Characteristics of textile and clothing sector social entrepreneurs in the transition to the circular economy

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ABSTRACT – REZUMAT

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The limits of the present take-make-waste business model are extremely visible when examining the textile and clothing industry. The concept of circular economy gained traction, which has led to the creation of policy actions throughout the life cycle of a product and at disposal. Transitioning from linear to circular economy business models requires significant value-chain changes in both production and consumption patterns. Existing circular business models are paving the way towards a paradigm shift. However, the literature has not retained much empirical evidence about these sustainability-oriented innovators which are invisible and work in anonymity. This study provides a simple, yet rich and unique overview of the characteristics of circular economy business models in the textile and clothing sector in Romania, identified through qualitative analysis performed on the entire population of sustainability-oriented innovators identified in Romania in the textile and clothing sector in a previous study done by the same author. The data was collected using a structured questionnaire with 37 questions connected to four areas: human resources, legal and fiscal framework, customers and communication, and materials, tools or technology employed. With a 100% response rate, the real significance of this paper is that it may have discovered the real contribution of these agents of change in the circular economy, functional circular business models which have never been studied before as a population.

Keywords: circular economy, innovation, social enterprise, sustainability-oriented innovators, sustainable entrepreneurship, textile and clothing sector

Caracteristicile antreprenorilor sociali din sectorul textile și îmbrăcăminte în tranziția către economia circulară

Limitele prezentului model de afaceri preia-produce-consumă sunt extrem de vizibile când examinăm industria textilă și de îmbrăcăminte. Conceptul de economie circulară a câștigat tracțiune, ceea ce a condus la pollitici publice care vizează tot parcursul ciclului de viață al unui produs. Trecerea de la modelele de afaceri bazate pe liniaritatea resurselor folosite la modele circulare necesită modificări semnificative ale lanțului valoric atât în modelele de producție, cât și în cele de consum. Modelele circulare de afaceri existente deschid calea către o schimbare de paradigmă. Cu toate acestea, literatura de specialitate nu a reținut multe dovezi empirice despre acești inovatori orientați spre durabilitate, care sunt invizibili și funcționează în anonimat. Acest studiu oferă o imagine de ansamblu simplă, dar bogată și unică, a caracteristicilor modelelor de afaceri circulare din sectorul textil și de îmbrăcăminte din România, identificate prin analiză calitativă efectuată asupra întregii populații de inovatori orientați spre sustenabilitate identificați în România în domeniul textile și îmbrăcăminte într-un studiu anterior realizat de același autor. Datele prezentului studiu despre caracteristicile inovatorilor din domeniul textile și îmbrăcăminte au fost colectate folosind un chestionar structurat, cu 37 de întrebări legate de următoarele subiecte: resurse umane, cadru juridic și fiscal, clienți și comunicare, materiale, instrumente sau tehnologie utilizate. Cu o rată de răspuns de 100%, importanța acestei cercetări este că prezintă contribuția reală a acestor agenți de schimbare în economia circulară, modele funcționale de afaceri circulare care nu au mai fost studiate până acum ca populație.

Cuvinte-cheie: economie circulară, inovare, întreprindere socială, inovatori orientați spre sustenabilitate, antreprenoriat durabil, sectorul textile și de îmbrăcăminte

INTRODUCTION

The transition to a circular economy is associated with circular businesses, models concerned with the sustainability of materials, processes, mainly sustainability of the value chain [1–3]. Despite the lack of circular strategies, existing business models are steadily shaping the textile and clothing sector. These innovators are contributing to the transition to the circular economy through incremental and transformational innovation. Studies about incremental business models [4–7] are already being discussed in the public space and studied by academia. Sustainability approaches to the textile and clothing sector are shifting from incremental to transformative business models, in an effort to engage in the transition to the circular economy innovations which produce accelerated change [8]. However, transformational innovation has not gained the same momentum, although these are offering real business models of applied circularity.

In Romania, a roadmap to circular economy has not yet been formulated despite of a variety of models

available from other Member States, but a tentative proposal for a Circular Economic Strategy is being developed [9]. At this time, the literature related to Romanian circular business models is scarce and best practices in terms of circularity are absent. Most reports narrate about Romanian social entrepreneurs in general without a sectoral classification [10–11]. These innovators are practically invisible and no empirical data has been gathered to document their activities related to circularity. However, these models certainly exist since they appear mentioned in various reports. To summarize, these sustainable business models in the textile and clothing sector in Romania, with environmental and social sustainability in their core business [12] are invisible in the public discourse and their characteristics and achievements are not being promoted. The purpose of this research study was to explore the dimension of these sustainability-oriented innovators in the textile and clothing sector in Romania. To achieve the scope, the researcher identified the characteristics of the sustainability-oriented innovators in the textile and clothing sector by studying four areas related to the business model.

LITERATURE REVIEW

The transition towards a circular economy offers an opportunity to reduce Europe's environmental footprint through measures of diminishing raw material consumption and reducing waste generation [13–16]. In the past decade, the circular economy model has recently gained worldwide attention from business people, authorities and academia [2, 17, 18]. In the perspective of the urgent need for change, the circular business models are gaining traction, which has led to the creation of bi-directional policy actions: throughout the life cycle of a product and at disposal [14, 19, 20, 22]. However, these policies cannot succeed if the business models are not aligning the value chain to the circularity principles. If designed properly for circularity, innovative business models could thrive and contribute to reducing the need for new products and raw materials as well as the efficient use of assets [23]. Textiles waste is relatively small in terms of weight as compared to other waste streams, but it has a large impact on human health and environment [24–27]. The limits of the present take-make-waste business model are extremely visible when examining the textile and clothing industry [6, 7, 28]. Transitioning from linear to circular economy business models is not simple and requires significant value-chain changes in both production and consumption patterns [29, 30]. The shift from a linear to a circular model in the textile and clothing sector is associated with the need to implement innovative business models, but the adoption of circular business strategies in the industry has been scarce [31–33, 9].

Thus, studies are being developed on the innovations in the field, the majority of them are dedicated to incremental innovators, companies dedicated for the mass-market [34]. However, only a few sustainable business models emerged from the population of sustainability-oriented innovators whose mission is environmentally and social driven, with insignificant value attributed to the profit [35–37]. These sustainability-oriented innovators are being recognized for their circular business models and best practices in the transition to the circular economy [8, 38, 39] Recent research [40, 41] identified the population of sustainable-oriented innovators in the textile and clothing sector in Romania: eleven social enterprises are pioneering circular economy. This is the population concerned by this study.

METHODOLOGY

In motivating the decision to use qualitative research, it is important provide a definition and to justify the use of qualitative research methodology. Creswell [42] defined qualitative research as a process of understanding based on different methodological traditions of inquiry that explore a social or human problem. According to Patton [43], through qualitative research methods, researchers produce a wealth of detailed data about a much smaller population. In this particular case, it is important to understand that the population being investigated qualifies for "a hard to reach" or "hard to capture" population [44] characterized by low numbers, members hard to identify, difficulty into identifying commonalities among the members, information about them rarely recorded and available for consultation, and not entirely known behaviour which leads to a poor choice of places or spaces in which to approach them [45].

The data was collected using a structured questionnaire, technique considered particularly useful when the sample size is relatively small [46–49]. It is important to mention that the researcher itself is an active participant in the field under investigation through its role of social entrepreneur in the field of clothing manufacturing at Atelier Merci, a social enterprise based in Bucharest, Romania. Based on prior literature review, the researcher defined the game-changers targeted by this research which are the object of previous research published by the author [40, 41]: small and medium-sized sustainability-oriented innovators, with a business model and mission aimed at contributing to diminishing environmental and social problems. Throughout this study the researcher employed four association of words to which assigned the same significance "game changer", "sustainability-oriented innovator", "social entrepreneur", "agent of change". Eleven Romanian sustainability-oriented innovators were asked to participate in the survey: Made in Roșia Montană, Asociația D'Avent, Iuliana Pîslaru Design, Asociația Mai Bine – REDU, Mesteshukar ButiQ, Cup & Candle, Upside Down, Crucea Roșie, Sector 6 – Bine Boutique, Asociația Viitor Plus – Atelierul de Pânză, Yard Sale, Asociația Merci Charity – Atelier Merci. The response rate was 100%. The questions were designed by combining the findings resulted from previous work [40, 50] and

Table 1

THE SECTIONS OF THE QUESTIONNAIRE			
Section	**Description**	**Number of questions comprised**	**Type of questions (open-ended or closed-ended)**
Profile of the social enterprise	Legal form of the SE, year of creation, number of employees, field of activity	5	closed-ended and open-ended
Current context in Romania for developing a social business	Perceptions on the conditions for starting a SE in Romania, public policies, funding, non-financial support, access to market, workforce, consumers, awareness of SE.	12	closed-ended
Human resources in the social enterprise	Typology of the employees, skills required at employment, difficulties in recruitment, employee training	9	closed-ended and open-ended
Legal and fiscal measures for the social enterprise	Incentives for business development, legislation related to social entrepreneurship	5	closed-ended
Customers and communication of the social enterprise	Typology of customers, collaboration with other SE, marketing.	7	closed-ended
Raw materials and tools or technology in the social enterprise	Type of raw materials and procurement, collaboration with textile plants, product design, tools or technologies, barriers in business development.	11	closed-ended and open-ended
Personal information about the respondent	Name, e-mail, age, gender, education, work experience	9	closed-ended and open-ended

questionnaires from relevant national studies dedicated to social entrepreneurship developed. An e-mail was sent to the SOI database [41] after the content was uploaded in the Google Forms platform for hosting surveys. The response rate was 100%.

The questionnaire applied comprised thirty-seven questions structured into four areas under investigation: human resources, legal and fiscal framework, customers and communication, raw materials and tools or technology. Apart from these categories, the questionnaire comprised two other sections regarding the profile of the respondent and the profile of the social business (table 1). The questions were classified into three categories: open questions, open-ended questions, multiple choice questions. The answers were collected using a Web-based service entitled Google Forms and stored in the researcher's computer locked with a password.

Table 2

QUESTIONNAIRE SECTION: PROFILE OF THE SOCIAL ENTERPRISE		
Questionnaire section	**Question**	**Answer**
Social business profile	The legal form of my social business is:	Open question
	The year of setting up the social business is:	Open question
	Number of employees	Open question
	What does the social business do?	Open question
	The social business is focused on:	1. Production 2. Services

The profile of the social enterprise is composed of the answers provided to thirty-seven questions divided into four sections: human resources, legal and fiscal measures for the social enterprise, customers and communication of the social enterprise, raw materials and tools or technology in the social enterprise (table 2).

FINDINGS

Previous research performed in 2019 employing traditional and virtual sampling research methods determined the population of sustainability-oriented innovators in the textile and clothing sector in the transition to the circular economy in Romania [41]. This population is the subject of analysis of this current research.

Respondents' profile

Most of the respondents to the questionnaire were founders and co-founders of the businesses with 36% of each of the two categories. 45% of them were aged 31 to 35 years old, followed by 26 to 30 years old representing 36%. 83% of the respondents were female. Most respondents have a bachelor degree (55%), followed by a master degree (45%). 64% of the respondents have previous studies related to entrepreneurship. 73% of the respondents believe it would have been useful to pursue an entrepreneurship course before working in the social business. All the respondents have previous work experience. To summarize, the respondents are the creators of the social businesses analysed, majority females aged between 26 to 35 years old, with previous work

experience and holding a bachelor or master degree, with previous studies related to entrepreneurship.

The characteristics of the sustainability-oriented innovators in the textile and clothing sector

Business profile
54% of the SOI are dedicated to textile recycling (figure 1). Analysing the eleven SOI, based on Smits [51], business models advancing the T&C sectors towards circularity, the Romanian SOI in the T&C are based on the "circular" which by definition is a model of creating value from waste [51] and "sufficiency" models which by definition are models based on effective use of resources. The majority of the business models (82%) are circular models of creating value from waste, followed by 73% of business models encouraging effective use of resources 73% of the SOI are dedicated to production.

73% of the SOI respodents are dedicated to production (figure 2).

Legal forms
Four categories of legal forms resulted from the respondents' answers: Non-governmental organisation society with limited responsibility, Authorized person and Social Economy Structure (table 3).

Table 3

REGULATIONS RELATED TO THE LEGAL FORMS ACCEPTED IN ROMANIA

Legal form	Acronym	Regulated through
Non-governmental organization	NGO	Official Monitor – 26/2000, 2000
Society with limited responsibility	SRL	Official Monitor – 31/1990, 1990
Authorized person	PFA	Official Monitor – 182/2006, 2006
Social Economy Structure	SES	Labour Ministry – 219/2015, 2015

Most of the SOI were registered as societies with limited responsibility (45%), followed by NGOs with 27%. Only 9% of the SOI were registered as a structure of the social economy, structures developed especially for enterprises acting for the social greater good.

Longevity on the market
The population of the SOI questioned has 1–10 years' experience, with 2 of them having 7 years of experience. It is important to notice that these entities are active on the Romanian market in the last 10 years (starting 2009) though the law on social economy has been published only four years ago, in 2015.

Human resources
All the eleven SOI employed 34 people, ranging from 1 to 12 employees. 90% of the employees of these SOI become productive within the first 90 days of starting a job (figure 4 and 5).

Most SOI hire unemployed people (33%), followed by poor women, rural residents and people with disabilities (11% of SOI for each of the three categories). We should not ignore the other categories of employees which were belonging to vulnerable populations, among them young
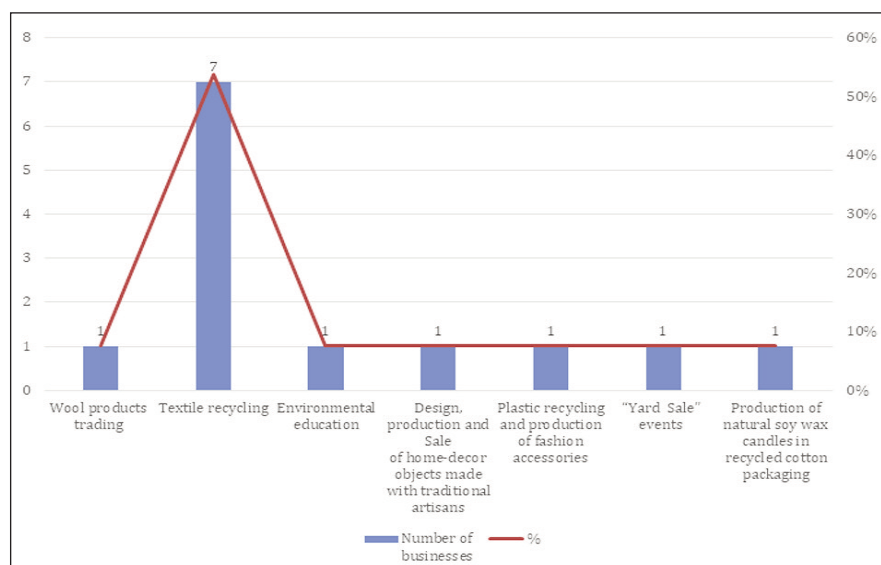

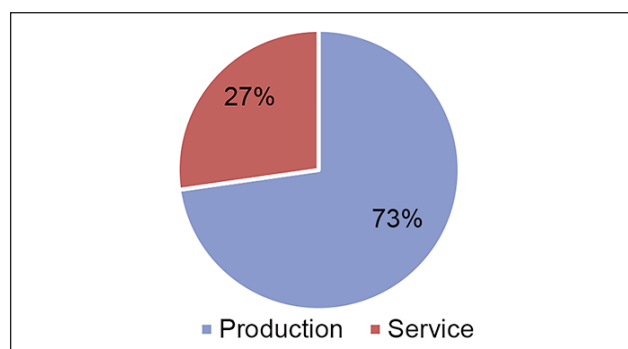Fig. 1. Main activity of the SOI
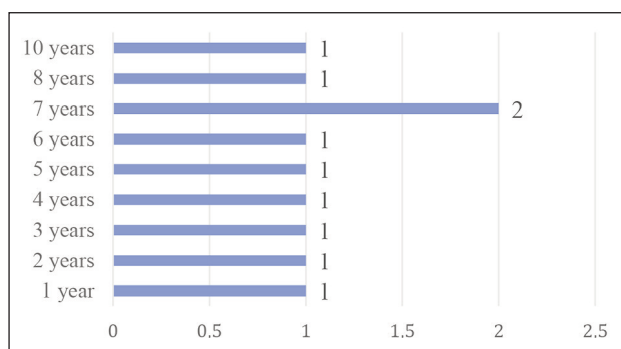

Fig. 2. Type of activity
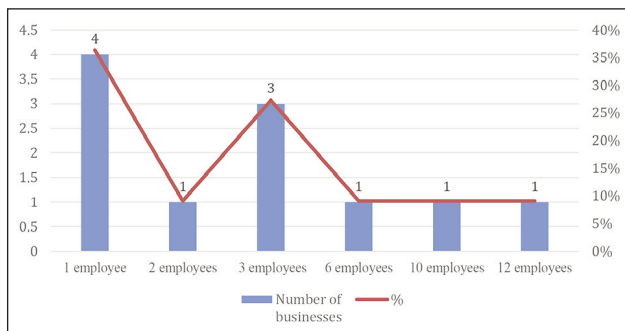

Fig. 3. SOI years of experience on the market
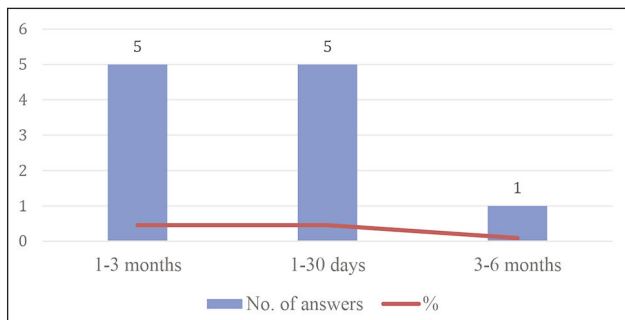
Fig. 4. SOI number of employees

Fig. 5. Employee productivity timeline

people over 18 who are no longer included in the childless care system, Roma people in high-risk situations, women victims of domestic violence, mono-parental families, young people and craftsmen. The answers to the question related to "Which skills are you searching for in future employees?" were collected and grouped into four main categories with 40% skills related to tailoring, and each of the following with 20%: skills related to knitting, skills related to product design and skills related to selling products/entrepreneurial spirit. One of the SOI mentioned that the skills related to product design are necessary because the products were purchased for utility and design. Moving to skills related to accountability, in equal percentages, the employer appreciates as being important: organizing abilities, meeting duties on time and being a team player.

Third, the respondents highlighted mindset related skills searched in the future employees: the determination to keep a job (20%) while the determination to learn is 80%. The last categories of skills are related to personal values of the future employee, among these the most appreciated being cognitive flexibility (27%), seriousness (18%) and humanitarian values (18%). The people employed show interest in getting a job (44%), while only 25% have the qualification required.

Legal and fiscal framework

55% of the respondents do not have knowledge about the social economy law 219/2015 provisions.

Customers, product and communication

Most customers are individuals (64%) and it is important to signal that public institutions are not among the customers of SOI. The products of the SOI (figure 6) are purchased for design (32%), followed by the mission of the social enterprise (24%) and quality of the fabrics (20%). 82% of the respondents already collaborate with other social businesses. 64% of the respondents intend to collaborate with other SOI. I
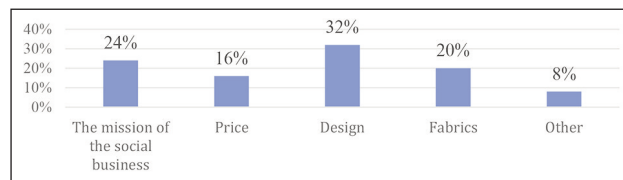

Fig. 6. The characteristics which determine the customers' purchase decision

91% of the respondents intend to launch the business of the international market and the same percentage promote their products through a website and have been mentioned in the media.

Raw materials and technology

42% of the raw materials employed are donated clothing, and only 8% recycled materials (figure 7).
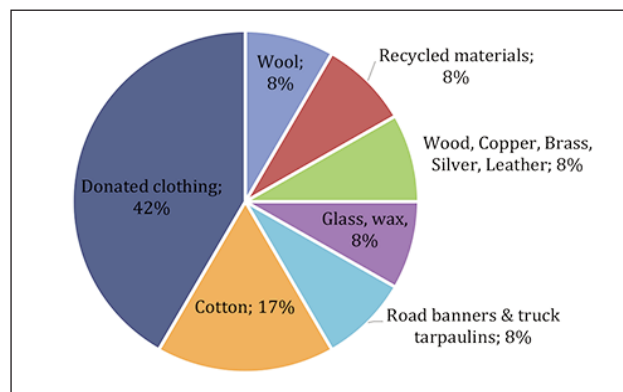

Fig. 7. Raw materials employed in the SOI questioned

Fig. 8. A snapshot of the characteristics of sustainability-oriented innovators in the T&C

The sources of the raw materials (36%) are various companies from Romania, followed by the textile stores and donations from individuals (36%). 47% of the respondents pay per kilo or per meter for their raw material and 40% obtain it without paying. In equal percentage (36%), the design is created in collaboration with a designer or by an employee. There is no collaboration with the Art University or students in the arts. 91% of the equipment is bought and 73% of it comes from Romania. The value of the equipment used is estimated between 2,000 and 5,000 EUR for 55% of the respondents. 64% of the respondents do not collect their used products from the customers as seen in figure 8.

CONCLUSIONS

This is the first exercise of obtaining empirical data about the Romanian sustainability-oriented innovators in the textile and clothing sector and provides valuable information about the distribution and dimension of this category of circular economy stakeholders. The following characteristics were discussed: experience on the market, legal form, main activity, human resources, materials and technology, and customer typology. Although this study was designed to provide preliminary research into the characteristics of sustainability-oriented innovators in the textile and clothing sector in their transition to the circular economy, its real significance may be the discovery of the real impact of these agents of change in the circular economy.

To sum up, the interpretation of the results gave **the following characteristics and contributions of the population of sustainability-oriented innovators in the textile and clothing in Romania**: the majority of the innovators in the textile and clothing sector are circular models of creating value from waste, followed closely by business models encouraging effective use of resources being mostly dedicated to production and less to providing services. Most of the innovators were legally registered as societies with limited responsibility followed by NGO's.

The population questioned has 1 to 10 years' experience, and it is important to notice that these entities have been active on the Romanian market for 10 years (since 2009) even though the law on social economy has been published in 2015. 90% of the employees become productive with the first 90 days of starting a job and most innovators hire unemployed people, followed by poor women, rural residents and people with disabilities.

Most of the characteristic skills related to these specific businesses were related to tailoring, followed by skills related to product design, sale of products and knitting in equal percentages. Next, moving to skills related to accountability, in equal percentages, the employer appreciates organizing abilities, meeting duties on time and being a team player. The last categories of skills are related to personal values of the future employee, among these the most appreciated being cognitive flexibility, seriousness and humanitarian values. 55% of the respondents indicated that they have no knowledge about the social economy law 219/2015 provisions.

Most customers are individuals, and it is important to signal that public institutions are not among these customers. The products are purchased for design, followed by the mission of the social enterprise, and quality of the fabrics. Most of the innovators already collaborate with other social businesses and intend to launch the business of the international market and promote their products through a website. The source of the raw materials are various companies from Romania, followed by the textile stores and donations from individuals. Less than half of the respondents pay per kilo or per meter for their raw material and 40% obtain it without paying. For a third, the design is created in collaboration with a designer or by an employee. There is no collaboration with the Art University or students in the arts. Most of the equipment is bought and three quarters is bought from Romania. The value of the equipment used is estimated between 2,000 and 5,000 Euro for more than half of the respondents. 64% of the respondents do not collect their used products from the customers.

Based upon the findings and the conclusions of the study, **there are two decisively important implications for the circular economy ecosystem sectors.** First, in order to facilitate the transition to circular business models, there are obvious **barriers to transitioning to circular business models signalled by the low scores in some questions which have to be alleviated or best eliminated in order for the circular business models to develop**. Second, **the Romanian textile and clothing sector has functional business models and their activity is not being studied enough.** Their characteristics can serve as best practices for the field of circular economy with the condition of being pulled from anonymity and invisibility, given a voice and placed at the table of discussion about the topic of circular economy. **It is imperative for these circular business models to participate in all conversations about circularity and be inquired about the facilities, which would help these models scale up their businesses.** So far, these circular business models have been only intrinsically motivated and it is the time for external stimulants.

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