

Categorizing Recycling Cooperatives as a Form of Social Innovation and Social Development

Marcelo Okano, Graziela Bizin Panza, Marcelo Eloy Fernandes

Abstract

The process of social innovation produces the effect of reconstructing social relations systems, as well as the structure of rules and resources that reproduce such systems. The objective of this research is to verify how recycling cooperatives are adapting to social innovation and social business model. The multiple case study was chosen as research strategy, the approach will be qualitative and will be exploratory and descriptive. The epistemological positioning is positivist and the interview was the main source of data collection. Although social innovation is recent, recycling cooperatives have demonstrated that they have all of their characteristics and also make it clear that they are going through a transition from a business model of a bona fide organization to a competitive company with the characteristics of a social.

Keywords: Recycling cooperative; social innovation; social business; business model.

1. Introduction

Companies are changing their form of organization and administration, some as a result of the new business models that are appearing, others due to the evolution of technologies and business networks and more recent because of the new values that customers are accepting as social, sustainable, and economic.

These processes are revolutionizing social relations, as well as the structure of rules and resources that reproduce such systems, characterizing itself as social innovation.

Among these transformations we can mention social businesses that are oriented to solve social, economic and environmental problems that have been plaguing humankind for a long time, such as lack of housing, diseases, hunger and pollution [1] and income is reverted to the company itself.

The solid waste generated after the consumption of goods and services by the population in general is one of the most serious problems for the local public power, who have to dispose properly and represent a huge waste of natural resources. According to De Jesus and Barbieri [2], the recovery of this waste in the forms of energy reuse, recycling and revaluation increases the useful life of landfills and reduces the cost of collecting household waste. At the same time, it contributes to increase the sustainability of the Planet by reducing the need for extracting natural resources to meet the needs of production of goods and services demanded by society.

Recycling cooperatives are examples of these organizations that are transforming or adapting themselves to this new scenario, being a mixed of NGOs and company with social and lucrative ends, fight in the market to be able to survive the several difficulties.

The objective of this research is to verify how the recycling cooperatives are adapting to social innovation and the social business model.

2. Theoretical framework

In this chapter we will cover the main subjects for the theoretical framework of this research work.

2.1. Social Innovation

Social innovations constitute a component of social change not limited to the action of governments, through the creation of products, services and models, aiming at reaching social needs [3], see Figure 1.

Innovation	+	Social Aspects	=	Social Innovation
Introduction of novelty or improvement in the productive or social environment that results in new products, processes or services.		Social needs or problems		
		Social value		
		Balance between creation and capture of public value		
Novelty, performance improvement, magnitude, implementation				

Figure 1 - Social Innovation [3]

The process of social innovation produces the effect of reconstructing social relations systems, as well as the structure of rules and resources that reproduce such systems. Therefore, according to the author, it is only about social innovation "when changes alter processes and social relations, changing pre-existing power structures" [4].

Already Cloutier [5] considers social innovation as a new response, defined in action and with lasting effect, to a social situation considered unsatisfactory, which seeks the well-being of individuals and/or communities.

For Bignetti [6], it is the result of knowledge applied to social needs through the participation and cooperation of all stakeholders, creating new and lasting solutions for social groups, communities or society in general.

For Castor et al. [7] include "search, discovery, experimentation, development, imitation, and adoption of" alternative social arrangements "to produce something. And it defines alternative social arrangements as other forms of organization of the collective effort of production, differing from traditional forms of production. Therefore, forms other than those usually adopted by strictly economic, constitution-oriented firms focus on profit and competitiveness. It aims to create innovative projects for economic and social purposes.

Murray et al. [8] define as new ideas (products, services and models) that simultaneously satisfy social needs and create new social relations or collaborations. In other words, they are innovations that, at the same time, are good for society and increase the capacity of society to act.

Ten recent social innovations according to Phills et al. [9]:

1. Charter Schools: publicly funded primary or secondary schools that operate free of some of the regulations that normally apply to public schools. Administrators, teachers and parents thus have the opportunity to develop innovative teaching methods.

2. **Community-Centered Planning:** A process that draws on the knowledge and resources of local residents to help create solutions tailored to local needs. Allowing people to create and implement their own plans for the community helps lead to sustainable development.

3. **Emissions Trading:** A pollution control program that uses economic incentives to reduce emissions. A limit is set for the total quantity of a given pollutant that can be emitted, and the pollutant emissions are issued to all participating companies. Those with higher emissions can buy credits from companies that have reduced their emissions. Over time, the limit is reduced.

4. **Fair Trade:** an organized movement that establishes high commercial standards for coffee, chocolate, sugar and other products. By certifying traders who pay producers a living wage and meet other social and environmental standards, the fair-trade movement improves farmers' lives and promotes environmental sustainability.

5. **Habitat Conservation Plans:** an agreement that creates economic incentives for wildlife conservation, allowing habitat development of an endangered species if the owner protects endangered species elsewhere. The plans are managed by the US Fish and Wildlife Service and the Environmental Protection Agency.

6. **Individual Development Accounts:** Equivalent savings accounts that poor workers use to save for a college education, to buy a home, to set up a business, and other productive activities. For every dollar a person saves, philanthropic, government, or corporate sponsors donate an average of \$ 2 for the account.

7. **International Labor Standards:** legally binding norms that protect the rights of workers to freedom, equity, security and human dignity. The standards have been developed by the International Labor Organization, governments, officials and workers and are implemented by member countries.

8. **Microfinance:** financial institutions that provide services such as banking services, loans and insurance to the poor and disadvantaged who do not have access to these services. By saving money, getting loans and having insurance, the poor can improve their lives and even get out of poverty.

9. **Socially Responsible Investment:** an investment strategy that attempts to maximize financial and social returns. Investors often favor companies and other organizations whose practices support environmental sustainability, human rights, and consumer protection.

10. **Supported employment:** programs that help disabled or otherwise disadvantaged workers find and retain good job opportunities.

2.2. Social Business

Social affairs are oriented to solve social, economic and environmental problems that have been plaguing humankind for a long time, such as lack of housing, diseases, hunger and pollution [1]. For social businesses, clients are poor people [10], which differs from social enterprises, which do not necessarily have the poor as clients.

The investor has no capital gain per se, only the return, seeks to help other people without making a profit until the business is self-sustaining, which means generating enough revenue to cover their own costs. Profits are reinvested in the company itself. Consequently, social business should be described as a lossless and dividend-free enterprise, completely dedicated to the social objective [11].

According to Hoque [12] the characteristics of a social business are:

- it is not primarily a charitable organization, but a competitive enterprise;
- needs to recover total costs to achieve high sustainability;
- the owner never receives profits / dividends; however, he has the right to recover his invested amount only;
- Profit can be reinvested to expand the business and
- seeks to maximize social benefits rather than profit. He tries to achieve social goals rather than personal gain.

For Yunus and Weber [11] to establish and manage a social business enterprise, it is necessary to meet certain standards and norms that will guide it in its journey to achieve the desired social objectives:

- The commercial objective is to overcome poverty, or one or more problems that threaten people and society - not to maximize profit;
- The company will achieve financial and economic sustainability;
- Investors receive only the value of the investment. No dividend is given beyond the return on the original investment;
- When there is a return on investment, profit remains with the company for expansion and improvement;
- The company will be environmentally conscious;
- The labor force obtains market wages with better than standard working conditions.

There are three fundamental perspectives on social business. The North American, the European and the perspective of the developing countries [13]:

a) North American perspective

The American perspective defines social enterprises mainly as private organizations that apply the logic of the market for the resolution of social problems and includes any entrepreneurial action of market that has social impact with its commercial action, being able to assume diverse legal forms, like limited companies, organizations without for-profit, corporations, and corporations [13].

According to Comini et al. [13], since the seminal article by Prahalad and Hart [14] on the relevance of the Base of the Pyramid (BoP), much has been written on the subject, which indicates that a market still little explored are the "billion aspirants to poor accessing the market. " The central idea of this approach is to develop products and services accessible to this public, without, however, departing from the generation of profit and the consequent distribution of dividends to shareholders. The discussion, which began on the potential of this market [14][15], has evolved to incorporate ways of developing business models that can provide access to products and services for BOP, while also helping to reduce the high deficit world.

Authors such as Prahalad and Hart [14] pioneered the important role that multinationals should play in mitigating socio-environmental problems. The authors pointed out that corporate social responsibility actions would be limited, and in some cases ineffective, to contribute to improving the living conditions of marginalized people. The main contribution of multinational corporations would be to offer innovative

products and services that would meet a demand quite different from that traditionally large corporations had focused on.

Buchko [16] considers that the American approach is divided into two schools: the first is called "social innovation" and is related to the concept of the "Ashoka" organization, the second is labeled "earned income" and refers to business activities in support of its objectives.

b) European perspective

The European perspective, born of the tradition of social economy (associations and cooperatives), emphasizes the role of civil society organizations with public functions [13]. According to the European concept, the pioneering model of social enterprise is "social cooperative" that appeared in Italy, and then spread to other European countries. Subsequently, the other legal forms of social enterprises were legislated in Europe [17].

The prevailing academic approach in Europe emphasizes the importance of beneficiary participation in decision making as well as the reinvestment of profit in the organization itself to enhance growth and social impact. This view is premised on the existence of a tension between obtaining financial and social results. Thus, the distribution of profit would have as a driver the search for the maximization of financial return to the shareholders / investors, which would be conflicting with the search for the maximization of social impact [13].

c) Developing country perspective

Unlike Europe, where the term social business prevails, and the US, where the term "social business" is generally applied to strategies connected to BOP, in emerging countries the term including business appears more strongly. It emphasizes market initiatives aimed at reducing poverty and transforming social conditions for marginalized or excluded individuals [13].

From the perspective of developing countries, for Comini et al. [13], the usual term is inclusive business. It considers that the Latin American vision like the Asian vision of Yunus [1] has common elements and analyzes them together. They affirm that both views point out that social or inclusive businesses are strongly concerned about poverty reduction and initiatives of this type should have a positive, effective, and above all long-term social impact.

The main reference for understanding the vision of social affairs in Latin America is the texts of researchers from the SEKN (Social Enterprise Knowledge Network) network. Formed in 2001 by leading business schools in Latin America, SEKN seeks to advance the frontiers of knowledge and the practice of social entrepreneurship through collaborative research, shared learning and case-study [13].

In this case, according to Comini et al. [13], the social benefit stems from the fact that the dividends and financial growth produced will benefit the poor and reduce their poverty.

2.3. Business Model

a) Conventional business model

Yunus et al. [18] suggest that a business model has three components, as shown in Figure 2:

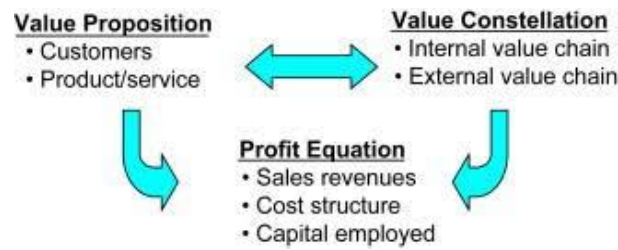


Figure 2. The three components of a conventional business model [18].

A value proposition is the answer to the question, "Who are our customers and what do we offer them that they value?". A constellation of value is the answer to the question, "How do we offer this offer to our customers?" This involves not only the company's value chain but also its value network with its suppliers and partners. These two components need to fit together as pieces of a puzzle to generate a positive profit equation, which is the financial translation of the other two, and includes how the value is captured from the proceeds generated by the value proposition and how the costs are structured, and the capital employed in the value constellation.

b) Social Business Model

To adapt the model to the social business, Yunus et al. [18] propose the following changes:

The first change is the specification of stakeholders and the provision that the value proposition and constellation are not customer-only but are expanded to encompass all stakeholders. The second is the definition of desired social benefits through a comprehensive ecosystem view, resulting in a social profit equation. The third is that the equation of economic profit aims only at the full recovery of cost and capital, not the maximization of financial profit. These changes are illustrated in Figure 3.

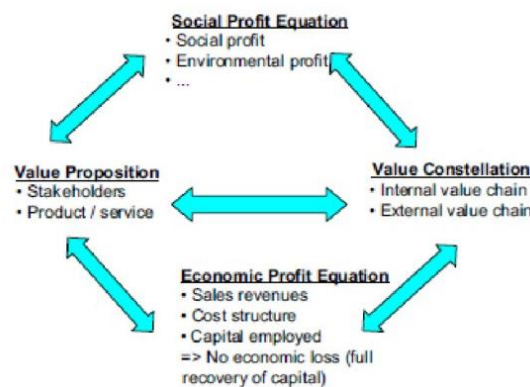


Figure 3. The four components of a social business model [18].

2.4. Cooperatives of Recyclable Materials

In both large and small cities, the process of collecting recyclable material is characterized by the formation of collectors' cooperatives, in which the workers act in a cooperative way with an employment relationship with the cooperatives; there is also the presence of the independent (autonomous) collectors who collect recyclable material on their own, reselling it to the recycling companies, and these collectors do not have any link with any type of institution, and their performance, in most cases, happens under

precarious working conditions, individually, in an autonomous and dispersed manner on the streets and in dumps [19].

The social meaning attributed, historically to garbage, as something to be kept apart, hampers a cultural change that involves the population in a joint action that reverts to the current discard logic [20].

It is in this scenario that the collectors appear as social actors, since, given their exclusion conditions, they accept the contact with the trash as a way of survival and, later, other actors are inserted in this scenario when they envision in the activity a source of complementary income [20].

The figures of recyclable waste pickers are workers who are unemployed, or who, for lack of better work options, often work full-time from childhood with their families, or there are still those who intercalate with other works, eventually as a form of income supplementation [21].

For the poorest populations, selective collection represents an important source of income, contributing significantly to the livelihoods of the families.

In Brazil, the first associations and cooperatives of garbage collectors appeared in the 1990s, in parallel with the emergence of the National Movement of Collectors of Recyclable Materials (MNCR) in 1999. Then, in 2000, the occupation was identified by the Brazilian Classification of Occupation (CBO) due to the demonstrations and struggles of the collectors, and to the national mobilization for better living and working conditions [22]. It is observed that the number of collectors of recyclable materials is constantly increasing, year after year. It is estimated that in Brazil there were more than 380 thousand waste pickers in 2010, which had average pay above the minimum wage [23].

The ownership of the cooperative belongs to its members, and is managed by its owners, and the profit generated for them, with the objective of economically empowering the poor, encouraging self-sufficiency, and promoting economic development [1].

The cooperative paradigm, in contrast to the competitive paradigm, emphasizes the collaboration that allows small entrepreneurs to access new resources that they could not develop or buy on their own, the main advantage of collaborative agreements being the grouping of leveraged resources by the partners that leads to the development of a broader and networked portfolio [18].

However, for Yunus and Weber [11] it is possible that a cooperative becomes a social enterprise, as long as the owners of the cooperative are low-income people, because in that case whatever profit generated by the cooperative would go to the poor and help them out of poverty, thus becoming a socially beneficial economic activity.

3. Materials and Methods

With the objective of discovering how recycling cooperatives are becoming social businesses, a multiple case study was chosen as research strategy, the approach was qualitative and exploratory and descriptive. The epistemological positioning is positivist [24] and the interview will be the main source of data collection.

For Yin [25], 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." And with respect to the question of research, the case study seeks to answer "how"

and "why" a phenomenon happens; does not require control over behavioral events; and still has a focus on contemporary events [25].

On the other hand, according to Eisenhardt [26] case studies can be used to provide a description, test a theory or generate a new theory and is especially appropriate in new areas of topics as social enterprises because the developed theory is emerging in the sense of that it is situated and developed by recognizing patterns of relationships within and through case studies [26][27].

Field research, in the form of multiple case studies, will be used because it creates a more robust theory because the propositions are more deeply rooted in varied empirical evidence; the constructs and relationships are more precisely delineated because it is easier to determine precise definitions and appropriate levels of construction abstraction of multiple cases; and allows the researcher to determine whether an emergent discovery is idiosyncratic to a single case or, more broadly replicated in several cases [27].

The qualitative approach emphasizes the perspective of the individual being studied, so that it is possible to obtain information from these perspectives, to interpret the environment in which the problem is or the research environment. Also, in relation to the qualitative approach, it is possible to affirm that [28]: "the subjective reality of the individuals involved in the research is considered relevant and contributes to the development of the research. And this subjective reality can interfere, in the development of research, in the construction of an objective reality. "

For Marshall and Rossman [29], the character of the research will be exploratory and descriptive when investigating phenomena poorly understood; identify or discover important variables; or generate hypotheses for future research; and concomitantly with the descriptive purpose of documenting the phenomenon of interest.

3.1. Selection of cases

The cases will be selected respecting the assumptions raised in the conceptual framework:

Replication - Replicate previous cases or extend emerging theory, or they can be chosen to fill theoretical categories and provide examples [26].

Theoretical Sampling - Since the objective of the research is to develop the theory, not to test, and so the theoretical sampling (not random or stratified) is appropriate. Theoretical sampling simply means that cases are selected because they are particularly suited to illuminate and broaden the relationships and logic between constructs [26][27].

Intensity sampling - defined as "information-rich cases that manifest the phenomenon of interest intensely (but not extremely)" [30].

Number of cases - Although there is no "ideal number" for the cases, from four to ten cases it is suggested to work well, stopping when the theoretical saturation has been reached, that is, the point where each additional case adds an incremental learning minimal [26].

We selected three recycling cooperatives located in the cities of São Paulo, Barueri and Cotia, in the state of São Paulo. These will be called alpha, beta and gamma, whose characteristics are described in Table 01.

Table 1. Characteristics of cooperatives

Interview	Interviewee	Gender	Position / Function	County	No. Workers	Beginning of Activities	Initiative
Cooperative Gamma	E1-1	Female	Founder and responsible for the electronics sector	Cotia	45	2000	Association of Neighborhood Residents
	E1-2	Female	Founding President				
	E1-3	Male	Treasurer				
Cooperative Beta	E2-1	Male	President Founder	Barueri	53	2002	Association of Waste Pickers
	E2-2	Female	Treasurer Founder				
	E2-3	Female	Secretary				
Cooperative Alfa	E3-1	Male	Founding President	Sao Paulo	35	2005	Catholic church
	E3-2	Female	Founding Treasurer				

3.2. Data collection

The data collection through interviews is of significant importance at the moment of information gathering, making it possible for the researcher to understand how individuals interpret their expectations [31]. The interview allows the researcher both to ask key respondents about the facts in a way and to ask their opinion on specific events [25].

The interview was the main source of data collection and were conducted in 2018. The protocols were composed of a series of open and semi-structured questions to guide the general discussions. The interviews were previously scheduled so that they could happen in an appropriate place, thus avoiding the intervention of other people from their daily living or activities.

In addition to the interviews, for triangulation, we used methodological procedures: direct observation, direct observation during the field visit and documentation, documentary information relevant to all the topics of the case study [25].

3.3. Analysis of the data

The interviews were recorded and transcribed. Each set of interviews and materials were then synthesized according to the common categories of the interview protocol and developed as a detailed case study for each organization, following a common format, systematically exploring the same facets of each social enterprise in turn.

This strategy within the case helped to synthesize large volumes of data in each case and allowed researchers to become intimately acquainted with each case as an independent entity, and to allow the unique patterns of each case to emerge before looking for generalizable patterns through cases [26].

Once the interviews were transcribed, a content analysis was done. According to Bardin (1977), content analysis is a technique for analyzing communications, analyzing what was said in the interviews or observed by the researcher, and when analyzing the material, classifications were made on topics or categories that help in understanding what is for behind the speeches.

Content analysis involved the coding process of domains and categories, taxonomic and componential analysis.

According to Spradley [32], a taxonomy differs from a domain in only one respect: it shows the relations between all popular terms in a domain. A taxonomy reveals subsets of popular terms and how these subsets are related to the domain as a whole.

For Spradley [32], a compositional analysis includes the entire process of searching for contrasts, sorting them out, grouping some as dimensions of contrast, and then inserting that information into a paradigm. It also includes verifying this information with informants and filling in any lack of information.

Throughout the data analysis process, the information collected was worked out in order to be comprehensible, so that the preparation of different analyzes was carried out in a consistent manner, as well as the representation of such data. There is also the pretense of reducing the distance between theory and data, between context and action, seeking the understanding of phenomena by their description and interpretation.

4. Results and Analysis

After a review of the literature, which served as a theoretical basis for the development of the research instrument, we selected the main characteristics to prove how recycling cooperatives are becoming social business.

4.1. Characteristics of Innovation and Social Business

The Theoretical Framework presented the characteristics of innovation and social business, which were questioned and observed in the cooperatives, according to Table 02.

Table 2. Characteristics of innovation and social business

Characteristic	Innovation or Business	Cooperative Beta	Cooperative Gamma	Cooperative alfa
Do changes change social processes and relationships by changing pre-existing power structures? [4]	Innovation	Yes	Yes	Yes
Is it a new response to a social situation considered unsatisfactory? [5]	Innovation	Yes	Yes	Yes
Is it the result of knowledge applied to social needs through the participation and cooperation of all stakeholders? [6]	Innovation	Yes	Yes	Yes
Is it intended to create innovative projects for economic and social purposes? [7]	Innovation	Yes	Yes	Yes
Are new ideas (products, services and models) simultaneously satisfying social needs and creating new social relationships or collaborations? [8]	Innovation	Yes	Yes	Yes
Is it a competitive company? [12]	Business	Yes	Yes	Yes
Is profit reinvested to expand the business? Hole (2014)	Business	Yes	Yes	Yes
Are the goals social? Hole (2014)	Business	Yes	Yes	Yes
Has the company achieved financial and economic sustainability? [11]	Business	Yes	Yes	Yes
Is the commercial goal to overcome poverty, or one or more problems that threaten people and society - not to maximize profit? [11]	Business	Yes	Yes	Yes
Is the company environmentally aware? [11]	Business	Yes	Yes	Yes
Does the labor force get market wages? [11]	Business	Yes	Yes	Yes
Are the owners of the cooperative the cooperatives themselves? [11]	Business	Yes	Yes	Yes

The managers' responses revealed that cooperatives have all the characteristics of an innovation and social business, emphasizing that Cooperatives are competitive companies, all profits obtained are reinvested in the cooperative itself, the objectives are social or overcome poverty, the owners are the cooperative, the salaries paid are consistent with the market, are environmentally conscious and have achieved financial and economic sustainability.

4.2. Business Models

We use the conventional and social business models of Yunus et al. [18] to analyze the scenes before and after the formation of the producers' association, Table 3.

Table 3. Conventional and social business models applied to the recycling cooperative

		Cooperative Beta	Cooperative Gama	Cooperative Alfa
VALUE OFFER	Economic value	Crossers and industries: material in quantity; Large generators: correct disposal;	Crossers and industries: material in quantity; Large generators: correct disposal;	Crossers and industries: material in quantity; Large generators: correct disposal;
	Social value	social inclusion; generation of work and income.	social inclusion; has a stated mission; generation of work and income.	social inclusion; generation of work and income.
	Functional Value	recyclable material in quantity; provision of cleaning service; disposal.	recyclable material in quantity; provision of collection and cleaning services; proper disposal;	recyclable material in quantity; provision of collection and cleaning services; proper disposal;
	External customer segment	Buyers: brokers and industries;	Buyers: brokers and industries; large universities, malls, supermarkets, bars and pharmacies;	Buyers: brokers and industries;
	Internal customer segment	cooperated;	cooperated;	cooperated;
VALUE CONSTELLATION	Internal value chain	redemption of citizenship; reintegration into the labor market;	redemption of citizenship; reintegration into the labor market; education; self-esteem and joy;	redemption of citizenship; reintegration into the labor market;

	External value chain	garbage screening in Barueri; press; weighing; sale of recyclables	waste sorting; press; weighing; sale of recyclables; advertising via social media (Facebook, Channel on YouTube and Instagram);	screening; press; weighing; sale of recyclables;
EQUATION OF SOCIAL PROFIT	Social profit	social inclusion generation of work and income; cleaning of the municipality proper disposal of recyclable materials; participation in sustainability events;	social inclusion generation of work and income; cleaning of the municipality appropriate disposal of recyclable materials; participation in events; professional training program;	social inclusion generation of work and income; cleaning of the municipality appropriate disposal of recyclable materials; professional training program;
	Environmental Profit	Creation of value beyond financial value; Ecological value through environmental impact reduction; Ecological value positive regenerative.	Creation of value beyond financial value; Ecological value through environmental impact reduction; Ecological value positive regenerative.	Creation of value beyond financial value; Ecological value through environmental impact reduction; Ecological value positive regenerative.
		Cooperative Beta	Cooperative Gamma	Cooperative Alfa

EQUATION OF ECONOMIC PROFIT	Key Activities	garbage screening in Barueri; press; weighing; sale of recyclables	garbage collection in São Paulo; waste sorting; press; weighing; sale of recyclables; advertising via social media (Facebook, Channel on YouTube and Instagram);	collect the garbage in Cotia; screening; press; weighing; sale of recyclables; initial environmental education in condominiums and
	Key resources	cooperated; trucks; balance; running machine; presses; bags;	cooperated; trucks; balance; running machine; presses; bags;	cooperated; trucks; balance; sorting table; presses; bags; crane;
	Partners	ABIHPEC; Town hall; Fatec Barueri; Leroy Merlin; Drager ;	Rotary; São Judas University; Uninove ; FGV; USP; Movement in Defense of the Favelados (MDF); European Union; Tetra Pak; Coke; Town hall; Paulista Network;	ABIHPEC; Town hall; Tetra-Pak; Pro- Lab; Poly-USP; Condos; schools and supermarkets;

Based on the social business model of Yunus et al. [18], we analyze the results obtained.

1. Value Proposition:

The cooperatives present three types of values that in the sum we can emphasize:

- Economic value - The main raw material is recycled garbage, the cooperatives receive from the municipal garbage collection such as the cases of the Alfa, Beta and Gamma cooperatives and the so-called

large generators that are condominiums, industries, shopping centers, etc. The sale of this separate and sorted garbage to industries or brokers (firms that buy scrap and resell to industries) revert to the main source of revenue for cooperatives.

- Social value - Cooperatives offer their members social inclusion, generation of work and income.

This allows the cooperative to work in the cooperative itself and will have an income and meals.

- Functional Value - The greatest contribution of recycling is the reuse of the material, thus avoiding to produce new products and saving resources to produce as well.

We find two types of cooperative clients:

- External customers - Buy recycled materials from cooperatives such as industries and middlemen.
- Internal Clients - Clients themselves are the internal customers.

2. Constellation of Value:

- External value chain - Transformation of waste into recyclable material
- Internal value chain - Rescue of the human dignity

3. Equity of social profit

The cooperatives presented two forms of profits in the social area:

- Social profit - It is the social inclusion of the individual (cooperative) after a negative event such as being in jail, involvement with drugs, etc.

- Environmental Profit - Creation of value beyond the financial value as the ecological value through environmental impact reductions.

4. Economic profit equation

The cooperatives presented that the economic profit is obtained through Key Activities, Key Resources and Partners.

- Key activities - Bring financial resources through the sale of recycled material
- Key resources - Produce material for sale
- Partners - Help in the absence of a resource.

5. Conclusions

Although social innovation is recent, the recycling cooperatives have demonstrated that they have all of their characteristics and also make it clear that they are going through a transition from a charitable organization business model to a competitive company with the characteristics of a social business.

It can be said that cooperatives are competitive enterprises, all profits obtained are reinvested in the cooperative itself, the objectives are social or overcome poverty, the owners are the cooperative, the salaries paid are market-friendly, are environmentally conscious and have achieved financial and economic sustainability.

The social business model of recycling cooperatives presented two proposals of value beyond economic, social and functional; two types of clients, the external who buys the recycled material and the

internal, the cooperative itself that receives for the work and two types of profits, the social and the economic.

As a future work, a study is suggested in cooperatives as social enterprises and also with a larger number of cooperatives.

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