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Laws That Enable Partnerships: The Case of *Proyecto Pensilvania* in Bogotá, Colombia

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Abstract: Waste picking is an informal economy activity that has attracted a large amount of research across the social sciences. We contribute to the debate on informality and its institutional determinants through case study analysis. We present a unique partnership between waste pickers and firms operating in Colombia called *Proyecto Pensilvania*. We argue that two specific sets of laws made this partnership possible. The first grants legal recognition to the activity pursued by the waste pickers, who become “waste entrepreneurs.” This is a key initial step to bring informal sector workers into the realm of the formal economy. The second grants special legal protection to the associations of waste pickers when they compete for inclusion in the local waste management plans. This is a way to incentivize waste pickers to join associations. *Proyecto Pensilvania* decreases transaction costs, generates income for disenfranchised groups of individuals and limits environmental degradation. The regulatory reforms that led to its establishment can be imitated by other countries with sizable waste picker populations.

Keywords: laws, waste pickers, partnerships, transaction costs

1 Introduction

Damage to the physical environment is a problem that acutely affects urban areas in the developing world. It is often linked to poverty and inefficient waste management programs at the municipal level (cf. Todaro and Smith 2015, p. 499). With budget cuts and government bureaucracy often hindering cities’ attempts to

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implement effective trash collection, disposal, and recycling strategies, generations of so-called “waste pickers”¹ have often filled the void.

Waste picking is an informal economy activity that has attracted a large amount of research across the social sciences (cf. e. g. Birkbeck 1978; Parizeau 2015; Sicular 1991). The informal economy is “the part of the urban economy [...] characterized by small competitive individual or family firms, petty retail trade and services, labor-intensive methods, free entry, and market-determined factor and product prices” (Todaro and Smith 2015, p.349). Informal economy activities typically escape regulations such as those concerning personal and corporate taxation, and labor and safety laws. Webb et al. (2009) distinguish between illegal but legitimate activities on the one hand, i. e., not registered but viewed favorably by society (e. g. street-vending and at-home beauty salons); and illegal and illegitimate activities on the other hand, i. e., not registered and viewed unfavorably by society (e. g. drug dealing or human trafficking). Waste picking loosely falls into the first category, with variations across contexts concerning the degree of social acceptance of waste pickers.

Development scholars are increasingly aware that the informal economy is at the same time a symptom of underdevelopment, but also a key ally in the reduction of poverty and environmental degradation. The informal sector is, in fact, a source of jobs and wages for the world’s subsistence-level workers (Chen 2006). Galiani et al. (2015) show that in Colombia informal sector dealing and formal sector dealing are two alternative ways to conduct the same businesses, each with its associated costs and benefits.

This paper is based on fieldwork by one of the authors in Bogotá, Colombia, with an association of waste pickers, the Bogotá Association of Recyclers (ARB). The question we ask is: *What is the role of laws in enabling partnerships between the formal and the informal economy?* The case analysis shows that significant progress was made in recycling, in generating income for waste pickers, and in decreasing transaction costs when regulatory changes were introduced that granted recognition to the waste pickers and their associations. These laws ultimately made a partnership between a group of large firms operating in Colombia and the ARB, the *Proyecto Pensilvania*, possible. We choose Colombia, and in particular, its capital Bogotá, for the wealth of information available on its waste pickers. We believe that case studies like the one we

¹ Other alternative names found in the literature for these people are “scavengers”, recyclers (probably from the Spanish *recicladores*), and *catadores* (the Brazilian Portuguese appellation for waste pickers).

present in this paper are a useful means to investigate the consequences of regulatory changes in their actual, historical unfolding.²

Our paper offers an application of the methodology of Coase's *The Problem of Social Cost* (Coase 1960). Here Coase first laid out the field of interest of what came to be called the new institutional school: "The problem is one of choosing the appropriate social arrangement for dealing with the harmful effects" (p.18). In our case, we are interested in cost-effective ways to deal with the harmful effects of waste mismanagement and lack of recycling in large urban areas. The costs we are interested in decreasing are the costs of establishing and enforcing property rights over waste, what the literature refers to as *transaction costs*. Our analysis will show that some regulatory interventions have increased transaction costs by trying to hinder access to waste for those individuals who have easiest access to it, i. e. the waste pickers. This trend has been countered thanks to a series of ground-breaking judicial rulings that we discuss in the paper.

The paper is structured as follows. Section 2 presents our case study, with particular emphasis on the environment and on the actors – waste pickers and firms – that gave birth to *Proyecto Pensilvania*. Section 3 presents the regulatory framework within which waste picking takes place in Colombia, pointing to the specific laws that have made the partnership possible. In Section 4 we present a general framework for such partnerships to arise. In Section 5 we take a comparative view of markets, governments and "hybrids" as different solutions to the problem of the harmful effects of waste. Final remarks follow.

2 The case study: *Proyecto Pensilvania (PP)*

2.1 Method and data

The case study is based on interviews conducted by one of the authors (Martinez) in Bogotá, Colombia, with staff of the Bogotá Association of Recyclers and *Proyecto Pensilvania*. The interviews took place in January 2011. Originally designed as a 6-month pilot project, the successful operation of *Proyecto Pensilvania* has led to its being indefinitely extended (cf. also Martinez 2012). Táutiva and Olaya (2013)

2 Alston (2008, p.104) discusses the usefulness of case analysis (or "analytical narratives", as cases are occasionally referred to in the new institutional literature) for the study of institutions and institutional change.

presents a summary of interviews with waste pickers from Bogotá. Their paper is a valuable source of information on the perceptions of the waste pickers regarding the *Proyecto*.

2.2 Colombia

Colombia is currently classified as an upper-middle-income country in the 2013 edition of the World Bank's World Development Indicators.³ This represents a recent conquest for Colombians, who “have been in absolute poverty and plagued by violence and insecurity” for most of their history (Robinson 2016, p. 1). As in many other Latin American countries, income is very unequally distributed in Colombia. The bottom 20 % of the income earners appropriates 3.4 % of the Colombian total income, while the top 20 % of the income earners 58 % of total income (World Bank data from 2013).⁴ The poverty headcount ratio, the percentage of the population living below the national poverty line, was 28.5 % in 2014, a significant decline from the 49.7 % recorded in 2002.⁵ The income-based Gini coefficient for Bogotá, the largest urban agglomeration of Colombia, with current population estimated at 9.5 million inhabitants forecasted to increase to 10.5 million by 2025 (UN Habitat 2013, p. 157), is 0.61, well above the alert line set at 0.4 by UN Habitat (UN Habitat 2010, p. 73). 44.1 % of the working population of Bogotá worked in the informal sector in 2013 (cf. references in Abizaid 2015, p. 2), a percentage lower than in other cities of Colombia, but still sizable.

In a comprehensive assessment of the institutions of Colombia, Robinson (2016) points to “extractive facets of political institutions” as the key to understanding the persistence of poverty and violence in Colombia. Fraud, vote buying in elections and clientelism (before and after elections) are some of the causes, according to Robinson, of the extractive nature of Colombian political institutions. These dysfunctional aspects of the process that leads to the selection of the political class leaves, according to Robinson, parts of the Colombian society disempowered. The amount of money employed in clientelistic practices reduces, furthermore, the resources available for public good provision, such as waste management services – a possible reason why waste management has been an

³ Cf. <http://beta.data.worldbank.org/?locations=CO-XT>.

⁴ Cf. <http://databank.worldbank.org/data/reports.aspx?source=2&country=COL> and <http://databank.worldbank.org/data/reports.aspx?source=2&series=SI.DST.05TH.20&country=>.

⁵ Cf. <http://databank.worldbank.org/data/reports.aspx?source=2&series=SI.DST.05TH.20&country=s>.

issue of such great importance in Colombia. Another long-standing problem in Colombia is the violence associated with paramilitary groups and drug cartels. These problems are particularly felt away from the capital Bogotá, in the “periphery” of the country, as Robinson calls it.

Despite all its past and present problems, several metrics support the claim that Colombia has made significant steps in the direction of modernization and human development (improvements also documented in Robinson’s paper). The Human Development Index⁶ for Colombia has increased from 0.596 in 1990 to 0.720 in 2014. The Economic Freedom Index⁷ has grown from 5 in 1990 to 6.6 in 2013. Another index of the quality of the Colombian democracy is documented later in the paper when we describe the ability of the waste pickers to successfully challenge local and national laws in front of the country’s highest judiciary.

2.3 The waste pickers

In terms of waste management, the city of Bogota is divided into 6 macro-areas (or Exclusive Service Areas), licensed to private companies that are obliged by law to attend to different public services, such as trash collection, street cleaning and taking care of park space (Táutica and Olaya 2013, p.10).⁸ The entire country has long struggled to find a viable strategy for its residential waste, and episodes of waste mismanagement have filled the pages of the Colombian media for decades. The most infamous episode was probably the landslide at the Doña Juana Landfill (in the Bogotá area) in 1997, which dumped a huge amount of trash into a nearby river (Hedron 2006).

Waste pickers are key actors in the effort to reduce environmental degradation in Colombia, a country that has lacked for most of its history any form of recycling plan. It is estimated that 10 % of the country’s 22,000 tons/day of solid waste are recycled to a significant part due to the efforts of the recycling associations and informal waste pickers.⁹ Many metrics show how important

6 This is a composite index of human development reported every year by the United Nations Development Program. The index varies from 0 (lowest human development) to 1 (highest human development). Starting in 2010 the Index has been revised, but still roughly remains an average of an health index, and education index, and an income index. Cf. <http://hdr.undp.org/en/data>.

7 This is an index reported every year by the Fraser Institute, a Canadian think tank. Its components include the strength of private property and of the rule of law in each country. The index varies from 0 (lowest economic freedom) to 10. Cf. www.freetheworld.com.

8 Cf. <http://www.eltiempo.com/bogota/modelo-de-basuras-en-bogota/16465407>.

9 Cf. <http://asociacionrecicladoresbogota.org/>.

the work of waste pickers is. Cutting one ton of carbon dioxide emissions through recycling costs 30 % less than cutting the same amount of emissions through energy efficiency and 90 % less than wind power (Medina 2009). Recycling reduces greenhouse gas emissions from materials decomposing in landfills (Tellus Institute 2008). Waste pickers, furthermore, help save energy and trees through their resale of recyclable goods to intermediaries who in turn sell in bulk (by the ton) back to the industry for reprocessing.

The city of Bogotá is home to one of the oldest waste picker movements in the world. Bogotá has stood out in the last few years for its efforts to include waste pickers in the municipal waste management system, thanks also to the leadership of the former mayor Gustavo Petro (Samson 2015), and to a judiciary system that, as we later discuss, has often sided with the waste pickers. It is estimated that about 20,000 waste pickers work in this city (Táutiva and Olaya 2013; Parra 2015), diverting to recycling facilities more than 1,200 tons of materials every day (Parra 2013). About 60 % of the Bogotá waste pickers have at most a primary school education, and about 20 % are illiterate (García 2011, pp. 268 and 269 and references cited therein). About 57 % of the Bogotá waste pickers are estimated to be women (*id.*). Táutiva and Olaya (2013, p. 15) present some estimates of monthly sales of a sample of 152 Bogotá waste pickers. They estimate that about 50 % of their sample has monthly sales that are comparable to the Colombian minimum monthly wage. They also report that women waste pickers have lower wages than their male counterparts.

Waste picking has been for a long time a high-risk activity, especially in the past when it was largely conducted in landfills. Common problems are transmittable diseases; fires that sporadically erupt from the buried flammable gasses; truck accidents; avalanches of trash (cf. Cointreau 2006, for a detailed account). Waste pickers also typically face stigma and the uncertainty related to their ability to have access to the garbage in front of inimical laws by local and national regulators (García 2011, p. 269; Táutiva and Olaya 2013). This is also a population that is vulnerable to crime, a condition that became painfully clear in Barranquilla, Colombia, when it was discovered that several homeless people (among them waste pickers) had been murdered so that their cadavers could be sold to the medical department of a local university (Markus 1992).

2.4 The Bogotá Association of Recyclers (ARB)

When one of Bogotá's landfills closed in 1990, several informal recycling groups partnered with *Fundación Social*, a Catholic nongovernmental agency that provided financial and educational resources to the waste-picking community, to

protest the landfill's closing. Although unsuccessful in this attempt to keep the landfill open, the two groups' anti-government activism was later followed by the founding of the *Asociación Cooperativa de Recicladores de Bogotá* (ARB) in 1990 (Táutica and Olaya 2013; Ruiz-Restrepo and Barnes 2010). The foundation of ARB precedes any recognition at the legal level of the role of waste pickers in Colombia, and, as we illustrate, proved a fundamental step in the establishment of rights for the waste picking community. Two of the main objectives of ARB since its birth are to bypass the rent-seeking middlemen¹⁰ in the recycling value chain and to promote social acceptance of the waste pickers (Parra 2007; Samson 2009).

The ARB currently comprises around 20 recycling associations from various neighborhoods in the city of Bogotá, reason for which it is often referred to as a second-level organization in official documents. Its membership has varied over time, and it is currently estimated at approximately 2,000 waste pickers, i. e. about 10 % of Bogotá's 20,000-odd waste pickers (Táutica and Olaya 2013; Parra 2015). A reason for not joining the association often reported by waste pickers is the cost of attending membership meetings (García 2011, p. 271). The waste pickers that join the ARB report feeling safer and less subject to hassles by the local authorities thanks to the perceived benefits of the ARB membership card (García 2011, p. 272). Further reasons for joining are related to the regulatory changes introduced in the last few years in Colombia, discussed later in the paper, in particular those establishing that an effective way to involve the waste pickers in the waste management system is to create partnerships with associations such as the ARB. Being part of an association eases, more in general, the "voice" problem, allowing the costs of lobbying and challenging laws in Court to significantly diminish for the single informal workers (Hirschman 1970; cf. also Abizaid 2015).

10 In this paper we generally take the stance that bypassing the middlemen, and increasing the income of waste pickers, is a socially desirable project given the state of poverty of many waste pickers. A recent survey of waste pickers finds that, in Bogotá and in other conglomerates of the world, waste pickers have a generally negative perception of the role of middlemen (Dias and Samson 2016). In certain sectors of the economy middlemen can play, however, socially valuable functions. McCloskey (1985, pp. 207–217) shows how in the presence of supply variability of a commodity (e. g., coffee) due to environmental circumstances, middlemen by storing the commodity in the years in which it is abundant, and reselling it in years in which it is scarce, will stabilize prices and quantities and produce social gains. In our particular case, we have no evidence of middlemen storing recyclables: they are therefore closer to being pure intermediaries between a sparse group of people, the waste pickers, and the corporate buyers of recyclables. On the "virtues" of middlemen, cf. also Landa (1994, p. 5).

2.5 The partner firms

PP's corporate partners have comprised over time large multinational corporations such as *Natura Cosméticos* (personal-care), *Carrefour* (a French retailer which sold its Colombian unit to another retailer, *Cencosud*, in 2011), *Grupo Familia* (personal hygiene), and *Tetra Pak* (packaging). Predictably, the ARB sought a partnership with firms with complementary assets or capabilities (Oxley and Silverman 2008, p.220), in this case retailers and packaging companies.

Brazilian personal-care multinational *Natura Cosméticos* was the primary motivator behind PP. *Natura* contributed in fact more than one-half of the initial capital required to start the project (the other three initial corporate partners donated the rest).

2.6 The partnership

Proyecto Pensilvania (PP) was launched in March 2010 with US\$ 90,000 of corporate seed money. The partners operate a neighborhood recycling transfer center for the residential recyclables. The objective of PP is to sort through the different recyclable materials buried in the waste the pickers collect, and then sell the recyclable materials to PP's corporate partners, without intermediaries. This streamlined recycling process can in principle increase the proceeds of the waste pickers from the sale of the recyclables, at the expense of the revenues of the middlemen, the alternative outlet for the sale of the recyclables.

PP's operational model is straightforward. The ARB waste pickers collect paper, aluminum, glass, cardboard, tetra paks, and other cartons from their recycling routes in the city's residential neighborhoods.¹¹ They store the bags of recycled materials in small, neighborhood warehouses until a PP truck makes its weekly pick up. The ARB workers on the truck weigh the bags of recycled goods and transport them to the PP Warehouse and Transfer Station, the *Bodega Pensilvania*, located about 15 miles from Bogotá's downtown area, in an area of Bogotá called Pensilvania (whence the name of the project).¹² When the materials arrive at the *Bodega*, a dozen or so ARB workers weigh them again,

¹¹ Sorting through bags in sanitary landfills became illegal after the enactment of Decree 805 of 2005, prohibiting public access to landfills.

¹² A map can be found on the ARB website http://asociacionrecicladoresbogota.org/?page_id=397.

wash and sort them, and then compress them for purchase by the partner firms.¹³ The firms dispatch their trucks daily to pick up cleaned, sorted, and compacted recyclables. A breakdown of the materials recuperated in 2011 and brought to the *Bodega*¹⁴ shows that the most common materials were paper and carton products.

The allocation of duties chosen when the partnership was created entails that day-to-day operations are delegated to the ARB. The ARB oversees the administration of projects, personnel, budgets and the outreach relations of the association. Several of its members work as quality control agents, talking to members, solving problems before they get out of hand, and assisting the PP management in their tasks. The ARB executive leadership serves as a liaison between the manager of PP and the corporate partners. It also negotiates on behalf of the ARB members who are employed by the project and maintains an ongoing relationship with other partners such as the local parishes and banks.

PP was probably established as part of a process of co-specialization of the waste pickers and the firms (Oxley and Silverman 2008), in a context where, as we later show, it is very hard for corporations to claim and enforce ownership of waste and exclude waste pickers. The waste pickers access the organizational know-how of the partner firms and their interest in purchasing the recyclables at a fair price. The waste pickers report (Táutiva and Olaya 2013, p. 29) that selling to the PP warehouse is often the preferred option because payments are immediate, as opposed to occasionally higher, but often delayed, payments by middlemen. Táutiva and Olaya (2013, p. 38) report that the majority of the waste pickers they interview view positively PP. The waste pickers suggest as an area of improvement an increase in the price paid for the recyclables.¹⁵ The corporate partners might have wished to enter into the partnership due to the ARB's substantial amount of local expertise in recycling and in dealing with government officials. They might also have entered the partnership as part of their corporate social responsibility objectives.

The most innovative aspect of PP is its ability to create a bridge between firms and the urban poor, two sectors that rarely conduct transactions as equals

¹³ Cf. also <http://www.cempre.org.co/sala-de-prensa/noticia/una-bodega-de-reciclaje-que-es-ejemplo-de-tecnificacion-y-administracion>.

¹⁴ Available on the ARB website at <http://asociacionrecicladoresbogota.org/wp-content/uploads/2012/06/PRE-COMITE-ASESOR-ABRIL-12-DE-2012-1.ppt>.

¹⁵ One possible reason for the lower prices paid by PP is that PP bears costs associated with the trucks that pick up the materials from the recyclers. Táutiva and Olaya (2013, p. 19) report that some of the recyclers, who probably do not sell their materials to PP, have their own means of transportation.

(cf. Eldar 2014, for an analysis of this problem). This partnership has at the same time economic value, the recuperation of the recyclables and the incomes generated; social value, the recognition of the role of waste pickers; environmental value, in terms of decreased amount of garbage in landfills.

3 The regulatory framework around waste picking in Colombia

As in most countries in the world, public service provision, including waste management and recycling, is a highly regulated sector of the Colombian economy. Abizaid (2015) notices that two trends are apparent as one discusses the changes introduced in Colombia to the public service body of laws. A trend towards privatization, as part of the country's strengthening record of economic freedom and modernization. The other is a trend towards an increased recognition of the role of waste pickers and of the social, economic, and environmental value of waste. It is important to keep these trends in mind as we discuss regulatory changes.

The history of regulations of waste in Colombia, and Bogotá in particular, starts as early as 1875, when the first body (a group of "municipal watchmen") was charged with ensuring the city's cleanliness (cf. Ruiz-Restrepo and Barnes 2010, pp. 48–52 for a detailed chronology of events). In 1954 Bogotá became a capital district, and a comprehensive reassessment of the city's waste strategy was undertaken, including a shift from waste management as a health issue to waste management as a public service, and an entitlement of all citizens (*id.*). In 1958 a decision was made at the city level to establish EDIS, the city public services company. EDIS, fully owned by the capital district of Bogotá, became fully responsible for waste collection and disposal (*id.*). In 1993 EDIS was dissolved due to the excessive costs and low quality of the services.

Around the time of the dismissal of EDIS, some key legal reforms were introduced. In 1991 a new Constitution entered into force.¹⁶ The new Charter establishes that "Health services shall be organized in a decentralized form, in

¹⁶ The Political Constitution of Colombia is available on the website of the Bogotá Mayoral Office (<http://www.alcaldiaBogotá.gov.co/sisjur/normas/Norma1.jsp?i=4125>). All of the Constitutional Court rulings and laws cited in this section are also available on the same website (all legal sources were last accessed in March 2016). All translations are the authors' unless otherwise noted.

different layers of care and with the participation of the community” (Article 49). The Constitution, in an often quoted provision, also establishes that “The State shall promote conditions such that equality is real and effective and will adopt measures for discriminated against and marginalized groups” (Article 13). These two provisions, taken together, create the necessary constitutional pre-requisites for waste pickers to be acknowledged as legitimate economic actors in later judicial rulings, as we discuss below.

The provision of public services in Colombia found comprehensive treatment in Law 142 of 1994 (heavily amended over the years by Constitutional Court rulings and later legislative interventions). This law stipulates at Article 15 which entities can provide public services. They include: public service companies (art. 15.1); other physical and legal persons that provide public services (art. 15.2); the municipal authorities, when they take on public service provision directly (art. 15.3); and “authorized organizations” in small towns, rural areas or specific urban areas (art. 15.4). Article 17 of the same law dictates specific organizational forms for public service companies. Namely, “public service companies are stock corporations...” This provision has led some authors to claim that this law overall establishes that incorporated firms are the preferred public service providers (Parra 2013, p. 4). In the following paragraph the law makes an exception for those “decentralized entities,” territorial or national, whose owners do not wish to form a stock corporation. It establishes that they ought to adopt the form of “industrial and commercial enterprise.” The law also establishes (art. 40) so-called “Exclusive Service Areas,” zones that are contracted out exclusively, and for a defined period, to private companies. The decision regarding the contracting out of services is taken at the city-level.

The waste pickers are the notable absentees of Law 142. The category is, as a matter of fact, not even mentioned in the law. The waste pickers were, at the time Law 142 was enacted, already operating all over the city of Bogotá, due also to the massive migration from the rural areas into the Colombian capital.¹⁷ The role of waste pickers was at that point to salvage materials before the pickup by the contractors (Ruiz-Restrepo and Barnes 2010, p. 51). The lack of recognition of waste pickers in Law 142, together with the contemporaneous birth of the ARB, resulted in a legal battle between the waste pickers and the

¹⁷ Colombia was, until recently, the country with the highest number of internally displaced people in the world (close to 6 million people, cf. Robinson 2016, p. 6). The trend has been from the periphery to the urban areas, and to Bogotá in particular. Syria has recently surpassed Colombia (*id.*).

city of Bogotá that lasts to this day. This legal battle has not only value as a struggle of disenfranchised individuals for recognition, but also as an attempt to ensure that waste pickers, who enjoy *de facto* access to waste, can also obtain legal rights to access, decreasing transaction costs – a point we return to in the next section.

The ARB took issue with both articles 15.4 and 17 of Law 142 of 1994. In her testimony, the then-president of ARB Blanca Ruth Rodríguez Jiménez argued that the organizational requirements in the Law favored large for-profit-corporations, leaving associations of waste pickers out of the public service business in most urban areas. In its ruling (number C-741 of 2003) the Court found that it would not have been excessively onerous for associations to transform into stock corporations, given the absence of minimum capital requirements in Law 142; and that laws could restrict the scope of action of the “authorized organizations.” In light of Law 142 and of this ruling it remains impossible even today for the ARB to directly compete for public service contracts in the city of Bogotá.

Law 1259 of 2008 is another example of regulation inimical to the waste pickers. Art. 6 of this Law establishes that sorting through garbage after it has been placed for collection is an infraction, subject to sanctions. An earlier Decree (number 1713 of 2002) established that garbage, once deposited in containers, becomes the property of the municipality. Law 1259 hence only established sanctions for breaching property rights that had been earlier established in 2002. Waste picker and historical leader of the ARB Nohra Padilla challenged in Court this provision (together with other organizations and NGOs), and the case was eventually heard in front of the Constitutional Court of Colombia. The Court, in ruling C 793 of 2009, found that while the motivations behind the law might have been praiseworthy in terms of promoting “civic culture,” in practice, this provision affected the waste pickers negatively. The Court declared constitutional the law, with the understanding that it “cannot impede the effective exercise of the activity of the informal waste pickers.”

The Constitutional Court, in ruling T-724 of 2003, established that waste pickers enjoy the status of disadvantaged class, protected by article 13 of the Colombian Constitution (cf. also ruling T-291 of 2009). In ruling T-724 the Court found that the new Bogotá public service company, UAESP, created after the dismissal of EDIS, did not put in place affirmative actions for the waste pickers in its call for bids Number 001 of 2002. The ruling (Section 3) asked the city of Bogotá to include the waste pickers in future call for bids for the management of the city’s waste, “due to the fact that the activity that they [the waste pickers] pursue is linked to this service, with the aim of achieving real conditions of equality and comply with the social duties of the State.”

The occasion for this inclusion soon presented itself, when in 2010 a new call was announced (Number 001 of 2010). Again, the ARB challenged the UAESP in front of the Constitutional Court, alleging that the mandate contained in ruling T-724 of 2003 had not been taken into consideration in drafting the new call. The UAESP claimed instead that the terms of the call required bidding companies to include waste pickers as shareholders. The ARB had instead asked the UAESP to allow to participate in the call only companies that had created partnerships with the waste pickers. The ARB also took issues with the fact that the UAESP did not include any minimum shareholding requirement for the waste pickers in the call, leaving open the possibility that the waste pickers could receive only symbolic share allocations by the companies. In Auto (decree) 275 of 2011 the Court established that the mere shareholding requirement, be the shareholders the waste pickers or second-level organizations such as the ARB, is not an effective way to recognize the role of waste pickers as entrepreneurs.

In a ruling intervened one year earlier (T-291 of 2009), the Court had already established that waste pickers of the Colombian city of Cali had to be “effectively” involved in the waste management system of the city. This inclusion cannot be limited to favoring the employment of waste pickers in waste management companies, but must accommodate the fact that the waste pickers are “waste entrepreneurs” (*empresarios de la basura*, section 9.2.2). The Court established that the activity pursued by the waste pickers is not only legal but also entrepreneurial in nature. *We argue that this is the first key law (together with the other court rulings and laws that led to this decision) that made PP possible.* The economic rights of waste pickers include the right to pursue their activity on a self-employment basis, or through an association, rather than being simply employed by public service companies. In ruling T-291 the Court also decided that an effective way to include waste pickers in the waste-management process is to favor their organizing into associations.

A year later, in Auto 268 of 2010, the Court transformed the requirement that waste-management policies must favor waste picker associations into a “test” that can be used to assess laws and public contracts. The Court decided that: “A parameter that helps to determine whether there exists or not an actual inclusion of the population of waste pickers is the establishment of measures that favor associative forms and that do not only allow the employment of these people but give impulse and support so that these people become entrepreneurs of waste” (section 2.2.8). *We argue that this is the second key law that allowed PP to arise.* The Court incentivizes the waste pickers to form and join associations because these associations are likely to be sought after by the City and by private companies in the waste collection or recycling business. The Court ordered the

call for bids of 2010 to be amended in such a way that “a pre-requisite for the bidders is to include a second-level organization of the waste pickers of Bogotá” (*Decisión* section).

A year later, in Auto 275 of 2011 the Court reiterated the important role of associations of waste pickers: “(affirmative) actions have to tend to benefit associations of waste pickers, not as an end in itself, but as a means to overcome the conditions of exploitation and marginalization they [the waste pickers] endure... as well as to provide in an organized way complementary waste management services as ‘other providers’”. The Court re-established also that waste pickers are entrepreneurs: “the material participation of the waste pickers in the activities of recovery and reuse of waste is fundamental, not only as workers but as entrepreneurs of waste, in which they can employ the knowledge they have acquired during the years and capitalize on the environmental benefits that their activity represents for the city.”

4 Regulatory strategies for partnership creation

Partnerships like *Proyecto Pensilvania* exist within a complex institutional matrix. Institutions in this paper refer to those formal rules and regulations that, together with informal norms and conventions, constrain and incentivize individual choices (cf. Bowles 2004, pp.47–48). Laws, a term that refers in this paper to statutes, court rulings, municipal directives and any other regulation backed by government enforcement, take on a particularly significant role in developing countries (Allard et al. 2012), where changes in existing laws can bestow legality and legitimacy on disenfranchised individuals and their associations and attribute property rights where none previously existed. In *The Mystery of Capital* De Soto (2000) remarks that law is the instrument that “fixes and realizes capital” (p.157), in this case, the financial and human capital of the waste pickers.

Figure 1 provides a visual representation of the chain we envisage from unorganized waste pickers operating in the informal economy to the establishment of a partnership between a group of waste pickers and large firms. In between are two relevant changes in the legal code. The first set of laws bestows legality upon the waste-pickers and the activity they pursue. The second set of laws establishes the right of associations of waste pickers to be included in the waste-management and recycling chain.

Medina (2008) notes that “legalizing (informal) activities, preferably at the national level, is usually the first step toward improving the lot of the informal workers” (Medina 2008, p.2; cf. also Dias and Samson 2016, p.48). The legal

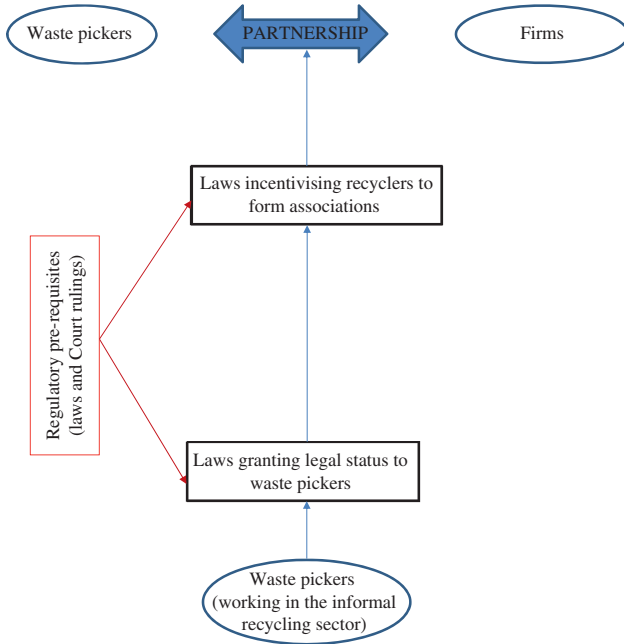


Figure 1: An illustration of the regulatory prerequisites for partnerships to arise between waste pickers and firms.

recognition of waste pickers represents the kind of “change creation through removal of constraints” that marks many entrepreneurial endeavors (Rindova et al. 2009, p. 479). Once the government drafts legislation into the legal code that transforms informal activities into formal activities, the choice set of the newly recognized individuals remains limited. As workers in the lowest rungs of the socio-economic ladder, the ability of waste pickers to work in the waste-management and recycling sector continues to be hampered by the lack of organizational structure, and possibly also by the small scale of each single waste picker’s activity. The second set of legal reforms is required so that these individuals are incentivized to join in associations. Key in this regard is the requirement that to be included in certain segments of the waste handling process, such as recycling, the waste pickers become members of formal organizations, such as associations or corporations.

To better appreciate the role of these two sets of laws in enabling partnerships like *Proyecto Pensilvania*, it is instructive to imagine what might have happened (or not happened) in the absence of these two sets of laws. Private organizations typically seek alliances with other organizations, rather than with

individuals, that have complementary capabilities (Oxley and Silverman 2008), and which are also part of the formal economy. A business alliance between firms and individual, informal workers seems hard to imagine. Even after the introduction of the first set of legal reforms granting formal economy membership, the waste pickers remain a sparsely organized group of individuals, again a problem for firms seeking a counterpart in the recycling business. The waste pickers need incentives to join associations, as the membership rate in the ARB shows that many waste pickers prefer not to become part of associations. The second set of laws establishing that municipal waste management plans should try to include waste picker associations is one such source of incentives for waste pickers to join into associations, creating a partner for the firms.

5 Markets, firms and hybrids

Our case analysis shows that there exists a relationship between the laws of a country and the organizational forms one is likely to observe in the economy. The partnership we study is neither a pure market solution, in the sense of a contract between independent market actors, nor a purely vertical, hierarchical arrangement. It is also not a purely public solution. The partnership is an instance of a *hybrid* arrangement (Oxley and Silverman 2008; Haigh and Hoffman 2014; Hahn and Gold 2014), a term that embraces different contractual and governance arrangements, such as alliances between firms, joint ventures, networks of companies in industrial districts, and, our case, a partnership between the formal economy and the informal (or recently “formalized”) economy.

The four discrete institutional arrangements the literature has described, markets, hierarchies, governments and hybrids (Williamson 1991), are all in theory capable of tackling the harmful effects of waste mismanagement and lack of recycling. Transaction costs are the metrics used in institutional analysis to evaluate the ability of these different arrangements to achieve socially desirable goals. We follow Allen (1991) in defining transaction costs as the costs of establishing and maintaining property rights, as opposed to other popular definitions that point to costs of acquiring information about one’s business partners or the costs of mistakes due to cognitive limitations. While cognitive limitations and the scarcity and costliness of information certainly play a role in the creation of the partnership we describe in this paper, the most interesting and relevant costs are the costs of establishing property rights over waste, this being after all the chief pursuit of the main actors of our case study, the waste pickers and the firms.

Decree 1713 of 2002 establishes that the property rights over waste belong to the municipal administration, once waste is deposited in the municipal garbage containers (Article 28). At the same article the law establishes that “unless the territorial entity determines otherwise, it is understood that this entity transfers property to the person providing the cleaning service or the complementary activities.” The laws that have amended over time decree 1713 (e. g. the already discussed decrees 1505 of 2003 and 2981 of 2013, and Auto 587 of 2015) have not changed the basic property rights assignment to the municipal authority, increasingly recognizing, however, the right of waste pickers to *access* waste.¹⁸

The right to access, together with the right to dispose and transfer, are the key components of the bundle of rights we call *property* (Merrill and Smith 2011). As a material that often lies on the streets or in open containers, regulating access to waste is costly. This is a problem that waste shares with Common Pool Resources (Ostrom 1990), i. e. resources for which it is impossible or very expensive to prevent use by unauthorized individuals. Given the difficulties of preventing access to waste, one must conclude that the waste sector is characterized by high transaction costs, in light of our definition. As typical of any positive transaction cost (Coasean) world, legal rules are very likely to matter both for the possibility of achieving an efficient outcome and for the distribution of resources.

Any approach to the problem of the harmful effects of waste that tries to exclude the waste pickers is bound to have high associated transaction costs. The waste pickers are in fact the ones with a capillary knowledge regarding where the garbage is and the location of the most easily and profitably recycled materials. Furthermore, the sheer number of waste pickers, and the constitutional protection they enjoy would make any attribution of exclusive property rights over waste to firms, or to a contractual agreement without integration among firms, fragile and costly. The solution that appears most viable is a partnership that involves the waste pickers, of the kind we have described in this paper.

6 Conclusion

In this paper, we discuss the role of two specific sets of laws in enabling partnerships between waste pickers and a group of large firms. Regulatory reforms

¹⁸ Cf. e. g. Auto 587 of 2015, stressing the importance of “certain and safe access to the collectible material as a right of the waste pickers”.

introduced in Colombia: a) established waste pickers as legitimate economic actors of the formal economy and as “entrepreneurs”; and b) incentivized waste pickers to form associations by granting special legal protection to these associations when they compete for inclusion in the local waste management plans. The result is a partnership that creates economic, social and environmental value. Promoting similar partnerships should be a priority for the regulators of countries such as India, Brazil, and Peru with large waste picking populations.

Claiming that the regulatory changes we describe in the paper were intended from the start to produce partnerships such as PP is implausible, as endogenous responses are the result of many institutional pressures as well as motivations of those involved (Alston 2008), such as the partner firms’ Corporate Social Responsibility strategy. The modernization of the Colombian society we have documented in Section 2 has likely played a role in favoring the organization of waste pickers into associations and in bringing increased attention to the problems waste pickers face.

We have not discussed the ideological reasons why the judiciary was more clearly favorable to the demands of the waste pickers (and to transaction cost considerations, possibly) than the legislature and some municipal administrations. A possibility is that the national regulators, and some mayors of Bogotá, had an ideological allegiance to a market-only approach to waste handling and recycling, a product of what is often referred to as “neoliberalism.” It is also possible that some regulators might have been sensitive to capture by large corporations that have vested interests in the garbage collection and disposal sector, in a framework of extractive political institutions such as Colombia.

One cannot ignore some specificities of our case study that might limit the applicability of our conclusions regarding the crucial role of laws in enabling the birth of hybrid arrangements. Olson (1965) describes the challenges that any group of individuals faces in advancing an agenda that will benefit everyone in the end, much like a public good benefits everyone regardless of whether one has paid for the good or not. Several aspects of our story might have eased this collective-action problem. First, the claim of the waste pickers was relatively homogenous, i. e. being able to access waste in safety. Second, as already remarked, the judiciary system of Colombia proved receptive to the requests of the waste pickers.

To conclude, several authors (e. g. Hahn and Pinske 2014; Forsythe 2007) have expressed the concern that cross-sector partnerships designed to alleviate environmental degradation problems might be unstable due to competition for legitimacy and capabilities within the arrangement. It is left for future research to establish if partnerships in this sector of the economy have lower long-term survival rates compared to companies in the same sector or municipal public-service agencies.

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