J., Borg, K., & Bragge, P. (2021). What is the role of eco-labels for a circular economy? A rapid review of the literature. *Journal of Cleaner Production*, 306, 127134. <https://doi.org/10.1016/j.jclepro.2021.127134>
- Neumann, W.L. (1997) *Social Research Methods: Qualitative and Quantitative Approaches* Alyn Bacon
- Our World in Data (2023). Ensure sustainable consumption and production patterns. Retrieved from <https://ourworldindata.org/sdgs/responsible-consumption-production>.
- Priya, A. (2021). Case Study Methodology of Qualitative Research: Key Attributes and Navigating the Conundrums in Its Application. *Sociological Bulletin*, 70(1), 94-110. <https://doi.org/10.1177/0038022920970318>.
- Pigosso, D. C. A., T. C. McAloone, and H. Rozenfeld. 2015. Characterization of the state-of-the-art and identification of main trends for ecodesign tools and methods: Classifying three decades of research and implementation. *Journal of the Indian Institute of Science*, 94(4): 405–427.
- Prieto-Sandoval, V., Alfaro, J.A., Mejía-Villa, A., Ormazabal, M. (2016). ECO-labels as a multidimensional research topic: Trends and opportunities, *Journal of Cleaner Production*, Volume 135, pp. 806-818, ISSN 0959-6526, <https://doi.org/10.1016/j.jclepro.2016.06.167>.
- Rocha, C.S., Antunes, P., & Partidario, P. (2023). Design for Circular Economy in a Strong Sustainability Paradigm. *Sustainability*, 15(24), Article number 16866.

- Staicu, D., Argatu, R., Benga, A. (2024). Circular economy as the pathway to sustainable future: a case study on ALTRNTV shop. THE 7th INTERNATIONAL CONFERENCE ON ECONOMICS AND SOCIAL SCIENCES, 13-14 iunie, Bucuresti.
- Staicu, D., & Pop, O. (2018). Mapping the interactions between the stakeholders of the circular economy ecosystem applied to the textile and apparel sector in Romania. *Management & Marketing. Challenges for the Knowledge Society*, 13(4), 1190-1209.
- Stewart, G. (2001). *The Use of Yin's Case Study Research Approach as a Means to Stimulating Emancipatory Action Research*. Available at: <https://core.ac.uk/download/pdf/301345061.pdf>
- Topliceanu, L., Puiu, P.G., Drob, C., Topliceanu, V.V. Analysis Regarding the Implementation of the Circular Economy in Romania. *Sustainability* 2023, 15, 333. <https://doi.org/10.3390/su15010333>
- Ungerman, O., & Dědkova, J. (2024). Consumer behavior in the model of the circular economy in the field of handling discarded items. *PLoS ONE*, 19(3).
- Valverde, J.M., & Avilés-Palacios, C. (2021). Circular Economy as a Catalyst for Progress towards the Sustainable Development Goals: A Positive Relationship between Two Self-Sufficient Variables. *Sustainability*, 13(22).
- World Business Council for Sustainable Development (2008). *Sustainable Consumption Facts and Trends*. Available at: <https://docs.wbcsd.org/2008/11/SustainableConsumptionFactsAndTrends.pdf>
- Yin, R. K. (2009). *Case study research: Design and methods* (Vol. 5). Sage.
- Yin, R. K. (2018). *Case study research and applications* (6th ed.). Thousand Oaks: SAGE Publications.