

THE SUSTAINABILITY OF SOCIAL ENTREPRENEURSHIP USING CIRCULAR ECONOMY PRINCIPLES

SUSTENABILITATEA ANTREPRENORIATULUI SOCIAL FOLOSIND PRINCIPIILE ECONOMIEI CIRCULARE

Dumitru STRATAN¹

Abstract

This article is realized within the State Program 20.80009.0807.22: Development the mechanisms for creation the circular economy in Republic of Moldova.

The general objective of this article is to analyze the perspectives for developing social entrepreneurship in Moldova and find what useful insights could bring its development in the Moldovan ecosystem through social economy and circular economy boosting.

One of the main hypothesis is that optimal model of social entrepreneurship can rather take place in the conditions in which companies attribute their principles to the circular economy and SMEs policies combine necessary attributes that change economic and social stereotypes of entrepreneurs.

The purpose of the article is to underline the understanding of social entrepreneurship perspective in Moldova through circular economy in order to configure a clear model of functioning in Moldovan realities.

Key words: circular economy, entrepreneurship, development, social

1. Approaches of social entrepreneurship through circularity

Switching from the model of linear economy at the micro and macro level, to a circular economic approach will improve not only the cost efficiency and in the same time the competitive advantage of the companies but also will reduce negative impact on the environment and on the society. Nowadays, different local, national and international stakeholders fight for saving natural environment from humans and companies' irresponsible interventions.

In case of business operations and strategies of for profit mission organizations, there are only several authors underlining the circular business framework how to look like. Some recent researchers develop new components of circular business model on the basis of Business Canvas Model: value propositions, channels, customer relations, revenue streams, key resources, key activities, key partnerships, cost structure (Lewandowski, 2015). Other researchers cover the circular business model only under the four pillars: value proposition, infrastructure management, customer interface, financial management (Frank Boons & Lüdeke-Freund, 2012). The need for new business model is widely expressed by other researchers (Sempels, 2014).

Some researchers give specific strategic tools or/and phases on how to change the existing business models. For example, Frankengerger (2013) have developed the *4I-framework*, which consists of four generic phases, from design to realization. Others redesign existing strategic planning tools, as Balanced Scorecard is, in a more sustainable way (Johansson, 2015). Some researchers highlight that for circular business models must be attributed ideation and out of box creative thinking (Frankenberg, 2013; Chesbrough, 2010).

¹ Drd., Managing Director Inspiro Consulting, Regional Development and Strategic Planning Consultant, Republica Moldova

Relevant methods of circular business innovation can be found in different academic literature (Heikkilä and Heikkilä, 2013).

The mentioned types of organization, which is subject of this paper, must review the existing policies and models of businesses, especially under the conditions of limited resources and potential. This is the reason circular economy attracted attention as a powerful tool towards sustainability (Lewandowski, 2015).

Some authors stress that social enterprises play one of the most relevant role into the process of transitions from linear to circular economy. Such companies use innovative strategic thinking in order to reduce environmental impact and create higher added value to the society, because the core business mission is a social one; a special attention for the sustainability is given by the stakeholders who must be involved into the transition process, such as policy makers, technology and innovation centers, researchers, etc. (Culcasi, 2014). Moreover, practitioners suggest that in the developing economies where green and social problems are on the Government agendas, the start-ups which use circular economy must be given incentives and support to have a strong sense of social aim (Perella, 2015). There are recommendations that a sustainable strategic approach must be used by the organizations that want to be sustainable and responsible into the same time (Johansson, Larsson, 2015).

The answer that the paper looks to provide is how social entrepreneurship operations can be modelled within existing business methods using circular economy principles. None of the reviewed studies have provided an appropriate answer. The author provides a framework of the circular business model as a strategic planning tool and approach that have to be considered by social enterprises (considered the pioneers of solving social and environmental problems).

The main scope of the circular economy is to protect the natural environment and natural resources (Wu, 2014). From this perspective, generally, the theoretical aspect of circular economy is described by economic theories and the theories of natural sciences. Specific literature is identified and conceptualized in respect to natural sciences theories, stating that circular economy mainly targets environmental problems. The economic theories stress on the circular business models and its components (Lewandowski, 2015). Lewandowski (2015) categorize the literature devoted to circular economy into the following sub-components, for each of them presenting the literature of different researchers: definitions, components, taxonomies, conceptual models, design methods and tools, adoption factors, evaluation models, change methodologies.

The earliest representation of circular economy is the development of the spaceship theory (Xie, 2004). Another earlier issue that argues for a circular production system necessary to optimize the resources is the report *Limits to growth* published in 1972 (Li, 2010). With time, the two categories of factors are concentrates around the circular economy theory, economic and social-environmental factors. McDonough (2002) states that eco-effectiveness must be part of the process that develop products that have a positive environmental impact.

According to European Parliamentary Research Service (EPRS), circular economy is an 'economic model based inter alia on sharing, leasing, reuse, repair, refurbishment and recycling, in an (almost) closed loop, which aims to retain the highest utility and value of products, components and materials at all times' (EPRS, 2016). The authors of the EPRS

(Bourguignon, 2016) underlines that circular economy is described as an approach wherein products and the products components are highly value comparing with a linear economic approach. One of the goals of circular economy is to reduce the waste at the minimum level: when the products' life cycle and their materials must be kept and reused, creating further value. The same authors give statistical data of waste generation from manufacturing and services sectors in the EU-28 and Norway, showing that since 2004 and 2015 waste generation from the mentioned sectors declined about 25%.

European Commission (2014) underlines that circular economy is a twofold concept:

a) Cradle to cradle, which contain following principles:

- product design for durability, disassembly and refurbishment. The main idea behind this principle is that business must apply eco-design and renewable resources to all the products

- modern circular and regenerative forms of consumption. The meaning of this principle is to change model of consumption from buyers to users

b) industrial symbiosis, which stress the importance of cooperation between different actors, even those who are not eager to cooperate. The cooperation must undertake within the integral value chain and cycle of products. The same ideas about circular economy can be found in Preston (2012) work, who describes the importance of collaboration between different actors through product value chains.

Ellen McArthur Foundation, being the first which defined circular economy, gives following definition: "an industrial system that is restorative or regenerative by intention and design". Linder and Williander (2015) define a circular business model as "a business model in which the conceptual logic for value creation is based on utilizing the economic value retained in products after use in the production of new offerings". Scott (2015) underlines "a concept used to describe a zero-waste industrial economy that profits from two types of material inputs: (1) biological materials are those that can be reintroduced back into the biosphere in a restorative manner without harm or waste (i.e.: they breakdown naturally); and, (2) technical materials, which can be continuously re-used without harm or waste". Arcadis (2015) considers that 'circular economy is a concept in which growth and prosperity are decoupled from natural resource consumption and ecosystem degradation. By refraining from throwing away used products, components and materials, instead re-routing them into the right value chains, we can create a society with a healthy economy, inspired on and in balance with nature.' Mentink (2014) analyze in his research the concepts of circular economy of different authors and schools, summarizing key terms of circular economy that can be attributed to different schools, some of them are described into this article. Mentink underlines following findings:

- 'Permaculture (Mollison & Holmgren, 1978): Diversity, stability & resilience
 - Performance Economy (W. R. Stahel&Reday-Mulvey, 1981): Performance-based, functional service (from ownership to use); Product-service systems
 - Industrial Ecology (Frosch&Gallopoulos, 1989): Systems perspective, thinking in systems; Minimize energy use, consumption of scarce materials, and environmental impacts including waste generation; Industrial Symbiosis; Life cycle assessment and material flow analysis (LCA and MFA)

- Regenerative design (Lyle, 1996): Regeneration, regenerative process (process that renews its sources of energy and material)
- Biomimicry (Benyus, 1997): Nature as a model (imitation, learning); Nature as a measure (norms); Nature as a mentor (valuing)
- Cradle to Cradle (McDonough & Braungart, 2005): Waste equals food; Celebrate diversity; Use current solar income; Distinguish bio- and technocycle; Eco-effectiveness over eco-efficiency.'

The Ellen MacArthur Foundation gives several characteristics for circular economic system:

- Out of waste – human made products are developed to be reused
- Use of alternative energy renewable sources – the system must work on alternative sources of energy than alternative one. The authors give examples of agricultural productions system and the way food and farming system can capture more energy value from using products and manures
- System approach – the Foundation recommends that those who use circular economy to understand the whole system and how different components are inter linked each other
- Synergy or 'think in cascade' – the reason behind this characteristic is that stakeholders who use circular economy must extract more value from the same product

In *Design for a circular economy*, Flora Poppelaars (2014) summarizes diverse comprehensive characteristics of circular economic system during developing circular products, as follows: 'Design for Product Life Extension, Design for Maintenance, Design for Re-use, Design for Remanufacturing, Design for Recycling, Design for Disassembly and Design for Reliability'. The common components of the mentioned characteristics are sustainability and environmental protection.

2. Features of social entrepreneurship through circular economy in Republic of Moldova

New conceptual framework for social entrepreneurship: In order to add more value and design a new framework for social enterprises using circular economy principles, the author interviewed 50 social driven organizations, from which 86% are social enterprises. The participants are both women and men, in proportion of 67% to 33%. The targeted audience are managers of national and international organizations as well as international practitioners of social entrepreneurship. During the experiment, have been selected only social enterprises that are already sustainable and which have learnt during their economic activity. However, during this experiment are not selected companies who use circularity into their operational and commercial activity because existing entities have only economic mission/goal not social one. As mentioned in the literature review and proved by the results of the interviews, the social organizations are the entities that must first of all solve social and environmental problems, including poverty. Around 72% of the respondents from the first experiment have that they have a social mission and the gained money are re-invested into the social goals.

One of the first conclusion of this experiment is that social enterprises have to re-invest their profit into social mission, which the respondents did so far. Regarding the types of organizations that are considered to be social enterprises the opinions of the respondents are different, depending especially by their membership. However, 69% of respondents

consider that both not for profit and profit organizations can be social business driven organizations. 21% consider that not for profit organizations can better succeed with a social enterprise mission. The second conclusion is that a social enterprise must have a separate strategic design, in case of NGOs. Moreover, there are different factors to be considered when deciding on a legal structure or legal statuses for a social enterprise, like personal liability, governance, funding issues, profit distribution, etc.

The discussions with some social entrepreneurs from first experiment permitted to capture the idea that the organizations who practice social entrepreneurship have to be conceptualize in a self-financial way, which means that even they are non-profit organizations, such entities must survive independently from their commercial activities and in the same time have to have sufficient ethics to re-invest in social goal. In case of some respondents, they used their profit in order to re-invest in new working places for disadvantaged people, in terms of salaries and training. Periodically they employ disadvantaged people into their operational lines. After clarifying the streamline and how social enterprises, from those who provided insights, act the author conceptualized a theoretical business model used as guidelines for respondents. In order to do that, the author used Business Model Canvas of Osterwalder:

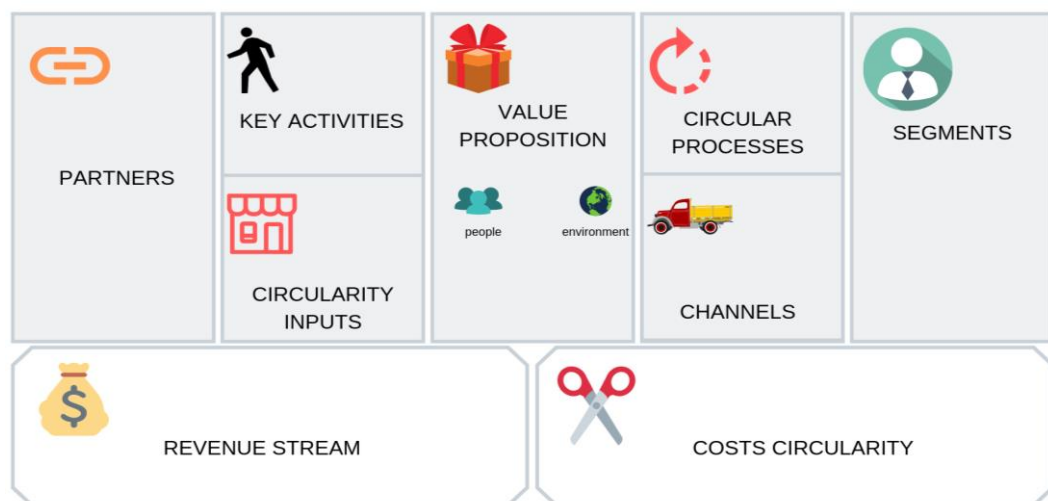


Figure 1. Experimental Business Model Canvas

Source: Elaborated by the author

The author slightly changed initial Business Model Canvas and adapted it to circular economic approach, especially the blocks of necessary resources to operate as a business and customer relations block was changed to processes.

In the same time, the value proposition block was changed to a value proposition block for social enterprises that focus on two main goals: social impact (related to social mission of a social business) and environmental impact (related to circular economy approach). That combination allows to adapt the business model of a social enterprise to a circular economy perspective. Besides the theoretical model, the author aimed to develop a model that closely fits the success factors that ensure the sustainability of the social

enterprises, the author identified those factors among the answers of the respondents. The most important success factors of a social business are:

- strong leadership
- motivation and commitment of management
- motivation and commitment of partners
- legal and regulatory environment
- business model of organization
- management expertise
- expertise of key people into the organization
- local community involvement
- financial sustainability
- ability to innovate
- rational use of resources

For each of the mentioned factors was attributed a scale of importance from 1 to 5, where 5 means strongest impact and 1 weakest impact of the factor. As a result of the discussions and interviews with the respondents have been identified following:

- Motivation and commitment of management represents the most important success factor of a social business (74% of respondents allocated 5 points for this factor and 26% 4 points). Within the Business Model Canvas, the motivation and commitment of managers are those factors that do allow to create the value proposition and the general strategy of the organization;

- The next success factor for which the most of the respondents gave 4 points is strong leadership (68% - 5 points, 26% - 4 points and 6% - 3 points). Strong leadership have two folds role within the business model. First it is important for realization and implementation of the organizational strategy that conduct to the value proposition achievement. Also strong leadership is important to develop strong partnership relations with different stakeholders, internal and external of the organization;

- Financial sustainability represents as well a high valued success factor through the respondents (69% - 5 points, 28% - 4 points and 3% - 3 points). The respondents indicated that financial sustainability is important factor for social organizations because own resources and strategies must be committed in a optimized and strategic way. Within Business Model Canvas, financial sustainability is part of revenue stream and cost circularity blocks. The cost circularity block refers to optimizing all costs related to economic activity of the organization and increase the revenues from commercial activities;

- Other important factors that are considered important for social enterprises are: expertise and qualification of management (68% - 5 points), ability to innovate (65% - 5 points) and business model (60% - 5 points).

- However, more than half of the respondents consider that the qualification of key people is not the most important success factor; nevertheless, it still remains an important factor (48% - 5 points, 29% - 4 points, so on).

- In the context of circular economy, we tried to find out the perception of the respondents in respect to rational use of resources (internal and external one). We found out that only half of the respondents strongly agree that efficiency in resources usage is a success

factor, which means that only limited number of social organizations experienced the implementation of circular economy principles.

- The principles of circular economy are somehow known between social organizations, 53% of respondents are familiar with circular economy concept and principles, but they do not consider circular economy between the most important success factors of a social enterprise. About half of the respondents experienced usage and re-usage of internal resources and even so, principles of circular economy are not considered so important for the sustainability of a social business. One of the explanations is that the principles are not well known between and much applied within businesses. The second reason is that existing models of social economy do not imply and stress on circular economy principles. The planning stage of the business model is an important step to be considered.

- In order to develop a model of social economy, consisting of circular economy principles, the author looked to find what are the factors that, first, determine a traditional for profit mission business to become a social mission business organization and second, in case of social enterprises, which are the most important factors that allow a social enterprise to be sustainable by using circular economy principles.

- In case of the first question, 81% of the respondents strongly agree that changes of strategic relevance of environment and social aspects are the success factor the traditional for profit business must imply in order to become a social business entity. 48% of the respondents consider that changes in value proposition are important variables that a traditional business must consider in order to become social organization. Other important success factors that must be implied by a traditional for profit business in order to become a social organization are: changes of financial model (39% of the respondents), changes of organizational capacities (35%), changes of internal processes (29%), changes of stakeholder's components (26%), etc. An important conclusion that can be inferred is that while developing the model of social enterprise, the first aspect to be considered and redesigned is the strategic direction of the organization in respect to social and environmental problems. In terms of business this is considered to be remodeling of the value proposition. Other factors considered very relevant to be rethought and redesigned are internal processes, competences, capacities, revenue and cost models etc. The best strategic tool that can be applied to change the perspectives of the traditional business is **balanced scorecard**. This tool must be applied within an existing or redesigned business model of social enterprises. The author considers that the best business model used by social enterprises and described by literature review is **Social Business Model Canvas**.

- Within the realized interviews the author founds out that a well-designed strategic plan with required processes, activities resources and capabilities is the most important factor which ensures the sustainability of social enterprises that implement circular economy principles (81% of the respondents). Another important factors considered by the respondents are stakeholders engagement (35%) and innovation (32%).

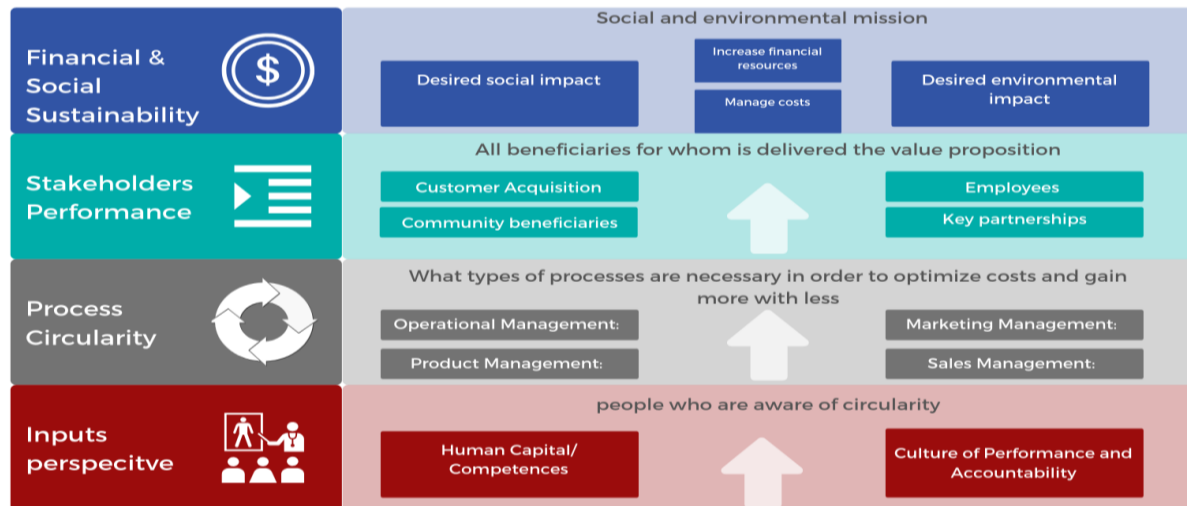


Figure 1. Social enterprise strategic framework

Source: Elaborated by the author

Why Balanced Scorecard is a relevant tool to be considered for strategic planning is because of its relevance to the business complexity. The importance of the Social Enterprise Balanced Scorecard (BSC) are in strategy creation in supporting an enterprise to keep its activities in the way that allows it meet its most important objectives. According to Social Enterprise London (2017), in order to create the BSC for social enterprises, managers have to address following questions that allow the organization reach its objectives:

- What are the financial goals for how the enterprise gains and uses resources?
- What are the organisation's key stakeholder groups? What does each stakeholder want the organisation to be? This part is linked to value proposition block from Business Model Canvas.
- What internal processes does the organisation need to improve and develop at in order to deliver what stakeholders want? These are usually activities that take place across teams or across the organisation. Also, the processes are build in a sustainable way in order to ensure the circularity.
- What skill sets, information technology, or access to networks/information/sectors does the organisation need in order to complete the internal processes?

The author of the article developed the strategic framework of a social enterprises using circular economy principles. This strategic map can be used by social entrepreneurs who are eager to become efficient and have a social and environmental impact.

To have a clear understanding on how to incorporate the strategy tool within the Business Model Canvas, the Social Business Model Canvas example have been developed by the author. This is an adapted example from a traditional enterprise.

This example shows that that the commercial products of the organization is made from circular inputs and resources. The value proposition is: Integrate disabled people into the production of refurbished furniture and sell it at lower cost for institutions that host homeless children.

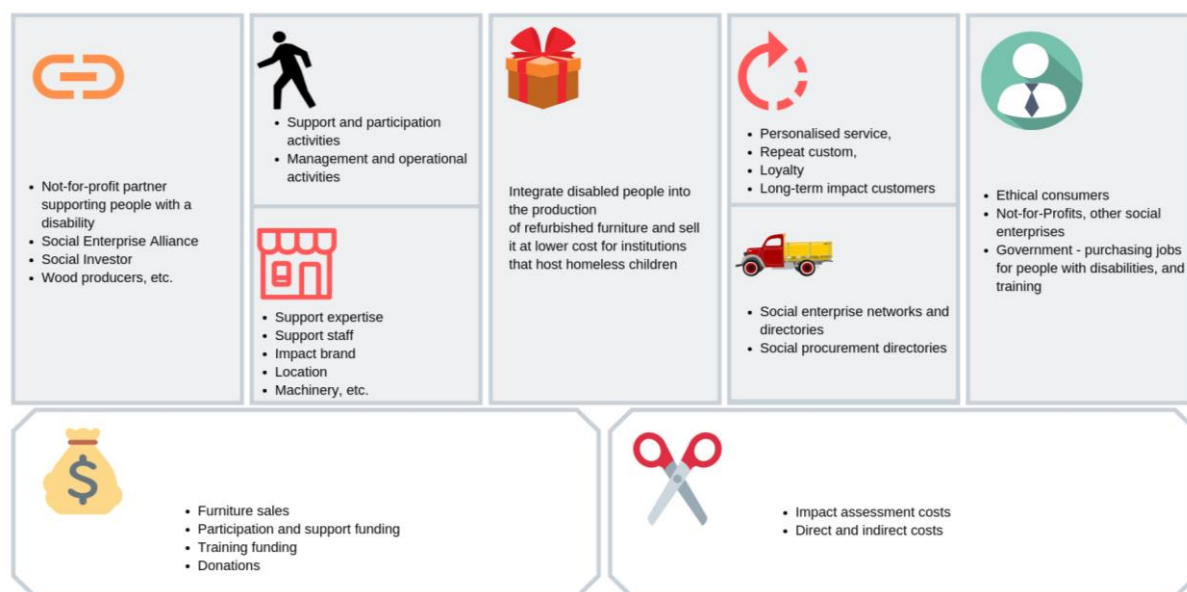


Figure 2. Example of Social Business Model Canvas using circularity

Source: Elaborated by the author

3. Recommendations

1. In this respect, social entrepreneurs, at the initial stage have to develop viable and sustainable business models that takes care not only on achieving social mission, but also the way social values are delivered. That is why, the author recommends that at the planning stage, social entrepreneurs must use a customized business model. Moreover, we recommend that the business model must clearly integrate circular economy principles and directives. That being said, business model must emphasize some of the following elements:

- Diminishing the amount of inputs/resources to create final products. This approach allows to minimize time and resources. For example, instead physical products must be used digital products. Operational procedures have to be designed in that way which would allow to make the products only when is needed and when an order has been made.
- Make sure the inputs necessary for production process are circular.
- Designing the product in order to have an extended life cycle.
- Resources recovery.

It is important to bear in mind that

2. Social enterprises must operate, having as a main scope, social mission. That means that entrepreneurs must exclude the rush after state incentives. It is understandable that entrepreneurs face a lot of challenges, especially incapacity to return investments, cover costs and gain profit to be re-invested in social copes. That is why, circularity can help such enterprises gain more effect with less results. That is why, into this formula, the national Government has an important role. The Government together with resort institutions have to make aware social entrepreneurs of social circular economy and its benefits. According to some studies (Robinson, 2016) the economic benefit of the circular economy is \$4.5 trillion by 2030.

3. Government together with resort institutions must encourage and support circular social enterprises. For example, social enterprises must be encouraged to use circularity by

offering them knowledge transfer possibilities as well as direct access to infrastructure and technology that will help them.

4. State has to create necessary national and international networking platform where it allows cooperation between social enterprises, research institutions, innovation enters, etc.

5. Government has to improve consumer's knowledge and awareness on social circular economy products by creating direct access between demand and offer.

6. Government has to create and improve procurement system in order to help social enterprises producing circular products.

7. Government have to focus on schools, universities, training centers and other stakeholders to develop an educational platform and program to ensure circular economy and social enterprise models are pushed at a young age in order to support foster practitioners for a full transition.

8. Social entrepreneurs and circular economy responsible actors have to collaborate each other in order to generate new concepts and ideas and create new value chains that would allow a sustainable business model that can ensure financial viability of the business and achievement of social and circular scopes.

9. In Moldova, because social entrepreneurship is at initial phase and existing companies can't ensure their financial sustainability from the commercial niche, it is premature to speak about circular social enterprise. However, it is imperious to create a national program that would develop a social circular enterprises/enterprises, by offering financial and expertise support. That would be a piloted project that have to be promoted among the communities and make people aware about it.

References

1. Poppellars, F. (2014): Designing for a circular economy. [s.l].
2. Bourguignon, D. (2016): Closing the loop. New circular economy package. *European Parliamentary Research Service*, PE 573.899. 9 p.
3. Culcasi, F. (2014): The circular economy and opportunities for small business. In: *The Practitioner Hub for Inclusive Business*.
4. Mentink, B (2014): Circular business model innovation. In: *Delft University of Technology & Leiden University*.
5. Kok, L., Worpel, G., & Ten Wolde, A. (2013): Unleashing the Power of the Circular Economy. *Report by IMSA Amsterdam for Circle Economy*.
6. Lewandowski, M. (2015): Designing the Business model of Circular Economy. In: *Sustainability Journal*, 8, 2.
7. Linder, M.; Williander, M. (2015): Circular Business Model Innovation: Inherent Uncertainties. In: *Business Strategy Environment Journal*.
8. Li, Chuang. (2010): Growth Mode of Circular Economy. Paper presented at *International Conference on Challenges in Environmental Science and Computer Engineering*, Jiaozuo.