Social Enterprises in Brazil and Poland: Comparative Analysis

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Abstract*— The main objective of this study is to verify how social enterprises through recycling cooperatives are developing reverse logistics under the theoretical lenses of economic, social and environmental value creation in Brazil and Poland. For the accomplishment of this research qualitative approach was applied, and the method used was multiple case studies, where more than one object of study was considered, with an exploratory and descriptive nature. During the interviews with the managers of the social enterprises in Brazil and in Poland semi-structured script was used. In order to verify the economic, social and environmental value creation the triple layer business model of Osterwalder and Pigneur [1] and Joyce and Paquin [2] was applied. Among the results it can be highlighted the creation of value beyond financial value, social inclusion through the generation of work and income, cleanliness of the municipality and appropriated disposal of recyclable materials, ecological value through reductions of environmental impact and ecological regenerative positive value in both countries, Brazil and Poland.

***Keywords*—** *business model, reverse logistics, social enterprises, productive systems, recycling cooperatives*

1. Introduction

Recycling cooperatives have played an important role in the post-consumer reverse logistic chain of many products, despite the legislation demanding manufacturers to be responsible for the return of their manufactured goods by the end of their life cycle, several production chains have not been able to deploy their reverse logistics system yet. As per the recycling cooperatives initiatives, it allows them to generate revenue, develop its own productive chain and transform itself into social enterprises, in which its main objective is to deliver social value besides profit maximization [3]. A cooperative with social purposes can be considered a social enterprise if its main objective is to improve the income of the poorest workers, to encourage self-sufficiency, and to promote economic development, and their owners must belong to low- or no-income population [4] that's the case of the recycling cooperatives in Brazil.

The main objective of this study is to verify how social enterprises through recycling cooperatives are developing reverse logistics under the theoretical lenses of economic, social and environmental value creation in Brazil and Poland applying the Triple Layer Business Model Canvas (TLBMC) of ref. [1] and [2].

2. Background

2.1 Reverse Logistics and Recycling Cooperatives

Since Agenda 21 (UN) concerns about reuse, remanufacturing and recycling were raised [5]. Reverse logistics has gained importance in the business field due to environmental concerns, legislation, corporate social responsibility and sustainability [6].

Rogers and Tibben Lembke [7] defined reverse logistics as: "planning, implementation and control process of finished products and their information, from the point of consumption to the point of origin, seeking to recover their value or appropriate final destination". Initially, the term environment was added to reverse logistics, by Carter and Ellram [8]. Recycling of products and materials is one of the levels of impact within a supply chain [9]. According to Leite [10], reverse logistics is the area that deals with the flow of post-consumer and after-sales goods from their point of consumption back to their place of origin to return them to the productive cycle through reverse channels. After-sales reverse logistics goods involve defective products, such as goods still under warranty. The reverse logistics of post-consumer goods deals with

the return of products and packaging to their manufacturer at the end of products life cycle. The post-consumer reverse distribution channels are constituted by the reverse flow of products and materials from their disposal, at the end of their life cycle, returning to the productive cycle through three reverse channels: reuse, remanufacturing and recycling [10]. Reverse logistics deals with the movement between the final destination of the product until its return to the business cycle, or appropriate final disposal [11]. Both small and large cities in Brazil, the process of collecting recyclable material is characterized by the formation of collectors' cooperatives in which workers act in a cooperative way in an employment relationship with the cooperatives [12]. The recyclable waste collectors are workers who, for a lack of better work options, would be otherwise unemployed. They may dedicate many years, even from a young age during childhood, working either full-time or with other jobs as a way of completing their own or their family's income IPEA [13]. As per Brazilian Law nº 12.305 from 2010, reverse logistics enables economic and social development through its activities [14]. For the poorest populations, selective collection represents an important source of income, contributing significantly to the livelihoods of families. In Brazil there were more than 380 thousand recyclable waste collectors in 2010, which had an average pay above the minimum monthly wage [15]. The ownership of the Brazilian cooperatives belongs to its members, and is managed by its owners, and the profit generated for the benefit of the cooperative, in order to economically empower the poor (lower income groups), encourage self-sufficiency, and promote economic development [16]. According to Yunus and Weber [4] it is possible for a cooperative to become a social enterprise, since the owners of the cooperative are low-income people, because in that case whatever profit the cooperative generates would be addressed to the poor and would help raise them out of poverty, thus becoming a socially beneficial economic activity.

2.2 Social Enterprises

The concept of Social enterprise arose in Europe for the first time in 1990 along with the third sector, followed by the Italian initiative linked to the cooperative movement [3]. In 2002, the British government also defined social enterprise as: "a business primarily with social purposes, where profits must be reinvested according to the purpose of the business or community, rather than directed at maximizing the profit of shareholders or owners of business" [17]. For ref. [16], the social enterprise seeks to solve social, economic and environmental problems. In this type of business all economic results are generated for the benefit of other parties involved in the business, such as employees and communities internal and external to the business.

The main characteristics of social enterprises are [3]: a continuous activity producing goods and / or selling services; high degree of autonomy; significant level of economic risk; minimum paid work; an explicit goal to benefit the community; an initiative launched by a group of citizens; decision-making power is not based on the capital of the property; participatory nature, involving several parties affected by the activity; limited profit distribution.

Social enterprises have an economic, social or environmental mission aligned with community's benefits and should reinvest its profits to guarantee the fulfilment of its mission [18]. Social enterprises pursue social mission, being profitable to deliver the social mission [19]. For Comini et al. [20] social enterprise are similar to traditional businesses in aspects such as products, services, customers, markets, costs and revenues. In social enterprises, the main objective is to expand and reach more people in need and profits must be reinvested in the company to finance its expansion [21]. Social enterprises present three dimensions: entrepreneurial (continuous economic activity), social (social purpose) and governance (the interests of stakeholders) [22]. In Poland, the objective of Social Enterprises are professional integration of people at risk of social exclusion (the employment of at least 50% of the people of groups at risk of social exclusion, or 30% of people with moderate or severe disabilities) or provision of social services of general interest; at the same time, fulfil pro-employment objectives (employment of at least 20% of the people of certain groups at risk of social exclusion); do not distribute profits or dividends among shareholders, instead, this money is used to strengthen the company's social potential; management follows democratic principles in consultation with employees and other stakeholders; the remuneration of administrative staff is limited [23].

2.3 Triple Layered Business Model Canvas

Seeking to explore the innovation of the business model oriented towards sustainability, Joyce; Paquin [2] proposes the Triple Layered Business Model Canvas (TLBMC) extending the original economic business model canvas (BMC) of Osterwalder and Pigneur [1] to social and environmental layers, considering that the environmental layer is based on the life cycle perspective of the product and service, and the social layer is based on the perspective of the stakeholders, the perspective of the parties involved in the business. The three layers of the business model make it more understandable how an organization creates different types of values: economic, environmental, and social, as well as allowing organizations to engage with different types of sustainability-driven innovations, directly integrating environmental and social impacts to the canvas economic business model. The TLBMC follows the triple-bottom line approach [1][2][24]. TLBMC allows a triple-bottom line to be applied to each of the Canvas layers, offering interaction, ways to integrate relationships and impacts as per figure 1 [2].

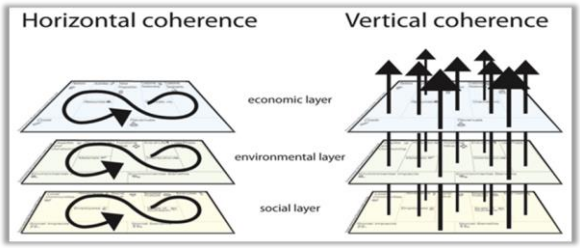

Figure 1: Horizontal and Vertical Coherence.

The economic layer of the business model is presented in figure 2, according to the nine blocks of the BMC [1], along with its components of each block.

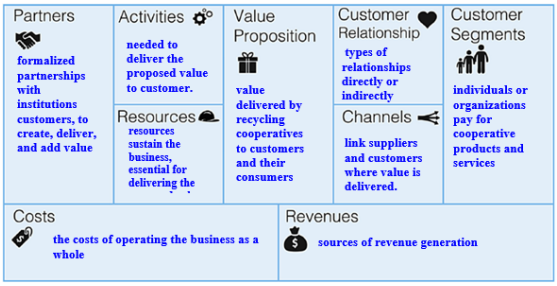

Figure 2: Economic Business Model

The environmental layer is presented as per figure 3 [2]. However, the main objective of TLBMC's environmental layer is to evaluate how the organization creates more environmental benefits, allowing a better understanding of the environmental impacts within the organization's business model, considering the 9 blocks: functional value, materials, distribution, phase of use, end of life, environmental impacts and environmental benefits along with its main components.

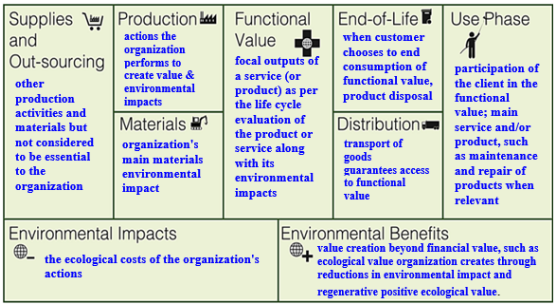

Figure 3: Environmental Business Model

According to figure 4 [2]., the main focus of TLBMC's social layer is to extend the BMC to include stakeholders to simultaneously capture influences between the organization and stakeholders, capturing the key social impacts from those relationships, enabling a better understanding of where the social impacts of an organization are, and the business model enhancing its value creation potential, levelling the stakeholder approach to the nine components of the organization, thus forming the third layer of TLBMC. Business model for social enterprises meets the specifications of social enterprises guided by the company's mission along with its social purposes [25]. According to Stanford University [26] business model, the value proposition block has to include how an enterprise measures its social impact.

Figure 4: Social Business Model

3 Method

The qualitative approach was used in this research, and the method employed was the multiple case study, where more than one object of

study was considered, with an exploratory and descriptive nature. For Yin [27], a case study is "an empirical investigation that investigates a contemporary phenomenon within its real-life context, and when the boundaries between phenomenon and context are not clearly defined. The case study is a research strategy that focuses on understanding the dynamics present within individual configurations, and may still involve a single, or multiple cases [28]. For Marshall; Rossman [29] the purpose of the research is exploratory when investigating a poorly understood phenomenon; identify or discover important variables; or generate hypotheses for future research; and concomitantly for the descriptive purpose of documenting the phenomenon of interest.

For this case study the recycling cooperatives were considered as object of study and the qualitative evidences were used. The theoretical lenses of economic, social and environmental value creation, the Triple Layered Business Model Canvas (TLBMC) from Osterwalder and Pigneur [1] and Joyce and Paquin [2] were used for the analysis of this study, to verify the development of reverse logistics through social enterprises.

For field research sources of internal evidences were interviews using a script with open questions with the directors responsible for recycling cooperatives in Brazil and the social enterprises in Poland along with direct observation techniques at the site.

Interviews were carried out in 7 cooperatives in different municipalities within the state of São Paulo, totalling 13 individuals interviewed, with the following positions within the cooperative: president, vice president, founder, financial administrator, treasurer, coordinator and secretary. In Brazilian cooperatives, the amounts vary between 35 and 126 workers. This research was also conducted in Poland. The Polish social enterprise interviewed had 5 workers and the interview was conducted with the vice-president, in the municipality of Częstochowa, as detailed in table 1, thus totalling 8 interviews.

Table 1: Interviewees information

Interview	*Interviewees*	*Gender*	*Job Position*	*City*	*Nº Workers*	*Year of Start*	*Initiative*
1. Cooperative A	E1-1	Male	President	Sorocaba	58	2001	Uniso
	E1-2	Male	Founder				Catholic Church
2. Cooperative B	E2-1	Male	Financial Administrator	Itu	46	2001	Catholic Church
3. Cooperative C	E3-1	Female	Founder and responsible for the electronics department	Cotia	45	2000	Neighbourhood Association
	E3-2	Female	President Founder				
	E3-3	Male	Treasurer				
4. Cooperative D	E4-1	Male	President Founder	Barueri	53	2002	Collectors Association
	E4-2	Female	Treasurer Founder				
	E4-3	Female	Secretary				
5. Cooperative E	E5-1	Male	Vice-president	São Paulo	35	2005	Catholic Church
	E5-2	Female	Treasurer				
6. Cooperative F	E6-1	Female	President Founder	São Paulo	126	2003	Civil Society
7. Cooperative G	E7-1	Male	Coordinator	São Paulo	56	2002	Catholic Church
8. Social Enterprise H	E8-1	Female	Vice-president	Częstochowa	5	2017	NGO Environmental Education and People with Disabilities

4 Results and Analysis

According to table 2 it is possible to highlight the main differences between the Polish social enterprise and the recycling cooperatives in Brazilian.

Table 2: Comparison between the cooperatives in Brazil and the social enterprise in Poland

	Brazil	***Poland***
Customer Segment	Recycling Industry and Intermediaries	Only the plastic industry
End Users	Cooperative members	Workers and Society
Usage Phase	All types of recyclable material	Recyclable granulated plastic
End of Life	Between 7 and 78 tons of waste sent to appropriate landfills	There is no waste generated;
Key Resources	All types of recyclable material	Plastic lids only

Channels	Local government unit and own trucks with the cooperative logo; recycling cooperatives;	Schools and own Van
Governance	Cooperative system; Participatory management for decision making; Participation shares	Social enterprise; The management team responsible for decision-making is the same as the NGO that provides assistance to people with disabilities; Employed workers; There is no charge of participation shares
Materials	Recyclable trash	Recyclable plastic lids only
Supplies and Outsourcing	Collection with local government unit trucks as per agreement established with the council;	Donated lids (material) only and exclusively by schools
Distribution	Volume sold and despatched between 35 and 350 tons per month	Volume sold and despatched of 0.7 tons per month
Costs	Between 30% and 40%	50%
Profit Share	Shared amount among members 60% - 100% of total revenue in the form of monthly remuneration/ wages	There is no profit shared; The profit generated is transferred to the NGO that assists people with disabilities
Social Impacts	Working day of 8 hours (full-time job)	Working day of 4hours (part-time job)
Environmental Benefits	Ecological regenerative value;	Ecological regenerative value; Promoting environmental education at schools
Legislation	There is no specific legislation for social enterprises; There is specific legislation for cooperatives;	Specific legal form for social enterprises; Law of the Social Cooperatives of April 27, 2006; There is a proposal for a statute of social enterprises; Employment of at least 50% of people from groups at risk of social exclusion, or 30% of persons with moderate or severe disability
Number of employees	Minimum: 35 members; Maximum: there is no limit;	Average of 5 workers, 3 being unemployed for a long period and 2 homeless from social reintegration centre; Minimum of 3 employees in the first year and 5 employees in the second year; Maximum of 15 employees;
Employees Monthly Wages	Calculated based on the profit share and the worked hours of each member; between R$ 290,00 and R$ 1,700,00 per month	Fixed monthly salary above the value of Polish minimum wage zł 1,100.00

Considering the cooperatives of recyclable materials studied in Brazil and the social enterprise studied in Poland, all can be categorized as social enterprises, thus corroborating with the definition of the Defourny and Nyssens [3]: organizations are involved in continuous economic activities of production and commercialization of goods and services, that's the case for the commercialized recyclable materials; pursue an explicit and primary social goal that is the generation of work and income for the population at risk of social

vulnerability; present limits in terms of distribution of profits prioritizing the social objective. Brazilian recycling cooperatives, the profit is distributed after all costs, expenses and investments have been made to ensure the continuity of operations. Polish social enterprise the profit is not distributed, since it is used to accomplish its social objective. Both, Brazilian recycling cooperatives and Polish social enterprise are independent by presenting organizational autonomy of the state and from any other traditional for-profit organizations; Brazilian recycling cooperatives have an inclusive governance characterized by participatory activities and democratic decision-making processes. Polish social enterprise the managers responsible for decision making are the same as those of the NGO that assists people with disabilities. However, it can be stated that the decision-making power is not based on the capital of the property. Brazilian recyclable cooperatives and the Polish social enterprise exist to create a positive impact on society or the environment, contributing to smart, sustainable and inclusive growth, being catalyst for social innovation, with social and economic transformation [30]. As per the data collected in this research the theory corroborates that the definitions are different in that the Polish social enterprises have a current legislation that determines that social cooperatives are categorized as social enterprises having clearly defined social objectives. While in Brazil, there is no specific legislation for social enterprises. There is only specific legislation for cooperatives, in which cooperatives of recyclable materials are framed.

5 Conclusion

The objective of this research was reached, it could be verified how social enterprises are developing reverse logistics under the theoretical lenses of economic, social and environmental value creation in Brazil and Poland. A cooperative can only be considered a social enterprise if its purpose, its mission is to generate social and/or environmental benefits. The social enterprise must be a business with merely social objectives, which means eradicate a social problem and the profits must be reinvested according to the social purpose of the company or the community, rather than being distributed among shareholders or business owners (DTI, 2002). Among the results it can be highlighted the creation of value beyond financial value, social inclusion through the generation of work and income, cleanliness of the municipality and appropriated disposal of recyclable materials, ecological value through reductions of environmental impact and ecological regenerative positive value in both countries, Brazil and Poland. It can be concluded that social enterprises in Brazil and Poland are important reverse distribution channels adding economic, social and environmental value to the reverse logistics chain. The suggestion for future studies would be to carry out research related to the feasibility of public policies that allow the emergence and development of social enterprises in Brazil and in other countries.

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