

COLLECTING  
DIGNITY:  
RECYCLABLE  
WASTE  
PICKERS  
OF BRAZIL

*A Report by*

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## About the Institute for Digital Cooperative Economy (ICDE)

The Institute for the Cooperative Digital Economy is dedicated to studying the cooperative digital economy.

Where, when, and how work is done is changing. Advances in artificial intelligence, automation, and data processing continue to shift responsibilities from workers to digital systems. These disruptions are often unpredictable and still unfolding.

To navigate these challenges, we need research that imagines, builds, and explores new visions of a fairer future of work. One starting point is the platform co-op model, which carries the cooperative principles into the digital economy. Platform cooperativism addresses the root causes of systemic inequality and presents a near-term solution for the problems plaguing our economy and democracy.

The cooperative digital economy is an under-researched area in the fields of anthropology, political science, sociology, history, and economics. This emerging field is closely linked with labor studies and cooperative studies. In business schools, this field of study is situated in the areas of finance, entrepreneurship, and organizational studies. In law schools, the pertinent areas are governance and corporate structure.

Acknowledging these research gaps, it is the purpose of the Institute to provide prospective and existing platform co-ops with applied and theoretical knowledge, education, and policy analysis. We are committed to realizing new visions for a fairer future of work grounded in relevant research, driven by imaginative proposals. Initial research questions focus on distributed governance, scaling, marketing, and start-up funding. The ICDE makes this knowledge accessible to diverse audiences in innovative formats.

Through this research, the Institute builds a body of knowledge that advances platform ownership and democratic governance for workers and Internet users alike.

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This report was cooperatively designed by [Keir M-Barnett](#) and [Co-operative News](#)

## INTRODUCTION

Many fled on seeing me  
Thinking I didn't realize  
Others asked to read  
The verses that I wrote

It was paper I was picking  
To fund my living  
And in the trash I found books to read  
How many things I wanted to do  
I was hampered by prejudice  
If I die I want to be reborn  
In a country where blacks prevail

Bye! Goodbye, I will die!  
And I leave these verses to my country  
If we have the right to be reborn  
*I want a place where blacks are happy.*

— Carolina de Jesus



1.

# INTRODUCTION



## Collecting Dignity: Recyclable Waste Pickers of Brazil

This report aims to analyze the impact of the Brazilian platform Cataki, a mobile app that connects collectors of recyclable waste—known as *catadores* in Brazil—to customers. The intention of this report is to examine the effects of the Cataki<sup>1</sup> platform—created by Pimp My Carroça (Pimp My Wagon), a non-governmental organization based in São Paulo—in the lives, the income, and the organization of more than 3,000 *catadores* in over 470 Brazilian cities.<sup>2</sup> This report also intends to analyze Cataki's operation and both its similarities to and differences from platform cooperatives.<sup>3</sup>

It is the intention of this report to investigate the viability of the creation and expansion of these digital platforms, which are still in their nascent stages in Brazil. Platform cooperatives are an alternative to the digital infrastructure of platform capitalism and an attempt to bring the history of worker cooperatives into the digital age, involving models of democratic ownership for the Internet.<sup>4</sup>

This research was carried out at a time of severe economic crisis in Brazil<sup>5</sup> which has seen the rise of poverty<sup>6</sup> and unemployment over the last five years,<sup>7</sup> a trend that should be intensified by the COVID-19 pandemic. This same period has also seen the emergence and growth of platforms in the sharing economy, an on-demand service economy that connects customers and service providers through apps and websites. With more than 100 million people connected to broadband Internet and over 200 million cell phones in the country, Brazil has become a big market for taxi-apps such as Uber, which has operated in the country since 2014; 99Táxi, and food delivery apps such as Rappi, Uber Eats, and iFood, among many others. While offering an alternative source of income for unemployed Brazilians, such apps have also accelerated the spread of precarious working conditions. It is estimated that, in Brazil, four million people work for service businesses without being considered employees.<sup>8</sup> Among the workers who use these apps are drivers, deliverers, manicurists, and day laborers.

A study carried out by the Brazilian Public Ministry of Work<sup>9</sup> in 2018 analyzed the labor relations imposed by these applications. According to the study, which focused on the case of Uber, although the company calls the drivers “partners,” who can supposedly choose when and for how long they want to work, this freedom is immediately negated by the duty of alliance to and fulfilment of the objectives set out in the algorithms, which are controlled unilaterally by the companies.

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Both the Brazilian and international press began to report on the precarious working conditions imposed by these apps in South America, including the cases of driver and food delivery platforms. A report by the BBC in May 2019<sup>10</sup> showed that food deliverers, who are mainly young adults, work twelve hours a day without safety equipment and often sleep on the streets so that they don't have to travel home (often located on the outskirts of big cities) to earn little more than the monthly minimum wage (R\$1,000, or US\$200). A study carried out by researchers from Federal University of Bahia (UFBA)<sup>11</sup> during the COVID-19 pandemic showed that deliverers work 65.5 hours a week, far above the 44-hour limit imposed by Brazilian legislation. The study also pointed to a drop of 18.7 percent in workers' net income (discounted fuel costs, vehicle maintenance, Internet) during the pandemic.

In this scenario, some Brazilian municipalities have attempted to regulate such platforms, regulation that faces widespread resistance from companies. São Paulo City Hall, for example, signed an agreement with delivery companies iFood and Loggi pledging to offer traffic safety courses to couriers and to abolish awards for faster deliveries. Uber Eats and Rappi, however, rejected the agreement.<sup>12</sup> There are also numerous legal disputes about corporate labor liability to drivers and deliverers.<sup>13</sup>

In the midst of the COVID-19 pandemic, massive protests and strikes by delivery workers generated a public debate in Brazil about the possibilities for workers to set up their own platforms. Some delivery workers have organized themselves into collectives and some are planning to create<sup>14</sup> their own platform cooperatives.<sup>15</sup>

In this context, platform cooperatives can be a way of encouraging job creation in a scenario of economic crisis, but with better working conditions, income, and participation in decision making and ownership for workers. Such a modality could also boost local development in the form of democratic and collaborative work.

The Cataki app, the subject of this report, is legally registered as a non-governmental organization, that is, a non-profit organization that does not charge for the service of connecting waste collectors and customers. Funded by philanthropic organizations<sup>16</sup> such as the Oak Foundation and Humanitas360,<sup>17</sup> Cataki has similarities and differences with platform cooperatives, bringing it closer to the experiences at the origin of the sharing economy, with genuine sharing platforms such as Couchsurfing.<sup>18</sup>

To achieve the objectives proposed in this report, exploratory field research was conducted with the adoption of a qualitative methodology through 20 semi-structured interviews with Brazilian recyclable material collectors (both those who do and do not use the Cataki app as well as collectors who work in cooperatives). The founder of the app and leaders of national waste collectors movements were also interviewed.

## INTRODUCTION

The choice of semi-structured interviews was based on the assumption that, considering the research object, it was better to rely on exploratory methods than to perform a statistical analysis.<sup>19</sup> Interviews were conducted to the point when the interviewees' responses began to become repetitive. Most were carried out by telephone, all interviews were audio-recorded, and photographs of those interviewed in person and a screenshot record of the Cataki profiles of *catadores* interviewed by telephone were taken. The researcher also used the application to call collectors interested in recyclables to verify the operation of the service.

This report is organized into five parts. The first deals with the Brazilian cooperativism scenario and the work of the *catadores* and cooperatives of waste collectors in Brazil. The second details the operations of the Cataki application. The third analyzes its similarities to platform co-ops and its achievements. The fourth considers Cataki's differences with platform co-ops models and its main challenges, offering both critique and encouragement. The report concludes by showing ways in which Cataki could become a platform cooperative.



PART 1

BRAZILIAN  
COOPERATIVISM  
AND THE WORK  
OF RECYCLABLE  
WASTE  
COLLECTORS



## Part 1 – Brazilian Cooperativism and the Work of Recyclable Waste Collectors

The history of cooperatives in Brazil dates back to the time of Portuguese colonization,<sup>20</sup> and was enacted by civil servants, the military, independent professionals, workers, and European migrants. Officially, the movement began in 1889, in Minas Gerais, with the founding of the Ouro Preto Public Employees Economic Cooperative—whose focus was the consumption of agricultural products. Following it, other cooperatives emerged in Minas Gerais as well as in the states of Pernambuco, Rio de Janeiro, São Paulo, and Rio Grande do Sul, according to Cooperative Organization of Brazil (OCB), a body founded in 1969 to represent and defend the interests of Brazilian cooperativism.

The creation of OCB was accompanied by the approval of Law 5.764/1971, which regulates the sector and specifies rules for the establishment of cooperatives in Brazil. Among the principles of cooperativism cited by the OCB are voluntary and free membership; democratic management; economic participation of members; autonomy and independence; education, training, and information of members; collaboration between cooperatives; and interest in the community. These are the seven cooperative principles that were adopted by the International Co-operative Alliance (ICA), which unites, represents, and serves cooperatives worldwide.<sup>21</sup>

There are currently over 6,828 cooperatives in Brazil, operating in thirteen sectors of the economy, with 14.6 million members.<sup>22</sup> The sector with the most members is credit (9.8 million), followed by consumption (1.9 million), infrastructure (1.03 million), and agriculture (1.02 million).<sup>23</sup>

When it comes to platform cooperatives, however, experiences are still developing in Brazil, according to the researcher and general director of the Faculty of Cooperativism Technology (Escoop), Mário De Conto, one of the leading Brazilian researchers on the subject.<sup>24</sup> De Conto and his team are studying examples of platform co-ops internationally to see if their business model could be applied to Brazil, as well as to the Brazilian co-op legislation. One of his conclusions so far is that some legislation modification would be needed if those business models were adopted in the country. Brazilian law does not allow, for example, the admission of investors into cooperatives;<sup>25</sup> the legislation allows for the constitution of cooperatives with different classes of members, but it forbids unequal treatment.<sup>26</sup> He explains that more debates would be needed to see the advantages and disadvantages of those business models for Brazilian cooperatives in order to maintain their independence. In the midst of the



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COVID-19 pandemic, however, one legislation change has already passed: a new article was incorporated into the General Law of Cooperatives, enabling remote voting and participation in co-ops meetings and General Assemblies.<sup>27</sup> It is important to be legally registered as a cooperative to access support services by OCB and other national and international organizations.

De Conto states that the very existence and dissemination of traditional platforms in Brazil may bring together workers interested in building their own platforms, while high unemployment rates also drive the search for alternatives. On the other hand, the restricting factors would be the difficulty of establishing their own technological platform, which demands high initial investments. Platform cooperatives also face the challenge of operating in markets dominated by large, global companies. The cooperation between local and international co-ops could be a way to obtain scale gains, he says.

Since this research is focused on the case of Cataki, a brief overview of the working conditions of *catadores* in Brazil and their cooperatives will be drawn. The National Movement of Recyclable Waste Collectors (MNCR) estimates that there are between 800,000 and one million waste collectors in the country, though only a small percentage of them are organized in traditional cooperatives. Those not organized in co-ops work as freelancers, most often under more precarious conditions than those associated with co-ops.

The work performed by these workers consists of picking, sorting, and transporting recyclable waste on the streets of Brazilian cities, often using a metal or wooden cart. The first records of this work in the country date from the 19th century, indicating that the phenomenon accompanied the process of Brazilian urbanization, according to the Institute of Applied Economic Research (IPEA).<sup>28</sup> Most of the waste pickers are men who self-identify as black (66 percent of waste collectors, compared to 52 percent of the population) with an average age of 39 years old. In 2010, their monthly income was R\$561.93 (US\$150), roughly half of the average income of the country's workers that same year, R\$1,271.88 (US\$333).<sup>29</sup> The illiteracy rate among *catadores* is more than double the average of that of the Brazilian population. *Catadores* also have less access to computers and the Internet.<sup>30</sup>

Although the work of waste collectors is not much valued or recognized by Brazilian society or the public authorities, it accounts for ninety percent of recycling in Brazil,<sup>31</sup> a country that recycles only thirteen percent of its solid waste.<sup>32</sup> The work is subject to price variations of recyclable materials, unhealthy and risky conditions, and is frequently performed by children and adolescents, often children of *catadores* themselves.<sup>33</sup> Some of the risks to which these workers are exposed include: heat, cold, and rain; the risk of being run over, cut, or coming into contact with toxic waste or being infected by the novel coronavirus; and strenuous physical exertion—to name just a few. Historically, it is an



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activity in the informal sector, which deprives waste collectors of a series of labor rights and access to social security.

Among the waste collectors interviewed for this report, many have been working full time since childhood; others started because they lost their jobs. In addition, there are those who blend waste collection with other gig jobs. On the streets, the work is performed individually or with relatives, with the aid of a cart pulled by the collector or with cars. In cooperatives, the work of sorting the material is done collectively and the collection is carried out by individual pickers or with the help of trucks or vans.

The majority of the *catadores* interviewed for this research had a home, usually located on the outskirts of cities or in slums and tenements in central regions. Two of them were homeless. Cataki data showed that, from the 3,000 *catadores* registered, 81 percent are men, 50 percent are between 40 to 49 years old, 79 percent are black, and 20 percent live on the streets.<sup>34</sup> This report focused on waste collectors carrying out routes through residential and corporate areas in Rio de Janeiro and São Paulo, excluding those that work in garbage dumps and landfills, where non-recycled solid waste ends up.

Recycling in Brazil involves a series of actors and steps so that what is considered waste can be transformed into recycled raw material to be sold to industry. Each material has its own value, its own process of transformation or recycling, and a specific demand. In Brazil, some products are recycled more than others, such as cardboard and aluminum, whose recycling rates reach 77 and 94 percent, respectively.<sup>35</sup> These materials have higher prices in the recycling market.

After disposal, the recycling process involves collection and sorting (picking out the different types of materials, such as paper, plastic, ferrous metals, aluminum, glass, etc.) and marketing to intermediaries who can process the materials for sale to industry. The *catador* acts at the first stage, or at the bottom of the value chain pyramid, by collecting and selling the material to intermediaries, which may be small junkyards or large and medium-sized recycling companies,<sup>36</sup> which determine the price, volume, and condition of the materials to be purchased. This renders waste collectors largely dependent on these intermediaries. Some cooperatives are able to grow in scale and sell directly to the recycling industry, which brings economic benefits to cooperatives and their workers.<sup>37</sup>

The organization of waste collectors into cooperatives helps these workers to gain greater value for their work, advancing them some stages in the supply chain, as these organizations are able to process the collected material.<sup>38</sup> Compared to independent collectors, cooperatives have more scope for negotiating with intermediaries or with industry itself, playing an important role in mobilizing and defending the interests of the group before public authorities.<sup>39</sup>



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In addition, *catadores* in cooperatives benefit from the support of others in a collective work environment.<sup>40</sup> There are workers responsible for sorting material within the cooperative space, often a shed granted by the government or acquired by the organization; there are those who are responsible for collecting the material on the streets who, unlike the independent collectors, have a space in the cooperative to wash and rest; and those who negotiate the sale of the material with intermediaries and the industry. Independent waste collectors need to perform all stages of this work alone: from collection to selling to intermediaries, without having a fixed place to rest, eat, or wash during the workday.

In Brazil, civil society groups, especially pastoral ones from the Catholic Church, played an important role in organizing and setting up waste picker cooperatives.<sup>41</sup> Currently, Brazil has 1,175 cooperatives or associations of waste collectors distributed across 684 municipalities, bringing together 30,400 workers.<sup>42</sup> The first of these was the Cooperative of Autonomous Collectors of Paper, Scrap and Reusable Materials (COOPAMARE), established in 1989 in São Paulo. The cooperative still exists today and has 80 cooperated and 120 independent collectors who deliver their material to the organization. Maria Dulcineia da Silva Santos, 55 years old, has been with COOPAMARE for 20 years, where she works daily from 8 a.m. to 5 p.m. inside the shed granted by the local government.<sup>43</sup> She receives a monthly salary ranging from US\$240 to US\$360, commensurate with her working hours and the cooperative's sales revenue. Expenses are evenly divided among the members, and all workers contribute to the Brazilian social security system, which will guarantee them a retirement pension in the future. For Maria Dulcineia, who has worked as an independent street collector, cooperative work is safer and less tiring, and also enables participation in the decision-making process through monthly assemblies. She says, "It is much better to work in a cooperative because we work together and don't work as much as if we worked individually. The work is divided. For example, those people over there are on the conveyor belt, [but] I'm here [with the electronic wires]. I'm a presser, but if I don't have to press material, I'll go to the conveyor belt or do something else."

Roberto Rocha, *catador* and spokesperson for the National Movement of Waste Collectors (MNCR),<sup>44</sup> recalls that the working conditions in a cooperative are better than those experienced by individual waste collectors because regular working hours are defined and personal protective equipment and sanitary conditions are better suited to the performance of the required activities compared to the conditions in private junkyards, to which most independent collectors sell their collected material.

Marislene Nogueira, project coordinator of the Nenuca Institute for Sustainable Development (INSEA), a non-governmental organization that supports the setting up of cooperatives and waste picker associations, argues that the organization of cooperatives also allows waste pickers to recognize themselves as workers, realize the importance of



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their work for society, and, as a result, demand compliance with rights. She says: “We realize that the organization provides an appreciation not only of the work but also of the person as well. They recognize themselves as citizens, as active, contributing people. It completely changes their outlook. They cease to see themselves as someone who works with garbage, with dirt, and they start to see themselves as providing an extremely important service to the city and the environment.”<sup>45</sup>

Despite the advantages mentioned regarding the cooperative work of *catadores*, it still represents only a small (3 to 5) percentage of the total workers who perform this activity in Brazil. Many waste pickers prefer to work alone for the sake of autonomy in managing their time and the outcome of their work. In addition, it is difficult to obtain the information and technical capacity necessary for the formation and management of cooperatives. Another aggravating factor is the fact that these workers are often in a situation of greater vulnerability, which means that they seek immediate solutions to their individual and family needs rather than having the necessary time to participate in a cooperative enterprise.

COOPAMARE’s Maria Dulcinea points out that many independent collectors work alone because they need the money on a daily basis, while co-ops only pay monthly or bi-weekly. According to her, some pickers also have problems with alcohol and drugs, which makes their inclusion and acceptance by colleagues in a cooperative work environment difficult. For Roberto Rocha, from the National Movement of Recyclable Waste Collectors (MNCR), there is also a lack of a collective work culture among waste pickers and in Brazilian society as a whole for historical and socioeconomic reasons. Such insights have been corroborated in this study’s fieldwork, which will be further detailed in later parts.

Although in recent years the Brazilian State, in its different administrative spheres and mainly during the administration of former President Luiz Inácio Lula da Silva (2003-2011), has adopted a series of normative acts concerning solid waste management—after pressure was applied and the recyclable waste pickers in the country had been organized—Roberto Rocha, from the MNCR, cites challenges that remain for strengthening and expansion cooperatives. One of the main laws in the sector, the 2007 National Basic Sanitation Policy, which deals with the waiver of bidding for the hiring of collectors’ associations or cooperatives for the selective collection service by the municipal government, has not yet been effectively adopted by most Brazilian municipalities.

There is also a lack of support from municipalities to formalize waste picker cooperatives, while a minority of Brazilian municipalities pays these workers for their public service. According to data from the Business Commitment for Recycling (Cempre), only 17 percent of Brazilian municipalities (927) have selective collection programs. Of this total, half chose to support or hire waste pickers’ cooperatives rather than companies. If all of the recyclable waste that is sent to landfills and dumps in Brazilian cities was recycled, the economic benefits would reach R\$8 billion per year.<sup>46</sup>



PART 2

WHAT IS  
CATAKI?



### Part 2 – What Is Cataki?

Compared by its founder to Tinder, the Cataki app, available for Android and iOS phones, connects customers with waste pickers working nearby for free. After a registration that requires a photo, name, and mobile phone number, the user can see different picker profiles, with information about the distance to where they are located, the types of materials they collect, the means of transport of the material (wagon or car), and a brief description written by the workers themselves. Materials collected include paper, cardboard, metal, plastic, aluminum, oil, rubble, and glass, among others.

There are two contact icons, one that makes a traditional phone call and one that leads to the WhatsApp app. After the picker is chosen, all communication is performed outside the Cataki application. Anyone with a telephone can sign up as a waste picker, cooperative, voluntary delivery point for recyclables, or junkyard. There is no identity or reputational verification system through user evaluation.

According to August 2019 data from Pimp My Carroça,<sup>47</sup> Cataki had 3,105 recycling agents, half (1,554) in the state of São Paulo. Of all agents, 2,598 are waste pickers (84%); 125 are cooperatives (4%); 226 are fixed points for the voluntary delivery of recyclables maintained by the local government (7%); and 156 are junkyards (5%). Of the total waste pickers, 58 percent have automobiles and 42% have an iron or wooden wagon.<sup>48</sup> Collectors with cars comprise the fastest growing new demographic group to register with the app.<sup>49</sup> Of the total waste pickers, 79 percent said they had the WhatsApp app to connect with clients. All negotiation for material removal, including payment for the service, is made between the collector and customer prior to or during collection without Cataki's involvement.

The first version of Cataki was created in July 2017, but the idea arose in 2014, according to the organization's founder, artist and activist Thiago Mundano.<sup>50</sup> The delay in launching the app was due to developmental difficulties, as none of the founders had programming skills. The development was performed by volunteer programmers. Cataki emerged from Pimp My Carroça, an NGO created in 2012 via crowdfunding with the purpose of art painting and refurbishing waste pickers' carts. The first version of Cataki was funded by the sale of graffiti cart miniatures by artists from São Paulo.

Cataki benefits from the entire structure of Pimp My Carroça, including the office and nine employees, four of them dedicated exclusively to the app. Following initial funding, the NGO is currently funded primarily by the charitable organization Oak Foundation.

## 2. WHAT IS CATAKI?

According to Mundano, Pimp My Carroça has complete independence from the financiers, with the only accountability being in the form of reports that detail where the resources are being implemented. In addition to employee compensation and office rent, most of the funding is used for in-app enhancements by third parties.

A graffiti artist, Mundano has been working with waste pickers for over a decade, painting these workers' carts. He started to become popular as an artist in São Paulo and began to informally mediate between waste pickers and friends who wanted to dispose of recyclable materials when the idea of creating an application for this purpose came up. Mundano estimates that Cataki has the potential to reach 200,000 workers, focusing on independent full-time waste pickers, and one million customers in Brazil. The app has no information on how much and what materials are being recycled.<sup>51</sup>



PART 3

CATAKI'S  
SIMILARITIES  
WITH  
PLATFORM  
CO-OPS  
AND ITS  
ACHIEVEMENTS



## Part 3 – Cataki's Similarities with Platform Co-ops and its Achievements

Cataki has a great deal of potential to become a platform co-op. As a location-based digital labor platform, its main objective is to increase the income and living conditions of recyclable waste collectors in Brazilian cities. It has already achieved that goal and also some digital and in-person organization of the workers, reaching the most vulnerable collectors who work by themselves, with no interaction with unions, traditional cooperatives or the national movement of *catadores*. Furthermore, it has also increased their confidence and self-esteem as workers, since they are recognized and appreciated by Cataki and its clients.

Some of those achievements were confirmed by the fieldwork of this research, which heard 20 people who work with waste picking from São Paulo, Rio de Janeiro. Of this total, 14 are independent waste pickers registered with Cataki, one is an independent waste picker who does not use the app, and three are waste pickers from cooperatives who do not use the app. Two Cataki-registered people interviewed were not waste pickers—one said she was a lawyer and was using the app as a hobby to protect the environment and another said he owned a recycling company. Of the total interviewed waste pickers registered on the app (14), most were men (12), six lived in the outskirts of the cities; four, in *favelas*; three, downtown; and one was homeless. Half of them were working with a cart on the streets; the other half said they had a car. The average age of respondents was 37 years old.

Ten out of 14 said that their monthly income indeed increased after a few months of using the app. At least four spontaneously mentioned a thirty to forty percent increase in income, which ranged from US\$200 to US\$600 per month for all of the interviewed collectors, while only one said he did not know how much he received each month. The Brazilian minimum wage is R\$1,045 (around US\$200). The results of the fieldwork are in line with a survey commissioned by Cataki to verify increased incomes. According to the results of this study,<sup>52</sup> which heard from 77 pickers, 58 said their monthly income had increased after using the app. More pickers with cars said their income went up (65%), compared to collectors with no cars (55%). Nevertheless, pickers without cars had a higher income increase of 83 percent, compared to 47 percent for pickers with cars. The overall average was a 65 percent increase. Fabiana da Silva, 40, a former convict and resident of the Favela do Moinho in São Paulo, spoke about the benefits of the application: “The app helped a lot; I’ve been using it for seven or eight months. I work with an iron cart. Now people call me more. Sometimes I get four to six



### 3. CATAKI'S SIMILARITIES WITH PLATFORM CO-OPS AND ITS ACHIEVEMENTS

calls a day. Sometimes these calls become collections. Then, when someone is attended to the first time, they immediately become a customer.”

Some pickers use Cataki calls to complement the daily route they already take through the streets in search of recyclable materials. Others, however, prefer to make the workday more predictable by just waiting for calls from Cataki so that they already have a definite destination. There were also reports of pickers who worked 14 hours a day before the application, and who later achieved the same income in much less time. This was the case for Ednar Matoso, 43, a former homeless woman who now lives in a central neighborhood in São Paulo: “The app is very good for me because so much has changed. In the past, I had to go out in the streets to pick up cardboard. As there are many pickers on the streets, I couldn’t even earn 10 reais (per day). The app was very good for me because it improved things one hundred percent. Now I only work using the application. I don’t go out to look out for cardboard anymore.”

Increased customer confidence in hiring Cataki-listed waste pickers was also mentioned by most respondents, who said they face various forms of prejudice when they are working through trash bags on the streets of Brazilian cities. Igor Guedes Silva, 22, a resident of Favela do Moinho in São Paulo, goes out daily with his wife, Karen Fernanda Brito de Lima, 20, and his 3-year-old son to collect with an iron cart. The couple said they were mistreated on the streets, mistaken for drug users by authorities and passers-by. The same is not true among Cataki’s clients, as Karen, who has been a collector since she was a child when she went out to work with her mother, affirmed: “On the streets, everyone thinks that a carter is a drug user. People make a face when they look at us, some even swear at us. This is normal in everyday work on the streets. But Cataki’s customers treat us very well. Just today, a woman let me into her house, even offered me a cup of coffee.”

Samuel de Oliveira Souza Gomes, 35, is homeless and has been a collector since he was 12 years old. Today he primarily collects metallic materials in Botafogo, Rio de Janeiro. He’s been on the app for about a year and said he’s got more customers, including businesses. For him, Cataki serves as a kind of marketing for waste pickers, since, in his opinion, without the application, it would be difficult for a company to contact a person whose job it is to go through dustbins on the streets.

Cataki has also created WhatsApp groups so that waste pickers can communicate with each other and with the organization. In total, there are eight groups managed by a Cataki employee, one for each region of the country and two groups for São Paulo and Rio de Janeiro, cities that have high numbers of registered waste pickers. Such groups are used for client sharing. When a collector receives a call they cannot fulfill, they place the information in the group for another *catador* available to collect. Information is also exchanged about the amounts paid by the junkyards for the material collected. Waste

### 3. CATAKI'S SIMILARITIES WITH PLATFORM CO-OPS AND ITS ACHIEVEMENTS

pickers inform others when a junkyard is paying more for a particular material.

For some pickers—such as Samuel de Oliveira Souza Gomes, who has moved away from friends and family and is now homeless—Cataki's WhatsApp group represents their only social connection. The *catadora* Fabiana da Silva from São Paulo said that there have already been cases of several waste pickers connecting through WhatsApp to gather their material and sell it together to have greater bargaining power with the junkyard owners. The WhatsApp groups also serve as virtual social centers for collectors, who exchange motivational messages and share difficulties, with minimal intervention by moderators. Most communication is through audio messages and photos, because some collectors are not literate or do not have a high level of formal education.

In relation to cell phone penetration among waste pickers, the majority of respondents (10) said they already had cell phones before joining Cataki because they relied on them to get other informal jobs. However, registering with the application motivated them to contract a data plan to be able to access WhatsApp, the main tool used by customers to contact waste pickers. Cataki's founder estimates that 30 to 40 percent of recyclable waste pickers have a cell phone. The main factor driving the dissemination of the application among the pickers is word of mouth, according to Thiago Mundano.

Cataki also supplies safety equipment and uniforms for pickers in São Paulo, where its headquarters are located. It has already distributed more than 3,000 reflective tapes to be glued on the wagons, in addition to Personal Protective Equipment (PPE) kits. During the COVID-19 pandemic, Cataki distributed face masks and created an online crowdsourcing campaign<sup>53</sup> to support waste collectors financially. According to Cataki's founder, the crowdfunding raised R\$1,500,000 (US\$300,000) from companies and individuals to support 2,000 *catadores* in the country, and each of them will receive R\$850.



PART 4

CATAKI'S  
DIFFERENCES  
WITH  
PLATFORM  
CO-OPS  
AND ITS  
CHALLENGES



## Part 4 – Cataki's Differences with Platform Co-ops and its Challenges

Despite those important achievements, the app faces many challenges. The first and most important is the fact that waste collectors do not own or govern the organization—worker ownership is the first principle of platform cooperativism.<sup>54</sup>

Decision-making within Cataki is made by the founder of the NGO and the four employees who work exclusively for the application. Waste collectors have no decision-making power at Pimp My Carroça, participating only in the advisory board and not the executive board. Waste pickers are consulted on decisions such as application updates, according to Mundano. Nevertheless, many *catadores* supported by Cataki are in a vulnerable situation—20 percent of them are homeless, struggling to get by. According to Mundano, that makes it hard for them to get involved in a more participatory process of decision making.

Waste collectors seem divided when asked about this matter. Eight out of 14 pickers interviewed for this report said they would like to participate in the app's decision-making process. According to these waste collectors, such participation would be facilitated if there were an online tool for this purpose, as they do not have time in their work routine to take part in face-to-face meetings. The other six collectors interviewed said they did not have the interest or the time to take part in Cataki's decision making process. Adopting democratic decision-making processes would be a way for Cataki to differentiate itself from extractive platforms of the sharing economy.<sup>55</sup>

A further concern is that the number of collectors with cars is growing at a faster rate than those who do not have cars and who work with carts. While in February 2019 the proportion of car collectors was half of the total registered workers on the platform, in July 2019 the figure rose to 58 percent.<sup>56</sup> This increase may be an indication that the poorer collectors, who are unable to afford a car, are being left behind in competition with the others. Collectors with cars tend to collect more recyclable material compared to those using carts, as they can make more collections in one day as well as collect further afield. It would be necessary to create some kind of design-based solution to protect the most vulnerable *catadores*.

Organizations representing Brazilian waste collectors also expressed reservations about the use of Cataki. Roberto Rocha, from the National Movement of Recyclable Waste Collectors, which mainly represents those organized in cooperatives, argues that this



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hesitation stems from the fact that Cataki waste collectors are still working individually, with no place to rest, socialize, drink water or eat—much like those working for the “on-demand” economy platforms. Workers also remain vulnerable to accidents, and when this occurs, their income generation is disrupted, as described by collector Gerardo da Silva Pereira, 22, a resident of Parada de Lucas, a peripheral region of Rio de Janeiro: “Three weeks ago, I was hit by a taxi while collecting recyclables from a hospital. I went to get some material there and the taxi hit me. [...] I already had knee problems and they got worse after being run over [...]. I was out of work for a week. Then my relatives, who are also collectors, took some money out of their income to help me.”

Roberto Rocha emphasizes that the purpose of the *catadores* movement is to reach self-employed workers and create the conditions for them to join a traditional cooperative, not to encourage individual work. He states that Cataki does not alter the exploitative situation of these workers who remain dependent on junkyards, which he considers “inhuman space[s].” Roberto goes on: “The junkyard is a place of exploitation of waste collectors. Not only because of the prices but also the inhuman space inside. Waste collectors do not have a space to bathe, to buy a meal. They have no guarantee that the scales of the junkyard are working properly, according to standards. Often, collectors exchange material for alcoholic drinks. As such, there’s a considerable process of exploitation inside the junkyard.”

Although Rocha’s statements are true, it is worth emphasizing that Cataki reaches the *catadores* that traditional cooperatives do not: the most vulnerable ones, who do not want or who cannot take part in a traditional cooperative, including those who are homeless or have mental illnesses or drug and alcohol addictions. Often, Cataki facilitates the only form of contact those workers have with other waste collectors and with an organization of any kind.

The National Movement of Recyclable Waste Collectors also expresses concern that, on the platform, waste collectors compete with people who are not necessarily waste collectors, as Cataki opens the possibility for anyone, including junkyards, to register with the app. In fact, there are more junkyards (156) than waste collector cooperatives (125) registered with Cataki. In addition, two people interviewed for this survey were not waste collectors. One said she worked as a lawyer during the day and at night collected electronics and discarded lamps to protect the environment, and another owned a large recycling company that has a fleet of trucks to carry out the removal of recyclable materials. Such people end up competing with waste collectors for the same materials.

Another challenge for Cataki is the fact that, although the platform helps to increase the income of these waste collectors, this remains low in light of the high living costs in Brazilian cities. According to testimonials collected, most of the interviewed pickers earned an average salary of R\$1,000 to R\$2,000 per month, and only one of them said he

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earned R\$3,000. According to calculations by the Inter-Union Department of Statistics and Socioeconomic Studies (Dieese),<sup>57</sup> an organization maintained by Brazilian trade union movements, in September 2019, the Brazilian minimum wage should have been R\$3,980 per month to meet the basic needs of a worker and his family in relation to living costs in the country.

Access to social security is also impaired for waste collectors who work alone, as the work remains informal. In Brazil, access to pensions and other security rights is linked to formal work contributions, or optional contributions for self-employed work. Of the total respondents using Cataki (14), only two said they contributed to the pension system on an optional basis, and only one said they received benefits from Bolsa Família.<sup>58</sup> In addition, workers are not protected against the arbitrary behavior of customers and junkyards, as the platform does not take responsibility for what happens to the pickers while working on the streets. Waste collectors also do not earn for the time they spend waiting for a collection; their work varies according to demand.

Although Cataki's WhatsApp groups serve as a mitigating factor, isolation and the lack of a social life during the workday were highlighted as an ongoing difficulty by some of the waste collectors interviewed, as was prejudice against the work they carry out. This was the case of 35-year-old Samuel de Oliveira Souza Gomes, who is homeless and works in Botafogo, an upmarket neighborhood in Rio de Janeiro. He states: "As the work is very discriminated against, I don't have much of a social life, I live in isolation. Every night I sleep in the same hostel, and when the other guests see me on the street pushing my cart, it's an annoying situation of discrimination, embarrassment. [...] People see me as a beggar. In my case, that's not it. I have a goal, I have many ambitions, aspirations."

Some of the workers interviewed also demanded access to physical identifiers that they are Cataki employees, such as the reflective tape and uniforms that are provided for the workers in São Paulo. For these collectors, it would be significant to have Cataki employees in their cities so they could obtain safety equipment, as well as other identifying elements such as bumper stickers or uniforms, which are provided to workers in São Paulo. For collectors, visual identification with Cataki is important in order to gain more customers and more respect from the public and authorities for their work on the streets, according to the evidence collected.

Thus, in addition to needing resources to invest in the development of the application to improve its functionality and data collection, Cataki also needs funding to expand its human resources to be closer to waste collectors living in other Brazilian cities.

### 4.1 Functionalities Challenges

The app also has functionalities challenges. The platform still does not generate data on how much recyclable material is actually collected or on the routes and collection history of each worker. As all conversations between client and collector take place via WhatsApp, this information is not gathered by the Cataki app, making it difficult to develop strategies for disseminating the app and improving its operation. There are also other difficulties in terms of functionality. Some waste collectors reported receiving many calls from people interested in disposing of materials the workers are not used to collecting,<sup>59</sup> as well as from people living in neighborhoods far from the workplace of the collectors. According to some workers, a lot of time is spent explaining to customers what they actually collect and what actually has value in the recycling market.<sup>60</sup> The 32-year-old collector, Pedro Paulo Silva, who lives in a central neighborhood in Rio de Janeiro, explains: "I get tired of having to decline orders because the amount the person wants to give to me is too small for the distance I would I have to travel. I think Cataki needs to have a kind of route, to bring together more people who want to collect. [...] Sometimes people call me to pick up six cardboard boxes in Botafogo [a neighborhood in Rio de Janeiro's South Zone]. It's not worth me going there just for that."



PART 5

CONCLUSIONS

AND

SUGGESTIONS



### Part 5 – Conclusions and Suggestions

Cataki has great potential to become a platform cooperative because it is already reaching waste collectors who do not want, for a number of reasons already mentioned, to participate in a traditional cooperative, and who have not been reached by organized waste collector movements or by the Brazilian State itself.

However basic and elementary the gathering of waste collectors in WhatsApp groups is, the virtual connection of these workers around Cataki represents, for many of them, the only form of socialization and mutual support at work. Furthermore, identification with Cataki has, as many collectors reported, resulted in increased income and self-esteem as workers.

Such achievements should not be overlooked, but they could, on the other hand, be enhanced. This study proposes that:

- Cataki becomes a platform cooperative that maintains the characteristics of a virtual platform—such as online interaction between workers and customers, and the online organization of often geographically distant collectors—while adding to them the characteristics of a traditional cooperative—such as collective ownership and democratic participation, even if virtual.

The intention would be to move Cataki away from the model of applications of platform capitalism, where the on-demand, outsourced, and fragmented work of “lean platforms” prevails.<sup>61</sup> The aim would be to allow waste collectors, while maintaining some degree of autonomy in managing their own working hours, to have access to labor rights and social protection as well as to a physical place to congregate, eat, and so on.

The idea of democratic participation and collective ownership would not necessarily lead to the loss of Thiago Mundano’s leadership at the head of the organization, but would be a way of harnessing it to the benefit of the organization’s members. Nathan Schneider<sup>62</sup> argues that it is necessary to recognize the importance of leadership and vision of a founder or group of founders in cooperatives. The goal should be to make such leaders adequately accountable to those who depend on them within a cooperative enterprise.

Organizing waste collectors into cooperatives is important so they can claim a larger share of the value of their work by advancing some stages in the recycling chain. Compared to Brazilian autonomous waste collectors, cooperatives have more leverage

## 5. CONCLUSIONS AND SUGGESTIONS

when negotiating with intermediaries, and also play an important role in mobilizing rights.<sup>63</sup>

The advantages of collective enterprises are not limited to individual economic benefits for waste collectors, but also include the largest organization to advocate for public policies favorable to the sector. Cooperatives are not themselves drivers of political change, but they can be insofar as they adopt broader practices for the defense of rights and transformational practices for society as a whole.<sup>64</sup> In this sense, platform cooperatives face the same challenge as traditional cooperatives: to remain economically viable in a competitive capitalist market while ensuring workers' rights, transparency in the use of customer data, ethical values, and democratic participation.

This challenge also presents itself to Cataki, which faces competition from recycling companies and, more recently, from other private ventures that have copied its business model. This is the case with the newly created Brazilian start-up Biothanks,<sup>65</sup> which operates similarly to Cataki, but charges a fee for the recycling service of waste collectors. Unlike Cataki, which is a non-profit, non-governmental organization, the start-up aims to profit from recycling, can access private equity and venture capital funds, and can scale up much faster.

So while Cataki needs to ensure a model of democratic organization from the point of view of participation and ownership, it also needs to ensure that it will have the strength to withstand competition from start-ups such as Biothanks. For this, it would must:

- Adopt models of organization and administration already used by traditional cooperatives that, in some form, also resemble those of private companies. This means that Cataki needs to have a fixed internal team of accountants, lawyers, publicists, and programmers in order to professionalize the enterprise and to survive the competition.

For this to be viable, Cataki needs, above all:

- Urgent sources of funding before its business is made unviable by profit-seeking competitors. These resources could come from the private sector, such as the packaging industry, but especially from the municipal public sector, since waste collectors perform a public service. This solution, of course, would depend on the political and economic will of these stakeholders. One limitation to accessing this kind of funding would be the registration at OCB, since legislation does not allow external funding for cooperatives.

Another solution would be for Cataki to:



### 3. CATAKI'S SIMILARITIES WITH PLATFORM CO-OPS AND ITS ACHIEVEMENTS

- Access cooperative incubators, such as the US Start.coop, since in Brazil there are no similar projects. To access foreign resources, however, Cataki would need to maintain its legal registration as an NGO, as in Brazil, cooperatives cannot access resources from international investors. This would not be an obstacle preventing Cataki from becoming a cooperative from an organizational perspective.

The necessary investment would be applied to improvements in the application itself, internalizing information about routes, recycled materials, and other data that, following the Platform Cooperative Principles, would need to be shared with workers themselves and managed transparently, avoiding the surveillance of work adopted by many platforms of the “on-demand” economy.

Another of Cataki's pressing needs is:

- The creation of protection mechanisms for the most vulnerable collectors, or those who are not car owners. These solutions could emerge from collaborative processes of software co-design and co-development in which collectors and users are consulted. The new version of the app launched in 2020 was developed in consultation with catadores, according to Mundano.

The organization could follow the path of becoming an online platform for traditional waste collector cooperatives, as the app already has 125 registered cooperatives. However, this model would maintain the exclusion of individual workers who do not wish to work for traditional cooperatives. Penetration among autonomous collectors is precisely Cataki's main achievement, and it should not be negated.

- Cataki could benefit from the exchange of knowledge and experience provided by the Platform Cooperative Consortium<sup>66</sup> and its global network of academic members and platform cooperatives. In this regard, platform cooperatives from other countries could make their suggestions and contributions to address some of the challenges cited in this report.

Given a global scenario of intensifying capitalist exploitation of labor, now made even more precarious by monopolistic digital platforms and the impacts of the COVID-19 pandemic, platform cooperatives present themselves as an alternative to the organization of labor if managed and administered in such a way as to generate both economic benefits for their workers and broader political benefits for societies.





# NOTES



## Notes

- 1 <https://www.cataki.org/pt/>.
- 2 Data provided by Cataki. March 23rd, 2020.
- 3 Trebor Scholz. Cooperativismo de Plataforma (São Paulo: Fundação Rosa Luxemburgo, 2016).
- 4 Scholz. 28.
- 5 The Brazilian economic crisis intensified after 2014, in a late reaction to the global financial crisis of 2008-2009 and amid a decline in commodity prices. While the Brazilian Gross Domestic Product (PIB [GDP]) grew 5.1% in 2008 and 7.5% in 2010, it began to slow down from 2012. In 2015 and 2016, there was a drastic drop in GDP of 3.5% and 3.3%, respectively. The years 2017 and 2018 were marked by small growth, of around 1%. For 2020, the World Bank expects a sharp drop of 8% for the Brazilian economy due to the impacts of the COVID-19 pandemic. World Bank: <https://bit.ly/2IUxkgl>.
- 6 While the 2000s were marked by economic growth and the adoption of social policies, from 2012, the economic crisis, in conjunction with policies of fiscal austerity, brought with it the rise of poverty in Brazil. From 2003 to 2014, the index of people that lived on up to \$1.90 per day had fallen from 11.1% to 2.8%. From 2014, the index began to rise annually, reaching 4.8% in 2017. World Bank: <https://bit.ly/2kjOZhi>.
- 7 Unemployment rates, which were under control in the previous decade, rose from 6.6% to 12.5% from 2014 to 2018. World Bank: <https://bit.ly/2kM4vTI>.
- 8 Pesquisa Nacional por Amostra de Domicílios (Pnad), Instituto Brasileiro de Geografia e Estatística (IBGE). February, 2019.
- 9 Empresas de transporte, plataformas digitais e a relação de emprego: um estudo do trabalho subordinado sob aplicativos. Juliana Carreiro Corbal Oitaven, Rodrigo de Lacerda Carelli, Cássio Luís Casagrande. Brasília: Ministério Público do Trabalho, 2018. <https://bit.ly/33GtQ2D>.
- 10 BBC: <https://bbc.in/3aidYqU>.
- 11 Projeto Caminhos do Trabalho: Tendências, Dinâmicas e Interfaces, Do Local ao Global. Universidade Federal da Bahia. Faculdade de Economia. Agosto de 2020. Levantamento sobre o Trabalho dos Entregadores por Aplicativos no Brasil <https://bit.ly/33HdPvE>.
- 12 Folha de S.Paulo: <https://bit.ly/30FJUSY>.
- 13 Folha de S.Paulo: <https://bit.ly/3a81WQy>.
- 14 BBC: <https://bbc.in/3gDnw1X>.
- 15 Despatronados (<https://despatronados.wixsite.com/cooperativa>); Señoritas Courier ([https://www.instagram.com/senoritas\\_courier/](https://www.instagram.com/senoritas_courier/)); Buscar Express (<https://www.facebook.com/buscarexpress/>); Ciclo

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- Courier (<http://ciclocourier.com.br/>); Feme Express ([https://www.instagram.com/feme\\_express/](https://www.instagram.com/feme_express/)).
- 16 Cataki: <https://cataki.org/pt/>.
- 17 The Oak Foundation is based in Geneva, Switzerland: <https://oakfnd.org/> and Humanitas360 is based in Denver, United States. Source: <https://humanitas360.org/>.
- 18 A free accommodation service created in the United States in 2004 (<https://www.couchsurfing.com>).
- 19 Jean-Claude Combessie. *O método em sociologia* (São Paulo: Edições Loyola,2004).
- 20 Organização das Cooperativas do Brasil (OCB): <https://www.ocb.org.br/historia-do-cooperativismo>.
- 21 ICA: <https://bit.ly/3gGUezp>.
- 22 OCB: <https://www.ocb.org.br/numeros>.
- 23 OCB: <https://www.ocb.org.br/numeros>.
- 24 Information obtained in interview with Mário De Conto, lawyer and director-general of the Faculty of Cooperative Technology (Escoop - Faculdade de Tecnologia do Cooperativismo). De Conto coordinates the research “Platform Cooperatives and the Legal Environment,” funded by the National Council for Scientific and Technological Development - CNPq and the National Cooperative Learning Service — SESCOOP.
- 25 Some cooperatives analyzed by De Conto research admit investors as members as a form of financing.
- 26 Some cooperatives analyzed by De Conto research have different classes of members.
- 27 Law Number 14.030. July 28th, 2020. <https://bit.ly/3iE9rSD>.
- 28 IPEA. Institute of Applied Economic Research. *Situação Social das Catadoras e dos Catadores de Material Reciclável e Reutilizável – Brasil*. Brasília, 2013.
- 29 Ibid.
- 30 Ibid.
- 31 IPEA. Institute of Applied Economic Research. *Situação Social das Catadoras e dos Catadores de Material Reciclável e Reutilizável – Brasil*. Brasília, 2013.
- 32 FIGUEIREDO, Fábio Fonseca. O desenvolvimento da indústria da reciclagem dos materiais no Brasil: motivação econômica ou benefício ambiental conseguido com a atividade? *Scripta Nova. Revista Electrónica de Geografía y Ciencias Sociales*. Barcelona: Universidad de Barcelona, 2012, v. 16, n. 387. Available at <<http://www.ub.es/geocrit/sn/sn-387.htm>> Acesso em 10 mar. 2015.
- 33 IPEA. Institute of Applied Economic Research. *Diagnóstico sobre os catadores de resíduos sólidos*. Brasília, 2011.
- 34 March 2020.
- 35 Ibid.
- 36 Brazil has a small number of large recycling industries that dominate the market and occupy the top



## END NOTES

- of the recycling value chain pyramid.
- 37 The participation of “middlemen” in the commercialization of the collected material is high, with 46% of associations and cooperatives using them on average. Source: IPEA. Instituto of Applied Economic Research. Situação Social das Catadoras e dos Catadores de Material Reciclável e Reutilizável – Brasil. Brasília, 2013.
- 38 Recycling is a term generally used to refer to the reuse of processed materials as raw material for a new product. Source: Associação dos Catadores de Papel, Papelão e Materiais Recicláveis de Araçatuba (ACREPOM). <https://bit.ly/2ITb4Ub>.
- 39 Information obtained in interview with Marislene Nogueira, coordinator of the Nenuca Institute for Sustainable Development project, a non-governmental organization that supports the formation of waste pickers’ cooperatives and associations in Minas Gerais.
- 40 Ibid.
- 41 Aldo Z. Benvindo. A nomeação no processo de construção do catador como ator econômico e social. 2010. Dissertação (Mestrado) – Universidade de Brasília, Brasília, 2010.
- 42 IPEA. Instituto de Pesquisa Econômica Aplicada. Situação Social das Catadoras e dos Catadores de Material Reciclável e Reutilizável – Brasil. Brasília, 2013.
- 43 Interview held in April 2019.
- 44 Interview held in June 2019.
- 45 Interview held in July 2019.
- 46 IPEA. Boas práticas de gestão de resíduos sólidos urbanos e de logística reversa com inclusão de catadoras e de catadores de materiais recicláveis. Brasília: Ipea, 2015.
- 47 Cataki Activities Report (February and August 2019).
- 48 Cataki Activities Report (February and August 2019).
- 49 Data from Cataki showed that the ratio of waste collectors with cars increased from 50 percent in February 2019 to 68 percent in July 2019.
- 50 Interview granted on February 22nd, 2019.
- 51 Data is a major means of competitiveness for lean platforms, non-physical services brokerage platforms. Nick Srnicek. Platform capitalism (John Wiley & Sons, 2017).
- 52 Performance Assessment of Pimpex, Pimp Nossa Cooperativa and Cataki. September 2019.
- 53 [https://www.catarse.me/viva\\_os\\_catadores](https://www.catarse.me/viva_os_catadores).
- 54 Scholz. Platform Cooperativism.
- 55 “Instead of spreading wealth and democratic decision-making, the extractive sharing economy funnels money and control toward the top.” Trebor Scholz. Uberworked and Underpaid: How Workers Are Disrupting the Digital Economy (Cambridge, UK and Malden, USA: Polity Press, 2017), 54.

## END NOTES

- 56 Results Report – Cataki (August 2019).
- 57 The minimum wage in September 2019 should have been R\$ 3.980,82, says Dieese. Source: <https://bit.ly/2KP6TSW>.
- 58 Bolsa Família is a federal government cash transfer program that aims to support families living in poverty or extreme poverty. Families with a monthly income of up to R\$700 are entitled to receive the benefit. Source: <https://bit.ly/34gKGVF>.
- 59 After the interviews were made in 2019, a new version of Cataki was launched in 2020, allowing customers to upload pictures of the recyclable material before they contact the collectors. The new version also allows all communication to happen inside the app.
- 60 Three of the interviewed collectors suggested that the app should have information about their routes; four said that many clients called to offer non-recyclable materials or recyclable materials with little or no value; two said they answered many calls from clients living in neighborhoods too far from their place of work.
- 61 Nick Srnicek points out that “lean platforms operate through a hyper-outsourced model, whereby workers are outsourced, fixed capital is outsourced, maintenance costs are outsourced, and training is outsourced.” Srnicek. *Platform Capitalism* (Cambridge and Malden: Polity Press, 2016), 120.
- 62 “It is not enough to copy corporate models and put in place a cooperative structure.” Interview with Nathan Schneider by Rafael Grohmann, Assistant Professor at the Universidade do Vale do Rio dos Sinos (Unisinos University), Brazil. (<https://bit.ly/2qZ6ma2>).
- 63 In chapter 11 of “Capital,” Karl Marx argues that by cooperating with others in a planned manner, the worker overcomes his individual limitations and develops his general capacity. Marx states that the social contact of collective work causes, in most productive work, the “emulation and particular excitement of vital spirits (animal spirits) which increase the income of individual workers.” “The reason is that man is by nature, if not a political animal, as Aristotle says, in all cases a social animal.” Karl Marx. *O Capital: crítica da Economia Política* (Livro 1. São Paulo: Boitempo, 2013), 401-405.
- 64 Marisol Sandoval argues that radical politics is not inherent to the cooperative structure, and that her research in the cultural sector has shown that the policy of any cooperative, therefore, depends on the policy of its members. Sandoval. “What would Rosa do? Co-operatives and radical politics,” *Soundings: A Journal of Politics and Culture*, (2016): 63.
- 65 Competitors of Cataki have already begun to emerge in the Brazilian market, but as for-profit enterprises. The start-up Biothanks, whose initial investments reached almost \$ 1 million, has its own payment system for the app, sets prices, and controls the collection routes. UOL: <https://bit.ly/2OUIs9a>.
- 66 <https://platform.coop/who-we-are/pcc/>.









**Platform  
Cooperativism  
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FOR THE  
COOPERATIVE  
DIGITAL  
ECONOMY