

**MSc Programme in Urban Management and Development**

Rotterdam, The Netherlands

October 2017

**Thesis**

Title: The influence of institutions in recycling markets, the case of  
Prishtina – Kosovo

**Name: Cindy Paola Garcia Buitrago**

Supervisor: Julia M. Skinner MSc.

Specialization: Managing and Financing Urban Infrastructure

UMD 13

**MASTER'S PROGRAMME IN URBAN MANAGEMENT AND  
DEVELOPMENT**

**(October 2016 – September 2017)**

**The influence of institutions in recycling  
markets, the case of Prishtina – Kosovo.**

**Cindy Paola García Buitrago  
Colombia**

**Supervisor: Julia M. Skinner MSc.**

**UMD 13 Report number: 1013  
Rotterdam, October 2017**

## Summary

The current thesis analyses the recycling activities in Prishtina, Kosovo. Punctually it focuses in the relation between the institutions and the recycling market of paper and plastic. The objective was to identify how the laws and policies (considered as institutions) influence the market, whether or not there are incentives or disincentives towards the companies and to the different stakeholders that participate in the recycling value chain of the city.

In order to conduct the research, the author chose the case study as a research strategy. It allowed the researcher to understand the particular characteristics of the context that had an impact on the variables of study. Likewise, the selected data collection methods were intended to mix primary and secondary data, the methods were the semi-structure interviews and the content analysis. In this sense, the researcher could add validity and reliability to the research by cross-checking information, and by triangulating documents with the responses from the different stakeholders of the recycling market in Prishtina.

The study found that Prishtina and Kosovo have some of the institutions (laws and policies) recommended by the literature in order to boost recycling, however, there is a mismatch in the implementation. As it will be described, some of the reasons behind this finding are related to the contextual particularities of the country, such as the decentralization progress, and the lack of law enforcement. Similarly, the findings also concluded about the conditions of the market, the presence of market failures and the undeveloped value chain, which derives from the existent of incentives and disincentives for the private sector. Finally, the study also concludes about the positive and negative influence of the laws and policies towards the market, as it was analysed, few of them have facilitated the emergence of a market, while the majority of the institutions are constraining it.

Finally, the author offers a set of recommendations that could be implemented to increase the recycling rate in the city. They are in relation to the cooperation with the private sector, not only to start new actions but also to provide the right incentives. They also relate to information, from the gathering of data for decision making, to the availability and accessibility of it for future investors.

## Keywords

Waste management, recycling markets, institutional analysis, Prishtina, Integrated Sustainable Waste Management Framework

## Acknowledgements

This thesis is dedicated to different groups of people that I have luckily met throughout my life.

First of all, my family. My father, mother and sister have been an incredible support during my whole life and it is for them that I can write this words. The academic degree this thesis pursues is also a degree for them, for being always supportive, for loving me, for being generous and for always trusting in my personal and professional capacities.

Likewise, I want to thank Eduar and Rocio, friends who transmitted to me the passion of working for others and for the long-term benefit of society. It is for them and our adventures with non-governmental organizations that I was able to learn English and to find sense in life by devoting myself to the public service.

Second of all, I want to dedicate this thesis to Qemile, Albanika, Drita and Shkëmbi, group of inspiring young Kosovar professionals that love the city of Prishtina and helped me during my fieldwork. Different from others, they are proud of who they are, where they come from and most importantly, they are willing to contribute with the betterment of the city and country. Thanks to them I could get to know more about the interesting complexities of the Balkans, and the challenges of a post-conflict scenario.

Finally, I want to acknowledge the support of the friends the life brought to me during the Master program. Inspiring, smart and extremely valuable people that helped me to get to know myself better, that taught to share, to welcome diversity and learn from it, the friends that were around me when I needed a supportive word, a hug, when I wanted to laugh, to study, to have fun, to share ideas, and to explore.

## Abbreviations

EU	European Union
EIA	Environmental Impact Assessment
GIZ	German Agency for International Cooperation
IHS	Institute for Housing and Urban Development
ISWM	Integrated Sustainable Waste Management
JICA	Japan International Cooperation Agency
KLMC	Kosovo Landfill Management Company
MESP	Ministry of Environment and Spatial Planning
NGO	Non-Governmental Organization
NATO	North Atlantic Treaty Organization
OECD	Organisation for Economic Co-operation and Development
USAID	United States Agency for International Development
UNMIK	United Nations Mission in Kosovo

# Table of Contents

<b>Summary.....</b>	<b>iii</b>
<b>Keywords .....</b>	<b>iii</b>
<b>Acknowledgements .....</b>	<b>iv</b>
<b>Abbreviations .....</b>	<b>v</b>
<b>Table of Contents .....</b>	<b>vi</b>
<b>List of Charts.....</b>	<b>viii</b>
<b>List of Figures.....</b>	<b>viii</b>
<b>List of Tables .....</b>	<b>viii</b>
<b>Chapter 1: Background and Problem Statement .....</b>	<b>1</b>
1.1 Background.....	1
1.1.1 Brief context of Kosovo .....	2
1.2 Context of Prishtina .....	4
1.3 Problem statement .....	5
1.4 Research Objective .....	6
1.5 Provisional Research questions .....	6
1.6 Significance of the Study.....	6
1.7 Scope and Limitations of the Study .....	7
<b>Chapter 2: Literature Review / Theory .....</b>	<b>8</b>
2.1 Integrated Solid Waste Management Framework .....	8
2.1.1 Dimensions of the ISWM.....	9
2.2 Institutional Theory .....	10
2.2.1 Institutional economy.....	10
2.2.2 New Institutionalism .....	11
2.3 Recycling.....	13
2.3.1 Recycling Market .....	14
a) Recycling Value Chain.....	14
b) Formality and Informality in the recycling value chain .....	15
c) Market conditions.....	17
2.4 Institutions in the recycling markets.....	18
2.5 Conceptualization .....	20
<b>Chapter 3: Research Design and Methods .....</b>	<b>21</b>
3.1 Revised research questions .....	21
3.2. Variables.....	21
3.2.1 Independent Variable – Institutions .....	21
3.2.2 Dependent Variable – Recycling market.....	22
3.3 Operationalization .....	22
3.4 Case study as a research strategy .....	24
3.5 Data collection methods .....	24
3.6 Sample size and selection .....	25
3.7 Validity and Reliability .....	28
3.8 Data Analysis Techniques .....	28
<b>Chapter 4: Presentation of data and analysis.....</b>	<b>30</b>
4.1 Introduction .....	30
4.2 General Findings.....	30
4.2.1 Institutional Background.....	30

4.2.2 The role of the international cooperation in the institutions around recycling of paper and plastic in Prishtina. ....	31
4.2.3 Decentralization of the waste management service in Prishtina. ....	33
a) National and Local Competencies towards municipal recycling of paper and plastic. ....	34
4.2.4 A short mention about the recycling market of paper and plastic in Prishtina. ....	37
4.3 Specific findings.....	39
4.3.1 Variable Institutions.....	39
a) Dimension: Rules.....	40
b) Dimension: Norms.....	42
c) Conclusion.....	43
4.3.2 Variable Recycling Market.....	43
a) Dimension: value chain of recycling.....	43
b) Dimension: market conditions.....	48
c) Conclusion.....	51
<b>Chapter 5: Conclusions and recommendations .....</b>	<b>53</b>
5.1 Introduction.....	53
5.2 Research questions.....	53
5.2.1 What are the institutions around the recycling market in Prishtina?.....	53
5.2.2 What are the differences in the recycling market of plastic and paper in terms of quantities, market conditions and value chain? .....	54
a) Quantities.....	54
b) Value chain of recycling.....	54
c) Market Conditions.....	54
5.2.3 Have the institutions boosted the recycling market of plastic and paper in Prishtina?.....	55
5.2.4 How do institutions affect the paper and plastic recycling markets in Prishtina? .....	55
a) Positive influence.....	56
b) Negative influence.....	57
c) No influence.....	57
5.3 Final Conclusion and Recommendations .....	57
5.3.1 Recommendations.....	58
<b>Bibliography .....</b>	<b>60</b>
<b>Annex 1: Semi-Structure Interviews Guides.....</b>	<b>64</b>
<b>Annex 2: Reviewed Documents.....</b>	<b>72</b>
<b>Annex 3: Triangulation Table .....</b>	<b>74</b>
<b>Annex 3: IHS copyright form .....</b>	<b>80</b>

## List of Charts

Chart 1: Composition of household waste .....	5
---	---

## List of Figures

Figure 1 - Integrated Sustainable Waste Management Framework.....	10
Figure 2 - Recycling value chain.....	15
Figure 3 - Formal and informal interaction in the solid waste management service .....	17
Figure 4 - Snowballing sampling .....	27
Figure 5: First Stage of the Analysis .....	29
Figure 6: Second Stage of the Analysis .....	29
Figure 7: Structure of Chapter 4.....	30
Figure 8 - Recycling value chain in Prishtina .....	38
Figure 9 - Triangulation Process .....	39
Figure 10 - Extent of the informal sector in the value chain of recycling.....	45
Figure 11 - The influence of institutions in the recycling market of paper and plastic.....	56

## List of Tables

Table 1: Comparison of waste amounts for landfilling and recycling in Austria, Denmark, Slovenia, Croatia and Kosovo .....	3
Table 2 - Purposive Sampling .....	26
Table 4- Number of times there is a mention about harmonizing the local laws with the EU's directives.....	32
Table 5 - Indicator No. 2 "Existence of the principle of Extended Producer Responsibility" .....	32
Table 6: Interviewees' responses when asking about information, former policies and programs .....	33
Table 7 - National and local competencies on waste management and recycling according to the National Law on Waste .....	34
Table 8 - Documents and answers on the decentralization process .....	35
Table 9 - Indicator No. 20 "Number of companies that formally process and export plastic and paper in Prishtina".	37
Table 10 - Results for the dimension of Rules.....	40
Table 11 - Results for the dimension of Norms.....	42
Table 12 - Results for the dimension of value chain of recycling .....	43
Table 13 - Results for the dimension of Market Conditions.....	48



# Chapter 1: Background and Problem Statement

## Introduction

This chapter will attempt to place the reader into the researcher's mind. In that sense, the upcoming pages will be dedicated to understand the importance of recycling in the contemporary urban context. This topic is analysed in Prishtina - Kosovo, a European country classified as a lower middle-income economy according to the World Bank<sup>1</sup>. The following sections will describe the socio-political situation of the city, the waste generation and recycling situation, the objective, and the research question that guided the present exploratory thesis.

### 1.1 Background

The history of urbanization allows scholars to understand the cities as places where agglomeration of people, activities, politics, religion, and markets happen (Scott and Storper, 2014, Duranton and Puga, 2004). At the same time, the interactions that occur in the cities are defined as complex systems (Bettencourt, 2013), in which, the isolated analysis of one aspect of the city is outdated. Cities can be understood as the agglomeration of networks (p.6), where the change in one system might lead to a change in another one, an example of the mentioned is the repercussion of the economic growth and population on the waste generation.

“As cities grow physically and economically, business activities and consumption patterns increase the quantity of solid waste generated” (GIZ, 2017, p.35). According to the World Bank, by 2012, it was considered that 3 billion people were living in urban areas, and were generating 1.3 billion tons of waste per year (World Bank, 2012). Likewise, the same report estimated that by 2025 the urban population would increase to 4.3 billion and it could generate around 2.2 billion tons of waste yearly (p. 11).

In terms of income, some researchers (Mazzanti, Montini, et al., 2008) have identified that the waste generation in developed countries is higher than the waste generation from developing countries. The latter can be seen internationally. In 2012, the major waste generators were the OCDE countries, who shared almost half of the total world's waste, “while Africa and South Asia figure as the regions that produce the least waste” (World Bank, 2012, p. 10). Europe follows the same pattern, in 2014 the European Union (hereinafter “EU”) members amounted 2.598 million tons, from which “the smallest EU member states generally reported the lowest levels of waste generation and the larger ones the highest” (European Commission, 2016)<sup>2</sup>.

---

<sup>1</sup>World Bank, 2017. World Bank Country and Lending Groups. Available at: <https://datahelpdesk.worldbank.org/knowledgebase/articles/906519> [Accessed 2017].

<sup>2</sup> The European Commission is the executive body of the European Union. Its mandate allowed the commission to make decision among the members in relation to politics and strategies.

In such a growing context, the waste management policies become important. Over the years, different drivers have historically arisen demanding a better waste management with a high priority on waste minimization. In the beginnings of the 1900's the main driver was the hygiene and the prevention of diseases in cities, later on, the sustainable development agenda, the increasing environmental protection awareness, and the institutional responsibility have demanded a more responsible and comprehensive way of managing the waste of cities (Wilson, (2007).

Within this comprehensive approach, the importance of recycling has also arisen as a meeting point from the private and public sector. According to Scheinberg, the interest of the cities on promoting recycling is not originally driven by the government initiative, on the contrary, the emergence of the recycling sector is mainly driven by the attention of the private sector towards the remaining market value of waste. In this sense, the recycling activities have been mainly fostered by the market, and followed by the government interest on the conservation of natural resources, the added value of the activity for developing countries, and the cost reduction of waste landfilling (Scheinberg, 2011).

An example of the latter, is the European countries. In terms of waste management, the EU has introduced long-term regional regulations under the concept of waste hierarchy, which prioritizes the prevention, reuse, recycling and recovery of waste when planning about waste management. The ultimate goal is to achieve "higher levels of recycling and to minimize the extraction of additional natural resources" (European Commission, 2016). As a result of the implementation of this regulation in every country, the landfilled waste "in 2014 was 16 % lower than it had been in 2004. And, the quantity of waste (...) recycled or used for backfilling<sup>3</sup>, grew by 20.1 %, from 890 million tons in 2004 to 1.069 million tons in 2014" (European Commission, 2016).

However, the positive numbers not always represent the real situation of every country in Europe, the directives and policies are not always easy to follow due to the disparities of the local context in each country. This is precisely the case of Kosovo, a country that despite its efforts of following the EU's directives does not reach the same recycling performance.

### **1.1.1 Brief context of Kosovo**

The Republic of Kosovo is the newest country in Europe, with a widely recorded history about the breaking down of the former Socialist Federal Republic of Yugoslavia and its aftermath war in the Kosovo territory from 1998 to 1999 (Ruijsink, 2005, Garstka, 2009, Boussauw, 2011). After the war the country has managed to move from a war to a peace context<sup>4</sup>. From

---

<sup>3</sup> According to the same source, backfilling is the use of waste in excavated areas for the purpose of slope reclamation or safety or for engineering purposes in landscaping.

<sup>4</sup> The Lund Curve offers a theoretical framework to analyze conflicts. It defines war as a sustained fighting between organized armed forces. It also defines stable peace as a relationship of wary communication and limited cooperation (e.g. trade) within an overall context of basic order or national stability.

2001 onwards, with the establishment of the United Mission on Kosovo and the assistance of international cooperation agencies such as GIZ<sup>5</sup> and USAID<sup>6</sup>, the country established a new democratic regime and has progressively built its national authorities, a system of laws and policies, which facilitated its independence declaration in 2008<sup>7</sup>.

After its independence, the country has kept on receiving international aid in the direction of capacity building, and has vigorously tried to build the country by following the European Union's directives, including the planning of the solid waste management by following the waste hierarchy concept. However, despite the international aid, the country faces some challenges in waste management and recycling. As it can be seen in the Table No.1, in comparison with some EU members, Kosovo is the country that landfilled the most and diverts the least to recycling:

**Table 1: Comparison of waste amounts for landfilling and recycling in Austria, Denmark, Slovenia, Croatia and Kosovo**

2008	Austria	Denmark	Slovenia	Croatia	Kosovo
Number of Inhabitants (millions)	8.1	5.4	2	4.45	2.3
Waste collected for landfilling	28.5%	5%	73%	89%	90%
Waste collected for recycling	34.3%	14%	10%	10%	9%

Source: (Strategy of the Republic of Kosovo on Waste Management 2013-2022, p. 14)<sup>8</sup>.

Additionally, different from the other countries, an informal waste-picker sector has arisen in the country. It is composed of the ethnic minorities of Kosovo (Roma, Ashkali<sup>9</sup>, and Egyptians - RAE). The reasons why they have engaged in the waste picking activity are not completely clear since there has not been further research about the topic, nevertheless, according to Moscoso (2015) the sector has emerged due to the mix of two factors. The first factor is the

---

<sup>5</sup> The prioritized pillars of the German government in Kosovo are: sustainable economic development, public administration, democracy and civil society, and lastly the improvement of energy services.

<sup>6</sup> The government of Kosovo and the government of the United States of America agreed in the following cooperation actions: rule of law and governance, activities to increase investment and employment in the private sector, and programs for the improvement of the human capital in Kosovo. (<http://www.president-ksgov.net/en/news/the-government-of-the-usa-continues-to-support-kosovo-through-usaid>)

<sup>7</sup> In 2008 the government of Kosovo declared its independence. So far, 111 States have recognized its status, however some other States have not, including the bordering countries of Serbia and Bosnia-Herzegovina.

<sup>8</sup> For the sake of clarification, where I do not specify a source in tables, figures, charts and diagrams I am the source.

<sup>9</sup> This community can be defined as Balkan Egyptians with Albanian ethnicity.

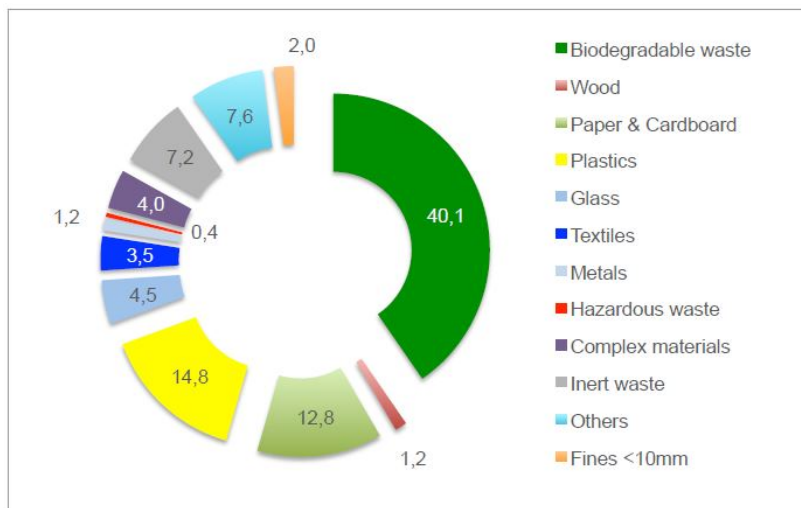
lack of qualification and certification of the RAE population, which has undermined their access to formal jobs. As a consequence, given the informal characteristics of the sector, and the existing demand for recyclable material, the waste picking activity shows up as an alternative to make a living. There is not official information about the number of people engaged in waste picking, however from Moscoso's thesis there is a "high number of waste pickers competing in a small market such as Kosovo"(2015, p.45).

In order to properly analyse the recycling sector in Kosovo, it was necessary to narrow down the area of study. In this case, the research was undertaken in Prishtina, where the above-mentioned characteristics also occur. In terms of waste generation, the city superseded the country average, while in the country the waste generation is 0.9kg/capita/day, in Prishtina the average is 1.4kg/capita/day (GIZ, 2017). Additionally, the city is located in the region with the highest amount of landfilled waste (Strategy of the Republic of Kosovo on Waste Management 2013-2022, 2013). Finally, regardless being the city that generates the highest amount of waste, it also has the presence of waste-pickers, which gives a sense of the existence of a recycling market around the city.

## **1.2 Context of Prishtina**

Prishtina is a city of approximately 400.000 inhabitants (Krasniqi, Nushi, et al., 2013, p.86) with an increasing waste generation. In 2014 the amount of collected waste was 59.219 ton/year, in 2015 it was 60.603 ton/year, and in 2016 it was 66.176 ton/year (Dukagjin, 2017). From this generated amount the "75% of the waste is recyclable, 42% organic waste, and 33% other recyclable materials" (Prishtina Municipal Solid Waste Management Plan 2012-2016, 2012,p. 9). The composition of the waste is diverse, Chart No. 1 shows a wide identification of the waste streams in the city,

**Chart 1: Composition of household waste**



Source: Prishtina Municipal Solid Waste Management Plan 2012-2016

As it can be seen, biodegradable waste, plastics, paper and cardboard account for the major part of the generated waste in the city. This waste is collected and transported to the Mirash landfill facility<sup>10</sup> by the regional public owned enterprise Pastrimi. This company is the only one that provides street cleaning and curbside collection<sup>11</sup> in seven municipalities<sup>12</sup> including Prishtina. According to the GIZ (2017), “the collection coverage of the municipality of Prishtina is almost around 100% of the city” (p, 41).

In regards to the Mirash landfill, it is operated by the Kosovo Landfill Management Company (KLMC), “an independent company owned by the Government of Kosovo” (GIZ, 2017, p. 15). KLMC has managed to overcome the operational challenges the landfill had faced since its opening in 2004, however, its capacity is expected to be full by 2020 (Prishtina Municipal Solid Waste Management Plan 2012-2016, 2012).

As such, the municipal waste management system in Prishtina is mainly focused in improving the waste management service by focusing on the components of collection, street cleaning, and disposal. In terms of recycling, it is the private sector the one that undertakes this activity in a blurred distinction between formal and informal practices (Marina Moscoso, 2015)

### 1.3 Problem statement

There is a mismatch between the national efforts of achieving the EU’s directives on waste management and the traditional focus of the municipality of Prishtina on improving the waste

---

<sup>10</sup> Kosovo has six regional landfills. Mirash in is the one in the Prishtina region. The other five are Ferizaj, Gjilan, Mitrovica, Peja and Prizren.

<sup>11</sup> According to Ibrahim Krasniqi, and advisor to the Kosovo Assembly, curbside collection is the allocation of community bins and adequate storage facilities in the urban areas that will be store the waste until they are collected by the company in charge.

<sup>12</sup> The other municipalities are: Fushë Kosova, Obiliqi, Lipjan, Drenas, Graçanica and Podujevo

collection and transportation. However, the presence of a recycling value chain demonstrates that there is a market for the recyclable material in the city.

In view of this, what Johnstone and Tilly argue brings relevance to the present research. “Prior to (or simultaneous with) introducing targeted recycling policies, governments can undertake a wide variety of policy reforms in order to ensure that the rate of recycling of waste is optimal” (p.170). In that sense, the main aspect of understanding the recycling market is to identify the incentives that a reform could generate in the recycling value chain. The “effects may be even more important than directed recycling policies” (Johnstone and Tilly, 2006, p. 174).

Therefore, with the aim of understanding the characteristics of the dynamics around the recycling market of Prishtina, its conditions and value chain, the present research will dive into the incentives and effects that the current institutions have generated towards the recycling market in Prishtina.

## **1.4 Research Objective**

This research aims at explaining the influence of the national and local institutions on the promotion of recycling in Prishtina. Punctually, what are the current incentives/disincentives and how are they affecting the emergence of a recycling market for two of the current recycled materials, plastic and paper.

## **1.5 Provisional Research questions**

How do institutions affect the paper and plastic recycling markets in Prishtina?

Subquestions:

- Which are the institutions around the recycling market of paper and plastic in Prishtina.
- What are the differences in the recycling market of plastic and paper in terms of quantities, market conditions and value chain?
- What type of influence have institutions had in the emergence of a recycling market of plastic and paper?

## **1.6 Significance of the Study**

In 2016, the international conference Habitat III<sup>13</sup> took place in order to define the New Cities Agenda. Under the “transformative commitment for sustainable urban development” of it, the UN members agreed on the promotion of a “sound waste management and to substantially reduce waste generation by (...) reusing and recycling waste” (p. 3). In this context, recycling has been globally acknowledged as a key issue for the sustainability of the cities, a fact that has also been recognized by the government of Kosovo within its national plans and strategies.

---

<sup>13</sup> Habitat III is the United Nations Conference on Housing and Sustainable Urban Development. In this conference the UN member set common goals towards the development of cities and human settlements.

Prishtina also shares this vision. The city wants to achieve a waste management service in which, besides improving the quality of the waste collection, there is also objectives towards achieving efficiency, effectiveness, and promoting recycling as a strategy to reduce the amount of landfilled waste. To this end, information is vital to understand the current dynamics of the recycling activities in the city. Since the city, as it will be shown later, does not have a systematic information about the sector, this current thesis becomes significant as it provides an academic analysis that could be taken into consideration by decision makers in the future projects, programs and plans.

Additionally, for the academia, this thesis becomes important by the fact that it increases the number of academic literature about the urban challenges of Kosovo as an independent country. When looking for literature about Prishtina, the researcher realized that most of the academic papers are based on a national level and the topics are still related to the aftermath of the war. In that sense, the current research is part of the new literature that not only acknowledges the country as an independent country but also focuses on an urban scale.

In terms of the literature about recycling, the current thesis contributes to the use of the Integrated Sustainable Waste Management framework as a guiding theory. As it will be seen, the researcher took the integral approach in order to include the private, public, local and foreign perceptions on the recycling activities in Prishtina.

## **1.7 Scope and Limitations of the Study**

The present study only focused in the influence of laws and policies as institutional aspects towards the strengthening of the recycling market of plastic and paper in Prishtina. In this sense the researcher concentrated on the city and national level, leaving aside external factors like the variation in the price of oil, which in some cases might create an incentive to the usage of virgin materials instead of recyclables. Likewise, the researcher decided to look at plastic and paper, this in order to understand in depth the recycling chain of the two materials. Additionally, it is important to mention that the present research did not undertake neither an economical nor a financial analysis of the recycling market. Due to the limitation on available information, the researcher based the market analysis on the qualitative perspective of the stakeholders and by the content analysis of institutions (laws and policies).

In terms of the particular characteristics of Prishtina, the language was considered to be a limitation, punctually for the stage of the data gathering. Having this in mind, the data collection methods were thought to be undertaken with the stakeholders that most likely would speak English, government officials, private companies and international donors. In the cases where the interviewee did not speak English, the researcher requested the help of students to help with the translation.

Finally, in regards to the scope, is important to mention that in Kosovo, the waste management service is part of the own competencies of the cities, which includes the responsibility of promoting recycling. However, as it will be explained in chapter 4, as a consequence of the early stage of decentralization, most of the regulations belong to the national level. Therefore, the researcher analysed the national and local regulation that have had an impact on the recycling activities that are currently occurring in the territory of Prishtina.

## Chapter 2: Literature Review / Theory

### Introduction

This chapter explains the theories and concepts the present research used to answer the research questions. In that process, after reviewing some other theories<sup>14</sup>, the author found that the most suitable ones were the Integrated Sustainable Waste Management Framework - ISWM, the institutional theory, the concepts of recycling, market conditions, and recycling value chain.

As it is elaborated, the ISWM was selected as it acknowledges and frames the relation among laws and policies to the promotion of recycling. Likewise, since the interest of the author was to analyse the recycling market, the researcher brings the institutional theory for two reasons. First to define what the researcher means from now on as institutions, and second, to understand the recycling market as an institutional arrangement.

Subsequently, the author elaborates about the concepts of recycling market, market conditions and recycling value chain in order to clarify what aspects of the recycling market were reviewed by the researcher. Finally, the chapter gives a short mention about the informal practice in the recycling sector, and it finalizes by explaining how the theories and concept relates to each other in order to answer the research question of the thesis.

### 2.1 Integrated Solid Waste Management Framework

Solid waste management is a core function of local governments. Various researches and reports refer to the negative impacts of a poor service delivery in public health systems, and in the environmental conditions of a city (Klundert and Anschutz, 2001, Lindfield and Steinberg, 2012). Different from other sectors, the waste management is affected by different aspects, consumers behavior, finance, social aspects, legality, and cultural factors that make of the waste management a “visible and politically sensitive service” (Klundert and Anschutz, 2001, p.9). For some, it is also an “indicator of good governance<sup>15</sup>” (Wilson, Rodie, et al., 2015).

Due to the multiple folds of the solid waste sector, several scholars support the adoption of an integral approach with regards to waste urban policies, the Integrated Sustainable Waste Management Framework – ISWM. The inclusion of the words ‘integrated’ and ‘sustainable’ acknowledges the “linkages and interdependency between activities (...), stakeholders and points of view” around the service (UN-Habitat, 2010, p.27). Besides considering the technical components of the service delivery, it includes principles, aspects and dimensions that allow

---

<sup>14</sup> In brief, the Circular Economy concept refers to the promotion of a restorative industrial system by changing the process of design, in this sense a better design will contribute to the reuse and recycling of products (Ellen MacArthur Foundation, 2012). On the other hand, the Planned Theory Behaviour focuses on the factors that would change an individual behaviour, for recycling, the theory is mostly used when understating the waste segregation behaviour (Botetzagias, Dima, et al., 2015).

<sup>15</sup> Governance refers to the process of decision making and the process how the decisions are implemented. The value of ‘Good’ refers to the fulfilment of certain characteristics of the decision making process that reduce the risk of corruption. According to the UNDP, they are participation, equity, non-discrimination and inclusiveness, gender equality, rules-based, transparency, accountability and responsiveness.



the comprehension of the complexities of the waste sector. This complexity includes the confluence of the informal and formal economies, the interest of the private and public sector, the environmental importance of waste management, the cultural and social factors that constrain or facilitate the service performance, and the impact of governmental institutions. (Klundert and Anschütz, 2001, p.11).

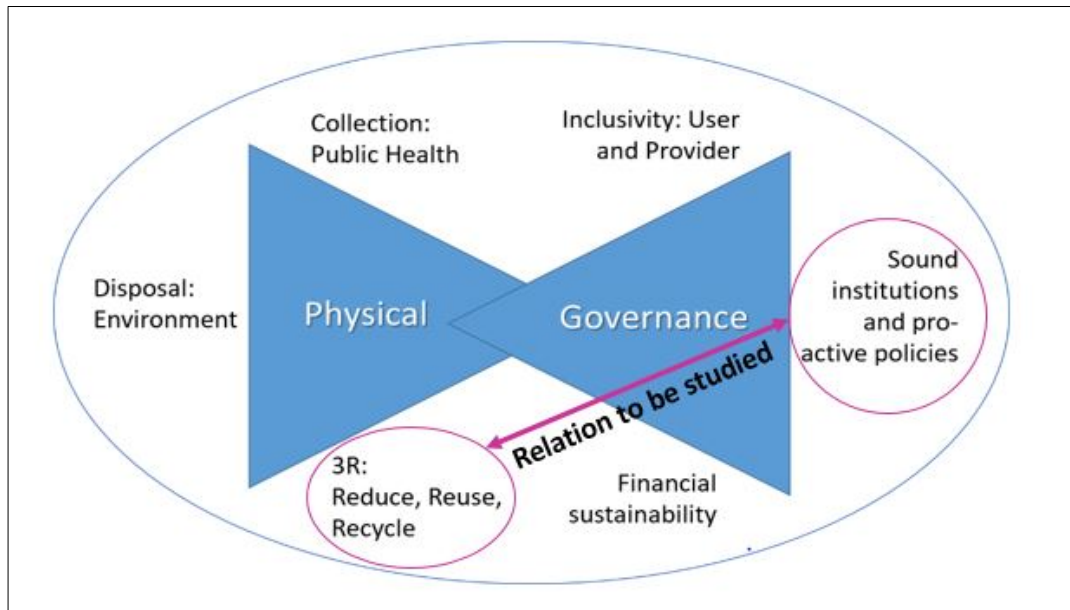
The principles of the ISWM framework are: 1) equity, regarding to the equal access to the service, 2) effectiveness, regarding the accomplishment of keeping the city clean, 3) efficiency, in terms of managing the waste by “maximizing the benefits, minimizing the cost and optimizing the use of resources”, and 4) sustainability, concerning the continuity of the service “without exhausting the resources upon it depends” (Klundert and Anschütz, 2001, p.11).

### **2.1.1 Dimensions of the ISWM.**

The first dimension is the stakeholders. It refers to the importance of identifying the actors or organizations that have a stake in the sector, as well as their level of importance and influence, which depends upon every context. The second dimension is the waste system elements. The Integrated approach strives for the inclusion of the “less well understood elements of waste”. Under the ISWM the elements are collection, transfer, disposal or treatment, as well as waste minimization, reuse, recycling and composting. The third dimension is labeled as aspects, according to UN-Habitat “for a waste management system to be *sustainable*, it needs to consider *all* of the operational, financial, social, institutional, political, legal and environmental aspects” (2010, p.27). In Klundert and Anschütz words, they are the “lenses through which the existing waste system can be assessed and with which a new or expanded system can be planned” (2001, p.13).

In a summarized way, the interaction between the principles, dimensions and aspects, can be explained by the integration of two triangles, one in relation with the physical components, and the other one regarding the governance strategies of the service. In this sense, the first triangle refers to the ‘hardware’ while the second one refers to the ‘software’ of the service (Wilson, Rodie, et al., 2015). As Figure No. 1 shows, the physical triangle includes the components of the service in relation with their impact on the environmental and health conditions of a city, as for the governance triangle, it includes the aforementioned principles, the stakeholders existence and the managerial aspects of the service.

**Figure 1 - Integrated Sustainable Waste Management Framework**



Source: (Wilson, Rodie, et al., 2015)

As it can be understood, the ISWM stands for the analysis of the solid waste management by taking into consideration the relation of the aspects (financial, social, institutional, political, legal and environmental) that affect the elements of the system (collection, disposal, 3R). As the circles on the Figure 1 show, given the particular interest of the present research, the ISWM offers a theoretical frame to relate and analyze the two variables the author has defined as the core of the research, the “sound institutions and pro-active policies”, and within recycling, the recycling markets. The relation among this two variables was analyzed by using the institutional theory.

From now on, the chapter will elaborate on the theories that are related to the variables of the present research, starting with the institutional theory.

## **2.2 Institutional Theory**

In the present research an institutional analysis approach has been chosen to analyze how the government intervention and actions affect the recycling markets. Therefore, a further development on this concept will be explained. The literature about institutions dates from the beginning of the XX century, however, throughout the years diverse approaches have emerged.

### **2.2.1 Institutional economy**

One of the first conceptualizations about institutions comes from the institutional economy. Under this perspective the analysis regards how the stakeholders choose their actions based on incentives and on the interest of optimizing benefits (Hernández, 2008). Different from the neoclassic economics, who defend the perfect equilibrium of markets in a context, this approach comprehend the existence of failures and hence the government intervention, more precisely how “the institutions influence the economic and social performance of countries” (Hernández, 2008, p. 48).

Therefore, as Douglas North is cited by Hernández, “the macroeconomic theory will never resolve the problems it faces unless it acknowledges that the adopted decisions in the political process critically affect the functioning of economy” (Hernández, 2008, p. 48). Then, the institutional economy embraces the existence of political factors that may affect the interaction among humans within an institutionalized environment. In this sense, institutions could be understood as “the rules of the game in a society, the formal and informal limitation that shape the human interaction” (Hernández, 2008, p. 48).

### **2.2.2 New Institutionalism**

This approach do not deny the previous one. On the contrary, it expands the analysis around institutions by considering other fields of study. As a consequence, under the new institutionalism there are three main strands, the sociological institutionalism, the historical institutionalism and rational choice institutionalism. (Edwin and Kelly M, 2010, Hernández, 2008).

The new institutionalism rises from three arguments. Firstly it expands the analysis and defends that “institutions are autonomous, capable enough to affect society” (Torres, 2015, p. 120). Secondly, the approach brings the concept of limited rationality, in which individuals are framed in an institutional environment that affects their rationality when decision making, in this sense there are additional factors, rather than just the cost and benefit analysis. As a consequence there is the third argument, it is that the New Institutionalism stands for the incorporation of the social sciences perspective within the analysis of institutions (Torres, 2015). Further, the “neo-institutionalism defines a perspective which is usually associated with the idea that institutional background matter because they shape public administration realities and processes” (Thoenig, 2007, p. 23).

Different from the older institutionalism, “the notion of neo-institutionalism does not define a unified theory. It covers a rather loose set of specific schools of thought” (Thoenig, 2007, p. 23). The following paragraphs will briefly explain the different strands within new institutionalism, focusing on the different conceptualizations of institutions. The institutionalist Guy Petters talk about seven new institutionalisms <sup>16</sup>, however, as a result of the literature review there seems to be an agreement on three, the sociological, rational choice, and historical institutionalism.

- *Rational Choice Institutionalism*: this stream relates institutions directly with the study of the interactions occurred under a political context. One of the interactions is the principal-agent relation in which institutions “allow the principal (political cabinet) to make the agent (a public agency) act in a way the principal would like the latter to behave” (Thoenig, 2007, p.5). In order to achieve the relation, institutions can be set in a way of contracts or mandates with defined incentives and penalties. Another type of interactions are the ones analyzed by the game theory, in which different actors play in a context where they are dependent among each other and want to optimize their results

---

<sup>16</sup> Some other authors like Guy Petters talk about seven new institutionalism, including the normative, the sociological, the historical, the empiric, the sociologic, the international, the interest representative and as the latest one, the network institutionalism.

separately. In this case institutions offer “cooperation schemes or arrangements to link competitors who are simultaneously interdependent and selfish” (Thoenig, 2007, p.5). The last interaction is about behaviors, in this context “rules are considered as the best mechanism by which administrative behaviors can be influenced” (Thoenig, 2007, p.5).

- *Historical Institutionalism*: this branch rather than offering a definition of institutions, it “calls for historical research to trace the processes behind the creation and persistence of institutions” (Edwin and Kelly M, 2010, p.16). In this sense, this new institutionalism attributes the establishment of institutions and its consequences in a particular historical context where the past influences the current situation of the institution. As Edwin and Kelly mention, institutions are path-dependent, as such, “radical changes in public administration are a rather hopeless endeavour” (Thoenig, 2007, p.6).
- *Sociological Institutionalism*: the added value of sociology is the interest in understanding the codified cultural constructions that shape institutions (Edwin and Kelly M, 2010). It takes a look at the rules and conducts and how they influence the interaction among individuals and their reasoning. The sociological institutionalism “studies the process of institutionalization (...) of the socially legitimized activities which in the long run come to characterize certain aspects of social life” (Thoenig, 2007, p.8). To clearly understand its particularity, different from the other perspectives, the sociological one “defines what institutional means in a much wider and global way. Besides formal rules and procedures, it includes symbols, moral models and cognitive schemes” (Thoenig, 2007, p.8).

With the mentioned background, and since the present thesis will undertake an institutional analysis, it is appropriate to understand and clarify the working definition of institution and institutional arrangement. Taking into account the different insights, institutions should be understood in the present thesis as the “prescription that humans use to organize all forms of repetitive and structured interactions including those within families, neighborhoods, markets, firms, sport leagues, churches, private associations, and governments at all scales” (Ostrom, 2005, p.3). As Hollingsworth also elaborates, institutions include norms, rules, conventions, habits, and values (2000, p. 601).

As for institutional arrangement, the same author states that they are a context of interactions (actions arenas as the Elinor Ostrom analyzed them) in which institutions “are involved in the coordination of various economic actors: producers and suppliers of raw material, knowledge (...); workers; customers (...) finished products, information, etc.; financiers; governmental and other types or regulations” (2000, p. 605). To give examples, institutional arrangements are “markets, states, corporate hierarchies, networks, associations, and communities” (Hollingsworth, 2000, p. 601).

Taking the latter into account, markets are institutional arrangements where different actors interact on a set of institutions and incentives. For the current case, when referring to recycling market, it could be understood as the interaction among different stakeholders in the value

chain of recyclable materials in a coordinated set of institutions. In order to understand more about the market of recyclable materials and how institutions affect it, the following section will first elaborate about the recycling concept.

## 2.3 Recycling

As described in the section 2.1, the ISWM framework embraces recycling, in this sense, the governmental institutions should consider how the policy decisions could affect this component when planning measures to manage the urban solid waste. The approach of the policy actions are highly dependent on the understanding of recycling and its specifications. This section will elaborate about the recycling definition and its different viewpoints.

In the light of the inclusion of the waste management hierarchy<sup>17</sup> into the European Directive on solid waste, recycling is a “recovery operation by which waste materials are reprocessed into products, materials or substances, whether for the original or other purposes” (European Union Directive 2008/98/EC, 2008). However, this definition relates to the mere process of materials, and lacks a conceptualization about the approaches to recycling, therefore some other views about recycling can complement the understanding of the concept.

According to UN-Habitat, recycling has two faces, a commodity value face and a service face. On one hand, the commodity face stands for the remaining value of waste material, precisely the value that allows the transactions between supply and demand. This face is the ground for the emergence of enterprises, and recycling markets (UN-Habitat, 2010) whose objective is to extract any remaining economic or use value from the ‘economic goods’ that end up in the waste stream.

Based on the same viewpoint, some academicians have adopted the term valorization when referring to recycling. In this sense, recycling generates different steps on the treatment of recyclable material, each steps add value to the material since there is an investment of resources. As it will be explained below, the steps are known as the value chain of recycling, some of the processes of the chain are the aggregation of quantities, the removal of contaminated material, the sorting by grade or type, the transport, and the marketing (Gunsilius, Spies, et al., 2011, p.5).

On the other hand, the service face looks at the sink value of recycling, which means the capacity to absorb waste. For instance by the municipal service of incineration or by the provision of public facilities to promote the processing of recyclable material. “This motivation can be so important that cities are willing to pay the recycling industry to take and process materials that can technically be used but have little or no economic value” (UN-Habitat, 2010, p.126).

Given the two faces of recycling and the case study, the present research will understand recycling as the definition given by the European Union Directive, and will approach to

---

<sup>17</sup> “Tool that policymakers have used to rank waste management options according to their environmental benefits” (Klundert and Anschütz, 2001, p. 15).

recycling under the commodity understanding of the concept, by which the recyclable materials have a value and are traded in a market. Based on this, the author will elaborate on the recycling market by giving further explanation of its value chain as well as the conditions that affect the market performance.

### **2.3.1 Recycling Market**

As stated before, recycling is an activity that has been historically present (Nicolli, Johnstone, et al., 2012), partly due to two situations. First, the understanding of waste as a commodity (waste material with a remaining value), and second, for the “environmental externalities associated with solid waste generation and management”. (Johnstone and Tilly, 2006, p.171). In this sense, the emergence of supply and demand for recyclable materials has facilitated the development of markets with the appearance of buyers, sellers, processors, exporters and other actors who pursue the remaining value of the materials. As stated in section 2.2, recycling market is understood under the institutional theory as an institutional arrangement where –as mentioned- there is an interaction among different stakeholders in the value chain of recyclable materials in a coordinated set of institutions.

There are different ways to analyze a recycling market. One way is by the private market studies, in which the analysis focuses on finding the profitable opportunities of the recycling business by understanding the supply and demand trends (Research and Markets, 2017, Metro Vancouver, 2012). However, since the interest of the present research was to analyze the recycling market from an institutional perspective, a more holistic approach was needed. In order to that, the literature shows two types of analysis, the recycling value chain and the analysis of the market conditions.

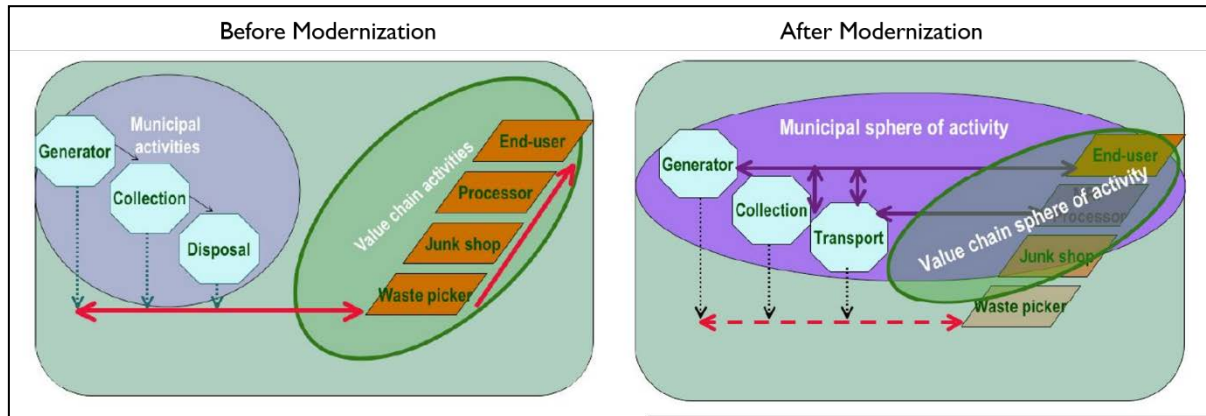
As it will be explained, the recycling value chain emphasizes in the consideration of all of the stakeholders that participate in the recycling activities, including the government and the informal sector. In a complementary way, the market conditions analysis focus on understanding the existence of market failures, and the incentives that laws and/or policies can create to boost or constrain the markets.

#### **a) Recycling Value Chain**

“The value chain describes the full range of activities which are required to bring a product or service from conception, through the different phases of production” (Kaplinsky and Morris, 2012, p.4). In recycling, as Jaligot et al (2016) defines, “each step or link in the value chain involves a source input, a process of value addition and selling the material to the next link in the chain. Each step adds value to the product and often generates more revenue than the previous step” (p. 81).

According to Scheinberg (2015), the recycling value chain could be different depending on the modernization of the disposal component of waste management. In context of pre-modernization, when there is not price for disposal, and the commodity vision of recycling prevails, the recycling activities are mainly driven by the private sector with no participation of the municipalities. On the other hand, in context of modernization, when the local governments have to pay a price for disposal, there is an incentive for the minimization of the waste that reaches the disposal facility, therefore municipalities intervene in the chain by providing a recycling service. Both situations are represented in the following figure:

**Figure 2 - Recycling value chain**



Source: (Scheinberg and Simpson, 2015, p.977)

In the pre-modernization value chain there is a “trade of materials and objects with positive economic value” (Scheinberg and Simpson, 2015, p. 978). The recycling process starts by the waste-picker who generally “pull the materials from which there is real economic demand” (Scheinberg and Simpson, 2015, p. 978), subsequently the waste-pickers engage in the segregation to sell the materials to the junkshop, who in turn pay an amount to the waste-picker and re-sell the material to the exporters and processors, generating income in every step. (Gunsilius, Spies, et al., 2011, Scheinberg and Simpson, 2015). On the other hand, in the modernized value chain the municipal recycling emerges and the “municipal activities have expanded to absorb most of the value chain, and this implies a shift in the “centre of gravity” of recycling from the private to the public sector. The waste-pickers and value chain reclaimers at the bottom of the value chain are excluded” (Scheinberg, 2012, p.18). This exclusion is represented in Figure No.2 by the red dashed line.

Accordingly, after Scheinberg and Simpson (2015) realized that usually, the exclusion appears when the municipalities look for lower-priced alternatives of disposal, focusing on “removing and safely disposing (...) waste” (p. 978), which could divert the recyclables to industrial or to agricultural value chains. When this happens, there is still a valorisation of the materials by selling them to a buyer “that is a business at a higher level of the value chain” (p. 978), for instance an incinerator plant. However, when this happens, many steps from the pre-modern recycling value chain are lost, mainly the steps where the informal waste-pickers have a stake.

Finally, to be able to continue, is important to acknowledge a particularity of the recycling market and its value chain, which is the iterative relation among the formal and informal economy in each one of the steps.

### **b) Formality and Informality in the recycling value chain**

In the developing cities, the solid waste sector is usually framed in the interaction of formal and informal economy, where the municipality is in charge of the collection, transportation and disposal (Rathi, 2006), while the private sector (formal and informal) engages in the recovery of recyclables, manufacturing activities, and provision of services such as street cleaning (Gunsilius, Spies, et al., 2011).

When it comes to define the boundaries of what is formal and informal, there is a constant differentiation of three visions, the dualist, the legalist and the structuralist (Rathi, 2006, Marina Moscoso, 2015, Chen, 2005, AlSayyad, 2004). The dualist understands informality as activities “happening only at the margins as the result of the incapacity of formal economic growth to absorb the surplus of workforce” (Marina Moscoso, 2015, p.11). The legalist understands informality as a survival strategy apart from the formal sector, this school of thoughts relates informality “to the excessive state regulations, and not to the dynamics of the labor market”. According to this legalist approach, an “informal entrepreneur was an economic hero who managed to survive and prosper despite the state’s continuous controlling measures” (AlSayyad, 2004, p.13).

Different from the other two conceptualization of informality, the structuralist relates the formal and informal economies to a capitalist context, in which the activities of the “formal economy are seen to reduce their input costs, including labor costs, by promoting informal production and employment relationships”(Chen, 2005, p.7). Finally, another vision is given by the ILO<sup>18</sup>. This organization do not focus on the reason why informality emerges, on the contrary it shares Chen’s (2005) view on understanding that “the informal economy is here to stay” (Chen, 2005, p.16). Therefore, it focuses in the working condition and status of labor, which could be “undeclared and noncontractual, lacking benefits, paid less than minimum wage (...), hazardous, unprotected” (AlSayyad, 2004, p.12).

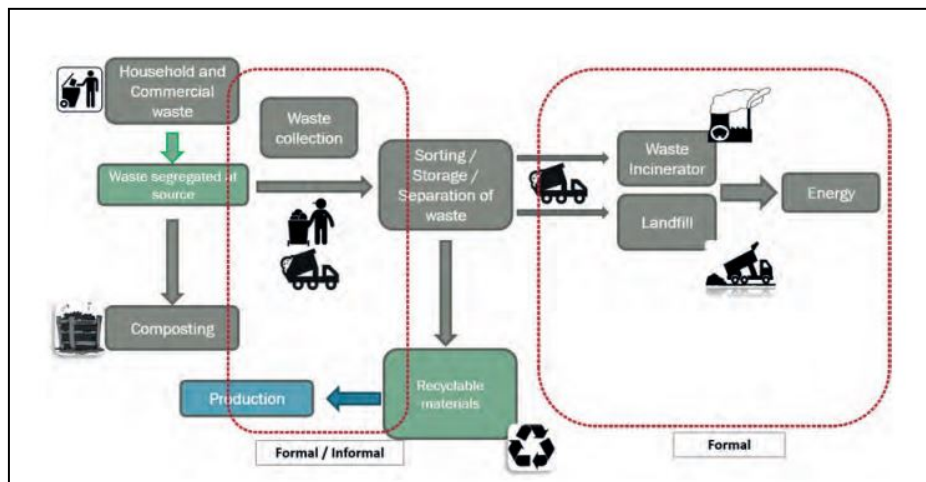
The variety of approaches and definitions about what is formal and informal could be endless. However, in the context of waste management (and bearing in mind the context of the case study) the differentiation among them is blurry since both sectors interact in the service provision. In this way the present research considers that informality is “linked to the formal economy, it produces for, trades with, distributes for and provides services to the formal economy. It represents a reserve pool of surplus labor” (Chen, 2005, p.15). A further explanation about how both sectors interact in the provision of the service, in the research’s case study, is described in the following figure:

---

<sup>18</sup> International Labour Organization



**Figure 3 - Formal and informal interaction in the solid waste management service**



Source: (GIZ, 2017, p.38)

Based on the Figure No. 3, there is an overlap between the formal and informal sector in the components of collection of waste, composting, segregation, and recycling. For the purpose of this thesis, the author will only cover the interaction of both economies on the various steps of the recycling value chain. In order to undertake such analysis Jaligot et al (2016) offer a toolkit to develop a value chain analysis including the informal sector, he recommends the mapping of the chain.

This research will incorporate the mapping of the steps in the value chain for the particular recycled material by a flow diagram, as well as the identification of the benefits along the value chain. For this last tool, Jaligot recommends the use of tables with the selling prices in order to trace the added value in each step, however, due to the absence of official data on the recycling sector of Prishtina, the present research will only focus on the qualitative perception of the profitability of waste-pickers, junk shops/collection centers and processors/exporters from the value chain of recyclable paper and plastic.

### c) Market conditions

“Recycling has environmental benefits, but most recycling companies are in it for profits” (GIZ, 2017, p.52). Nonetheless, the profit of one material could be more than another. “For many used materials (...) markets may be undeveloped and highly inefficient in the sense that there are significant unexploited gains from trade” (Nicolli, Johnstone, et al., 2012, p.263). The undeveloped recycling markets could be attributed to the existence of market failures and policy measures that could affect incentives in the demand and supply side (Nicolli, Johnstone, et al., 2012). As market failures, the present research will take into account the definition offered by the institutional theorist Elinor Ostrom<sup>19</sup>, as the understanding of a situation where “the rules (...) are insufficient to motivate individuals to produce, allocate, and consume these goods at an optimal level” (2005, p.23).

<sup>19</sup> Nobel Prize in economic science awardee, Political science professor, Co-Director of the Center for the Study of Institutions, Population, and Environmental Change at Indiana University.

In recycling, the prevalence of barriers and failures (...) can be attributed to their very specific nature of supply and demand” (Nicolli, Johnstone, et al., 2012, p.270). For instance, the information asymmetry from the seller to the buyer is most likely to exist in the plastic packaging due to the presence of non-visible contaminants on the material, while the difficulty in separating the parts of electrical appliances may cause a technological externality. However, some authors have identified six failures that in general terms exist around the recycling market:

- **Information asymmetries:** “Where one party involved in a transaction has more information than another, may lead to adverse selection” (Nicolli, Johnstone, et al., 2012, p.264).
- **Transaction cost:** All of the steps that are involved in order to match the supply and the demand to achieve the transaction or exchange (Akerlof, 1970).
- **Search cost:** Refers to the cost of identifying potential parties to complete a transaction (Nicolli, Johnstone, et al., 2012).
- **Consumption externalities:** “When buyers may not be aware of the degree of substitutability between products derived from secondary materials and those derived from primary materials” (Nicolli, Johnstone, et al., 2012, p.288)
- **Technological externalities:** When a product is designed in such a way that is difficult to recycle and there is not incentives to change the original design (Johnstone and Tilly, 2006).
- **Market power:** “When downstream manufacturers are exercising market power in a manner which discriminates in favor of the use of primary materials (and thus prejudices the penetration of recyclable materials in the market)” (Johnstone and Tilly, 2006, p. 178)

## 2.4 Institutions in the recycling markets

As it was explained in the previous section, the existence of the market failures has been the basis for economists and policy makers to justify the government intervention in markets (Zerbe and McCurdy, 1999). When a market is not able to properly match the supply with the demand of materials, the State could intervene with different measures, in this case through institutions such as laws, bylaws, ordinances, policies and programs. In the case of recycling, the concept is also applicable, the government’s interventions go beyond the creation of programs that might generate an increase in recycling rates, they could also be oriented to reduce waste-related environmental damages, and to remove failures that discourage recycling (Johnstone and Tilly, 2006).

The policy instruments are described by different authors. Anne Sheinberg (2012) mentions the pricing of disposal as one of the first policies in order to increase recycling rates. When disposing waste in the landfill is priced, whether per ton or volume, it “creates an imperative at the local authority level to divert materials from priced disposal” (p.8) and hence to design policy actions to avoid disposal. For their part, Callcot and Walls (2005) explain the effects of incentive-based instruments, such as the deposit-refunds and take-back instruments. The first one gives back to the consumer a deposit when the consumer returns beverage containers or

other consumer products. As for the take-back, it pays to consumer when returning the containers. Both instruments, according to the authors “lead to a higher recycling rate” (p. 288).

In addition, the abovementioned authors also discuss about two more instruments, recycling subsidies to foster the recycling chain at its different stages, and -in accordance with Johnstone and Tilly (2006) - the extended producer responsibility –EPR. The EPR is an instrument by which the government gives responsibility to the producer for the post-consumption phase of the products, this policy could be implemented by subsidies or research programs on designing for recycling by setting recyclability<sup>20</sup> standards.

Another focus is the enabling environment of recycling markets. Jaligot et al (2016) focus the analysis on the value chain of recycling. Different from the instruments already mentioned, two factors are important. The first one is the access to “working capital” to finance investments on the sector, the second one is the source segregation, “this immediately reduces health, safety concerns, dirty working conditions for recyclers, and enhances the quality of all the recycled materials” (p.88).

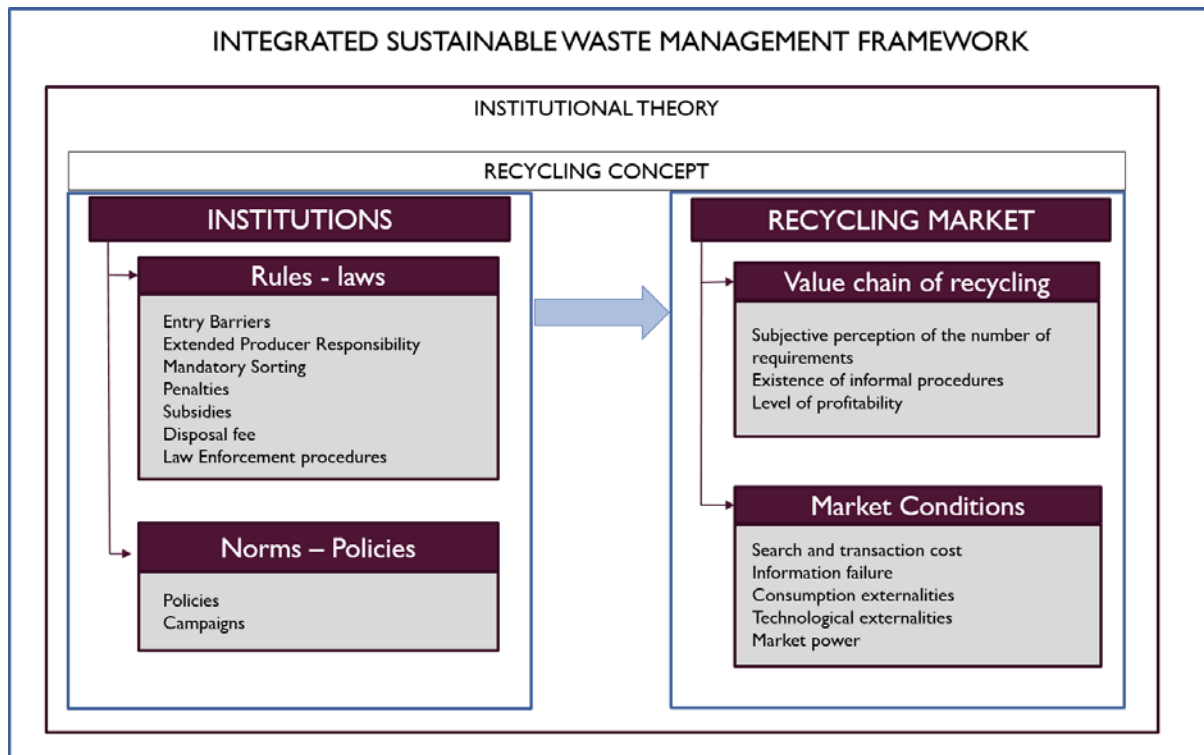
On their side, Lindfield and Steinberg (2012) exalt the important role of education and raise awareness, as well as of communicational campaigns to inform the consumers about the environmental and economic benefits or recycling. According to Johnstone and Tilly, this could close the information gap between sellers, buyers, and most importantly it could reduce the risk aversion of end-consumers who could chose not to buy a recycled product under the assumption of bad quality.

Lastly, is noteworthy to mention that “in order to instill a culture of sound solid waste management practice among waste generators of all classes, existing laws and ordinances must be strictly implemented through the imposition of fines and penalties” (Lindfield and Steinberg, 2012, p.289).

---

<sup>20</sup> According to the Organisation for Economic Co-operation and Development – OECD, it is the capacity of a product to be highly recyclable or recycled repeatedly.

## 2.5 Conceptualization



The ISWM, as it was explained, suggests a holistic approach to the management of solid waste in cities. It recognizes the importance of understanding the relation between the physical and governmental spheres of the service, respectively recycling and sound institutions. To further understand this relation, the research utilizes the institutional theory and the recycling concept in order to offer a common ground in which the recycling markets and institutions can be analyzed.

As stated in the previous sections, the research focused on formal and informal institutions regarding the streams offered by the literature: rules and norms. Besides identifying them, the author of the thesis emphasized on the incentives/disincentives and subsequent changes they generate in recycling market (institutional arrangement), punctually on the market conditions and on the relation between the stakeholders of the value chain of recycling (waste-pickers, junk shops/collection centers, and processors/exporters).

## **Chapter 3: Research Design and Methods**

### **Introduction**

In the previous chapter, the researcher could understand how the different concepts relate to each other. In that sense, the author comprehends the institutions (laws and policies) as the independent variable, while the recycling market acts as the dependent variable. To further understand this relation, and the way it is applicable in the context of Prishtina, the current chapter will explain the mentioned variables and how they were operationalized by the researcher. Subsequently, the chapter explains the research strategy that guided the fieldwork, as well as the description of how the data analysis was developed.

### **3.1 Revised research questions**

The research question of the current thesis remains the same. However, after the fieldwork, the author realized that re-formulating the third sub-research question could facilitate the train of thoughts of the thesis in order to answer the main research question. In this sense the revised research questions are:

Main question: how do institutions affect the paper and plastic recycling markets in Prishtina?

Subquestions:

- Which are the institutions around the recycling market of paper and plastic in Prishtina.
- What are the differences in the recycling market of plastic and paper in terms of quantities, market conditions and value chain?
- Have the institutions boosted the recycling market of plastic and paper in Prishtina?

### **3.2. Variables**

In the chapter No. 2 the literature review explained the theories that framed the current thesis. In this section the thesis will recap on the working definition of the independent and dependent variables.

#### **3.2.1 Independent Variable – Institutions**

This variable has been defined as the “prescription that humans use to organize all forms of repetitive and structured interactions including those within families, neighborhoods, markets, firms, sport leagues, churches, private associations, and governments at all scales”(Ostrom, 2005, p.3). In general words, formal and informal institutions influence the interaction between different stakeholders, “they describe opportunities and constraints that create expectations about other actor’s behavior” (Ostrom, 2005, p.137) . After reviewing the different disciplines that feed this theory, the institutions that the present research has selected are rules and norms.

- Rules: “refer to something laid down by an authority” In this case the Ministry of Environment and Spatial Planning of Kosovo, the national congress of Kosovo and the ordinances and regulations issued by the Municipality of Prishtina. Rules then contain attributes (the characteristic to whom the rule is intended to), a deontic (meaning a permission, obligation or prohibition), an aim (the actions that allowed, obliged or prohibited) a condition (sets when and where the action is allowed, mandatory or

forbidden), and a legal consequence of following or not the rule (Ostrom, 2005, p.16). In sum by rules the current thesis understood the national and local laws.

- Norms: to distinguish it from rules, the Ostrom approach is also useful. Norms comply with the same characteristics of rules but they lack of a legal consequences if the norm is not followed. (Ostrom, 2005, Carlson, 2001). In the case of the present research, the author selected the policies and policy documents that could have had an influence on the recycling market by changing behaviors in the citizens or in the market of paper and plastic.

### 3.2.2 Dependent Variable – Recycling market

As stated before, the analysis of the recycling market was subdivided into the analysis of the value chain of recycling and the market conditions.

## 3.3 Operationalization

Theory	Concept	Variable	Dimension	Indicator	Method
Institutional Theory	Recycling	Institutions	Rules	1) Existence of entry barriers for the collection and treatment of plastic and paper recycling in the city.	Content Analysis/Interview
				2) Existence of the principle of Extended Producer Responsibility	Content Analysis/Interview
				3) Existence of mandatory sorting for waste generators	Content Analysis/Interview
				4) Existence of penalties and fines when the rule is not followed.	Content Analysis/Interview
				5) Existence of subsidies to support recycling activities	Content Analysis/Interview
				6) Existence of incentive-based instruments (Deposit-Refund, Take-Back)	Content Analysis/Interview
				7) Existence of a fee for waste disposal	Content Analysis
				8) Existence of procedures to enforce the laws and bylaws	Content Analysis/Interview
			Norms	9) Existence of any policy or campaign driven by the municipality towards recycling.	Content Analysis/Interview
		Recycling Market	Value chain of recycling	10) Subjective perception of the number of requirements to formally participate in recycling activities (too many, not too many, few)	Interview

				11) Existence of informal (non-regulated) procedures in the recycling chain.	Interview
				12) Subjective perception of the Level of profitability of the business in the steps of waste collection, intermediation and processing/exporting (Low, medium, High)	Interview
			<b>Market conditions</b>	<b>Search and transaction costs:</b>	
				13) Subjective perception of time invested (few, not too much, too much) on the search and selling of recyclable material	Interview
				14) Subjective perception of the price of the material (few, not too much, too much) of the recyclable material.	Interview
				<b>Information Failure:</b>	
				15) Estimated percentage of contaminated material (plastic and paper)	Interview
				16) Existence of procedures to test the quality of the purchased recyclable material	Interview
				17) Subjected perception of the diffusion of the issued regulations that affect the sector (low, middle, high)	Interview
				<b>Existence of consumption externalities:</b>	
				18) Existence of risk aversion of consumers with goods manufactured from recyclable material (low, middle, high)	Interview
				<b>Existence of technological externalities:</b>	
				19) Existence of products with a high cost of recycling due to its manufacturing components	Interview
				<b>Market Power:</b>	
				20) Number of companies that formally process and export plastics and paper in Prishtina	Content analysis / interview

### 3.4 Case study as a research strategy

This strategy is appropriate when the researcher has a desire to understand complex social phenomena. By definition, “a case study is an empirical inquiry that: investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomena and context are not clearly evident” (Yin, 2014, p.13). Likewise, it is a suitable research strategy when the research objective aims at exploring, explaining or describing in depth. The case study is characterized by its “holistic approach” (Thiel, 2012, p. 86).

According to Yin, there are three useful conditions to differentiate the case study among other possible research strategies<sup>21</sup>, “a) the type of research the question posed, b) the extent of control an investigator has over actual behavioral events, and c) the degree of focus on contemporary as opposed to historical events” (p.5). Thus, the case study is suitable to research when the form of the question contains a how or why, when there is not control over the events and when the focus is on contemporary events (Yin, 2014). Finally, it is important to note that this strategy allows the study of a small number of unit of analysis since there is not an interest in conducting a representative study (Thiel, 2012).

Consistently with the earlier points, the city and the conceptual framework of this research allowed the researcher to select the case study as the research strategy. First, the research about recycling is a contemporary topic, as it was stated in chapter 1. One of the drivers of recycling was the debate about sustainable development in cities, which started since the 1960s onwards. Similarly, bearing in mind that Kosovo is an independent country since 2008, the studies about its institutions in the country is a new research topic. Second, since the nature of the research was exploratory, the researcher did not have any control neither over the unit of analysis nor over the events, in fact the researcher found out that the geographical location of the unit of analysis, in some cases, exceeded the territory of the city of Prishtina.

Third, the unit of analysis was small, as it will be shown on chapter 4 and 5, the recycling market in Prishtina and Kosovo is small, very informal, undeveloped, and to some extent new since the identified formal companies started to operate after 2012. Finally, the interest of the researcher was to understand about the role of the institutions on the recycling market, in order to do that the researcher chose depth over representativeness.

### 3.5 Data collection methods

The present research has a qualitative approach. Quantitative and systematic data about recycling was not available, the few numerical data was only considered as a complement of the qualitative findings. The data was collected by mixing primary and secondary data collection methods, which were semi-structure interviews and content analysis.

#### *Primary data collection – Semi-structure interviews*

“The interview is a conversation in which the researcher gathers information by questioning one or more people” (Thiel, 2012). This method was chosen due to the possibility to deep dive on the stakeholder’s perceptions and knowledge about the effect of institutions on the recycling

---

<sup>21</sup> Survey, experiment, archival analysis and history



market. Therefore, this data collection method was useful to: identify other institutions (laws and policies) the researcher could have missed, to inquire about the stakeholder's interpretation of the institutions, and to find out the informal practices around recycling.

The semi-structure interviews started off with general questions to understand the role of each stakeholder, later on, according to their relation to the recycling market, the author moved to punctual questions about the existence of the institutions that can boost recycling and their perception. Subsequently, to the stakeholders that had knowledge of the market, or performed an activity within the value chain, the author asked questions related to the qualitative perception of the market and the practices in the value chain.

#### *Secondary data collection – Content analysis*

This method is the study of the “content of the existing data source, which will usually consist of written material or documents” (Thiel, 2012, p.108). In this case, the analysis of formal institutions demanded the reading and interpretation of official documents such as laws, bylaws, policy documents and reports. The examined documents were:

- National Development Strategy 2016-2021
- National Law on Waste
- Strategy of Republic of Kosovo for waste management 2013 – 2017
- Plan of Republic of Kosovo for waste management 2013 – 2017
- Law on Business Organization
- Law on Local Self-government
- Law on Municipal Finances
- Law on Public Owned Enterprises
- UNMIK Regulation on the Social Assistance Scheme
- Administrative Regulation of waste management license
- Administrative Regulation of environmental permit
- Administrative Regulation of penalties with mandatory fines
- Administrative Regulation of import, transit and export of waste
- Urban Development Plan Prishtina 2012-2022
- Update of the Waste Management Plan Prishtina Commune 2016–2020
- Local Ordinance on Waste
- Budget Analysis for the municipalities of Peja and Prishtina 2015.
- Analysis on Own-source Revenues in the Municipalities of the Republic of Kosovo.

### **3.6 Sample size and selection**

As stated before the present research used qualitative data for the analysis. Therefore, the thesis selected two methods under the non-probability sampling (Thiel, 2012), purposive sampling and snowball sampling.

The purposive sampling helped the researcher to find the most knowledgeable people from the public entities and cooperation agencies. Is important for the reader to know that the current

thesis was supported by the program Erasmus +<sup>22</sup>. As a consequence the author was able to get in contact with the University of Prishtina prior starting the fieldwork, this helped the author to confirm the names of the authorities the researcher had found online. This cross-checking processes added new authorities and thereby the researcher could ensure that the interviewees were the appropriate ones for the purposes of the research.

As for the snowball sampling, it was used to undertake semi-structure interviews with exporter companies, processing companies, collection centers, and waste-pickers. Given the limitation of systematic information about the companies, and the presence of informality in the recycling sector, the snowballing sampling helped the researcher to find the interviewees.

In total, the researcher interviewed 17 respondents. The Table No.2 shows the interviewees that were approached by the purposive sampling strategy, and the Figure No.4 describes the interviewees approached by the snowballing process.

**Table 2 - Purposive Sampling**

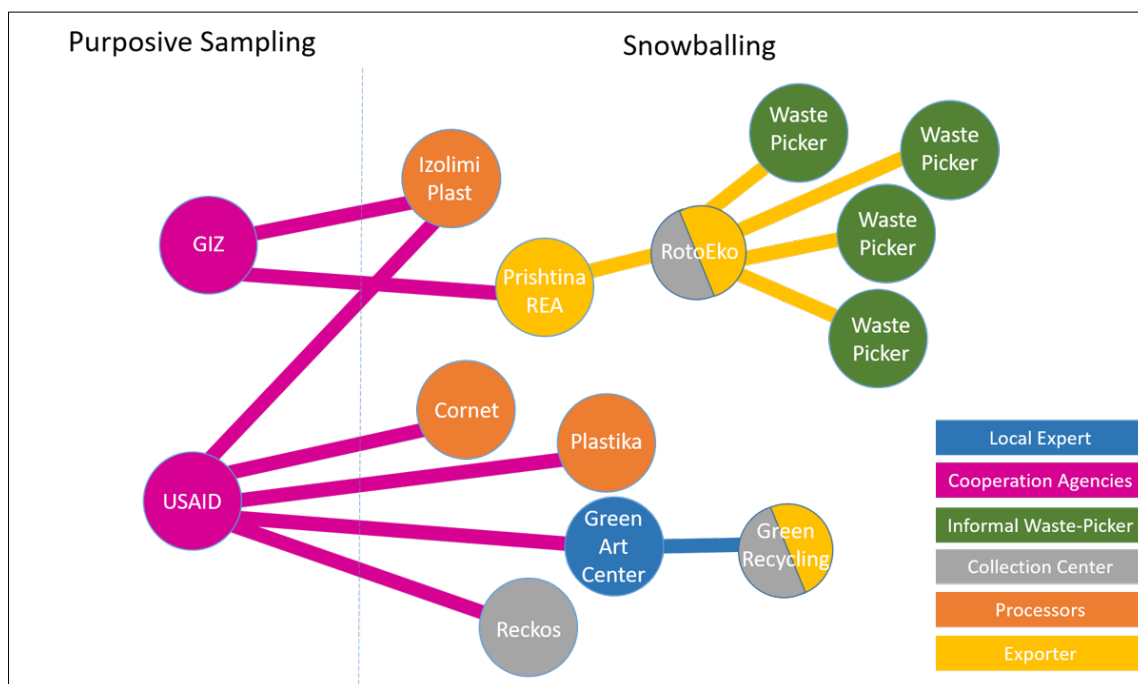
	Authority	Description
1	Unit of Waste Management of Prishtina	This Unit is the municipal office in charge of organizing the solid waste management of the city. It is in charge of the implementation of the Waste Management Plan of Prishtina.
2	Representative of Pastrimi	Pastrimi is the Public Owned Enterprise that is in charge of the operation of the collection and transportation of waste in Prishtina and other 5 municipalities.
3	Waste and Chemicals Division - Ministry of Environment and Spatial Planning - MESP	The Division is in charge of leading the country in the management of all type of waste the country is producing by formulating the national strategy and plan for the . The Division has the responsibility of issuing the waste management licenses and exportation permit.
4	Department of EU Integration and Policies Coordination - Ministry of Local Government Administration – MLGA.	The Ministry is charge of supervising and supporting the decentralization model of the country, the promotion of transparency and anti-corruption, and the integration of the country into the European Union.
5	Expert on waste management reforms at GIZ	The GIZ is the German Federal Agency for International Cooperation. As it will be explained later, this Agency is the main donor of the Municipality of Prishtina for the solid waste management sector.
6	Director of Public Policy at USAID	USAID is the United States Agency for International Development. Its cooperation lines in Kosovo are the rule of law and governance, activities to increase investment and employment in the private sector, and programs for the improvement of the human capital in Kosovo.

---

<sup>22</sup> This is a programme from the European Commission. The final goal is to offer learning opportunities for European and international students by supporting internship, student exchanges and research mobility.

7	Job Creation Team Leader – USAID Empower Private Sector Program.	Under USAID, this program intends to promote the private sector in Kosovo, punctually by promoting companies with job creation potential
8	Kosovo 2.0	It is an independent media organization. The interviewed journalist was contacted due to a published article about recycling and environmental protection in Kosovo.

**Figure 4 - Snowballing sampling**



- **9. Prishtina REA**

Prishtina REA is a consultancy firm on topics related with the economic development of Kosovo. Additionally, since 2016 the company has diversified its activity and is currently exporting recyclable paper to Montenegro.

- **10. Rotoeko Sh.p.k**

This is a collection center and exporter of white paper, cardboard, colored paper and vinyl. It is located in the outskirt of Prishtina.

- **11 – 14. Four Waste Pickers**

The 4 waste pickers were interviewed in the facilities of RotoEko. All of them collect paper and plastic in Prishtina. The names are not disclosed since they requested for confidentiality.

- **15. CornetKosova**

This company is a processor of paper, from the treatment the company creates egg trays. It is located in another municipality, however it receives paper from Prishtina.

- **16. Izolimi Plast.**

This is a processing Company of plastic. It treats High Density Polyethylene (HDPE), Low Density Polyethylene (LDPE) and Polyvinyl Chloride (PCV) and produces Foil for agriculture and construction. The company is located in Obliq, a neighbor municipality of Prishtina.

- **17. Green Art Center - Prishtina (GAC)**

GAC is an environmental NGO located in Prishtina. It has been involved with the GIZ, USAID, and the Municipality of project in activities related to environmental protection and recycling awareness campaigns.

The companies Plastika, and Green Recycling were not possible to interview due to holidays. For the case of Reckos, it was contacted but unfortunately they do not work with paper or plastic any longer and refused to be interviewed.

### **3.7 Validity and Reliability**

#### *Validity:*

The present research contains two data collection methods, which are the semi-structured interviews and the content analysis. In order to be sure that the documents helped the researcher to answer the research question, the researcher cross-checked with the international donors the intended documents to read, likewise in this consultations the researcher also asked the authorities and donors for some extra documents to take into account.

To add validity to the interviews, the researcher triangulated the responses. This process was based on the operationalization table. After gathering the responses, the researcher organized the answers of each stakeholders per indicator, with this the researcher could easily triangulate the data by comparing the answers, and example of this will be shown in the section 4.3.1. As Thiel (2012) mentions “by taking a diversified approach, the researcher gathers as much information as possible, so as to ensure that the data collected are valid” (p. 92). In terms of external validity, is important to mention that it is a common weakness of the case study strategy. Since the findings of the present thesis do not expect to be generalized, the mentioned constrain is considered in the section of scope and limitation.

#### *Reliability:*

To achieve reliability three measures were implemented. The first one was to cross-check the results by a triangulation process, if the collected information, from different research methods showed repeatability and consistency (Thiel, 2012) rather than contradiction then the results can be considered as reliable. The second one was by keeping record of the sources of information, this will enhance transparency of the data gathering. The third measure was the testing of the semi-structured interviews with colleagues, this was done in order to ensure that the questions were targeting the purpose of the research.

### **3.8 Data Analysis Techniques**

The Data Analysis Technique was divided in two stages: the organizing of data and the analysis. The first stage consisted in organizing the results of the interview in order to facilitate

the subsequent analysis. Afterwards, the researcher transcribed the interviews and uploaded them into the Atlas.Ti software. Once in the program, the author developed a list of codes in relation to the indicators and started coding the responses.

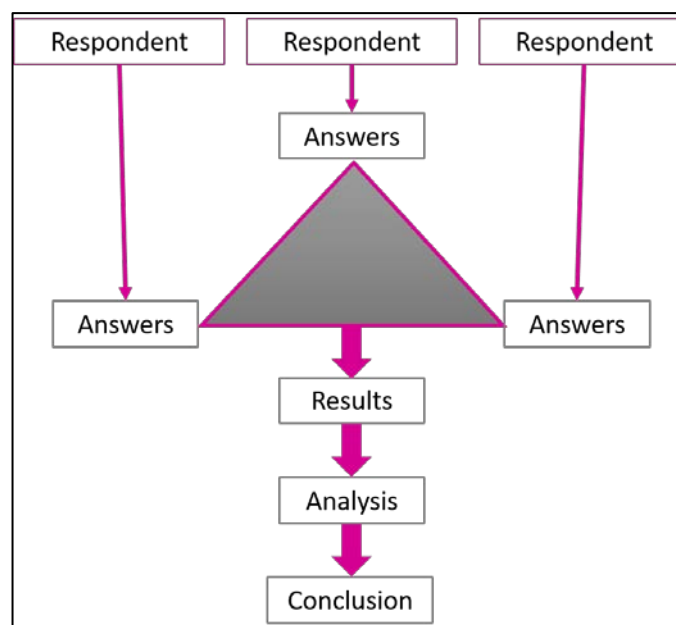
**Figure 5: First Stage of the Analysis**



After coding, the second stage was using the Query Tool to extract the quotations related to each one of the indicators. Once the quotations were extracted the author placed them on an Excel file to visualize the responses in relation to each indicator. This excel file also had a short summary of the reviewed documents that were related with the indicators (Annexe No. 3).

With the excel file, the researcher could triangulate by comparing the answers and documents. The process of the triangulation is shown in the Figure No. 6, while a specific example is shown in the section 4.3.1. The results of the triangulation are later shown in the same section (4.3.1) as a result per each indicator, then, it is followed by an analysis, and then by a conclusion.

**Figure 6: Second Stage of the Analysis**



## Chapter 4: Presentation of data and analysis

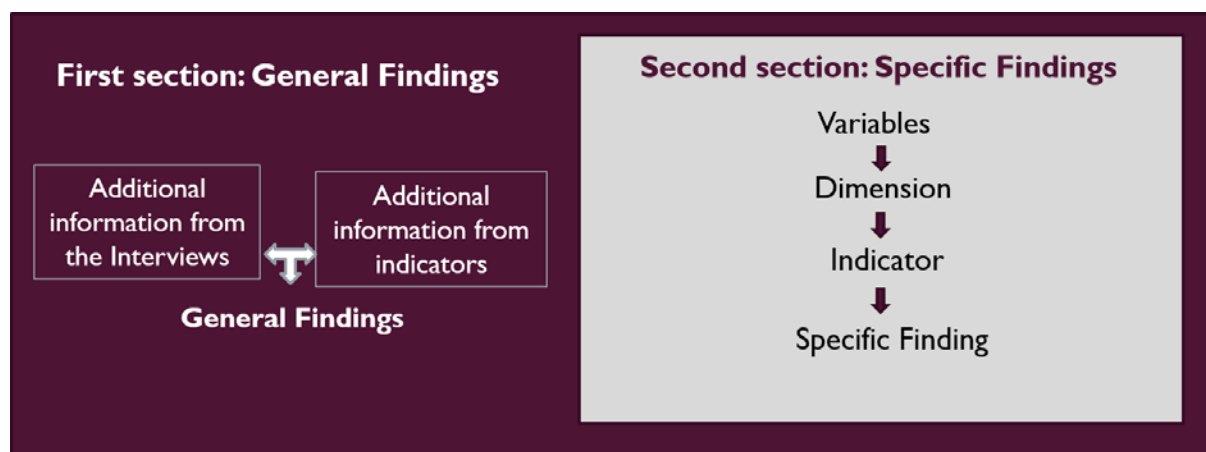
### 4.1 Introduction

The following chapter will introduce the reader to the findings of the research. In order to that, the author has divided the results into two sections. The first section is the general findings, these findings refer to relevant aspects of the case study (Prishtina – Kosovo), it will help to better understand some contextual aspects of the country, and how they relate to the specific findings. To this effect, the researcher will bring documents and the answers provided by the interviewees when they were asked about certain topics and indicators of the operationalization table (Chapter 3).

The second section contains the specific findings. The specific findings will follow the order of the operationalization table. In that sense, it will present the results of each variable by analysing the documents, and the interviews that related to every indicator.

The aim of this chapter is to present all the gathered information, to analyse it, provide short conclusions, and to do a transition to chapter 5, where the author provides the answers to the research questions of the Thesis.

**Figure 7: Structure of Chapter 4**



### 4.2 General Findings

#### 4.2.1 Institutional Background

As it was briefly introduced in Chapter 1, Kosovo suffered a war between the Serbs and Albanians about the dominance over the Kosovo's territory. This confrontation took place in 1999 and ended after the intervention of the NATO on behalf of the Albanians. After the intervention, the Serbians stopped the violent confrontation and agreed on welcoming the United Nations in order to stabilize the region. Thereafter, the first action was to establish an international civil presence, the United Nations Mission in Kosovo –UNMIK. The mandate of this mission was "organizing and overseeing the development of provisional institutions for democratic and autonomous self-government" (UN Resolution No.1244, 1999, p. 9). The

mission had 4 pillars, Pillar I: Police and Justice, Pillar II: Civil Administration, Pillar III: Democratization and institution building, and the Pillar IV: Reconstruction and economic development (UN Resolution No.1244, 1999).

In the following nine years, the UNMIK managed to build a provisional government by issuing institutions (regulations) whereby the authorities such as the Ministries, Parliament, and Municipalities were re-established. Alongside this process, the UNMIK also managed to organize the democratic elections of municipal mayors and the parliament. As a result of this efforts, and after national and international negotiations, the parliament of Kosovo unanimously declared its independence from Serbia in 2008.

Despite the fact that this declaration has not been recognized by several countries<sup>23</sup> yet, the European Union and the UN have supported the consolidation of the State of Kosovo. Likewise, some development aid agencies have been cooperating for the development of the national and local governments. In the waste management sector, JICA and the GIZ are the leading donors in the country. For the case study of Prishtina, it was found that among the two donors, the national government designated GIZ as the leading donor, starting in 2009 with the formulation of the Prishtina's Municipal Waste Management Plan of 2012. (Querimi, 2017)

Consequently, it can be said that the institutional history of Kosovo, is new, and it has been influenced by the international organizations. In the same sense, the newness of the country and the international influence have had an effect on the institutions related to recycling. In order to explain the extent of this relation, the following sections will guide the reader into the researcher's findings in this particular matter.

#### **4.2.2 The role of the international cooperation in the institutions around recycling of paper and plastic in Prishtina.**

When searching for documents and reports about the state of waste management and recycling in Prishtina, the researcher was often directed to get in contact with the GIZ prior the municipality itself. This raised the curiosity of the researcher to understand the level of influence of the international cooperation in the local urban context of Prishtina, punctually in the management of solid waste.

To start with -according to USAID-, after the independence, the Ministries and the Parliament of Kosovo undertook a rapid legislative process in order to regulate different areas of the country. In some occasions, the cooperation agency gave to the government the "text of the law, already written, and they only approved it and signed it" (USAID, 2017).

In the same sense, as it was mentioned in chapter 1, the national government of Kosovo aims at achieving the EU's directives, this have had a trickle-down effect into the national laws, plans and strategies. After analysing the content of strategic planning documents and laws, the

---

<sup>23</sup> The Republic of Kosovo is acknowledged by 111 states out of the 193 United Nations member states. More information can be found in the following link: <http://www.mfa-ks.net/?page=2,224>

researcher found a constant mention towards the European integration, harmonization of the local legislation with the EU directives, and inclusion of the EU standards into the local laws:

**Table 3- Number of times there is a mention about harmonizing the local laws with the EU's directives.**

Documents	No. Pages	No. of Times
National Development Strategy 2016-2021	55	15
Strategy on Local Self-Government 2016- 2026	73	19
Plan of the Republic of Kosovo for Waste Management 2013-2017	18	6
National Law on Waste	59	6
National Law on Local Self-governance	31	5
Urban Development Plan Prishtina 2012-2022	251	22
Update of the Waste Management Plan Prishtina Commune 2016–2020	51	3

Another type of influence was identified when applying the indicator No.2 of the operationalization table, to know it is the “Existence of the principle of Extended Producer Responsibility”. With this indicator the researcher found a degree of dependency of the national and municipal government from the international cooperation, punctually when it comes to the implementation of the regulations that affect recycling. The following are abstracts of the statements of the interviewees that support the mentioned finding:

**Table 4 - Indicator No. 2 “Existence of the principle of Extended Producer Responsibility”**

Interviewee	Question	Response
Unit of Waste Management of Prishtina.	Do the principle of, the extended responsibility of the producer, exist?	<i>“No, that is on the core of the national government, that is on the law but, what are they doing towards that?”</i>
Waste and Chemicals Division - Ministry of Environment and Spatial Planning		<i>“Yes, it is being supported with the GIZ. We will work this year and the upcoming years to develop an initiative about this”</i>
Expert on waste management reforms at GIZ.		<i>“Yes, we are now under the process of getting an international consultant company for supporting the Ministry in finding the best EPR scheme. Whether that would be like DRS - Deposit Refund System- or any other)”</i>

Similarly, when the researcher inquired about other indicators, it was found that there is also dependency on the information about the sector, former policies, and projects at the city level. So far, the only document that compiles information about the state of the waste and recycling in the city was done by the GIZ, the document is under the name of “Solid Waste Management



in Kosovo: Assessment of a Waste Bank Model in Dardania, Prishtina”. The dependency on the information was also confirmed while undertaking the interviewees when asking about available information, reports and documents about prior policies or programs. The responses are shown in the Table No.6.

**Table 5: Interviewees’ responses when asking about information, former policies and programs**

Interviewee	Question	Response
Unit of Waste Management of Prishtina.	Do you know about any policy or campaign driven by the municipality towards recycling? Is there any report about this project?	<i>“We started to work with the GIZ from 2004, we have a lot of projects with them in recycling part and so many other parts as well (...). There are reports, yes <u>but is the GIZ the one who has it</u>”</i> <i>“I don’t know, He had that information but <u>I personally don’t know</u>”</i>
Kosovo 2.0 independent media organization	Do you think there is a lack of information about the sector? Why?	<i>“That is, <u>there's simply a lack of protocols that would ensure the smooth collection, interpretation, and dissemination of environmental data</u>”</i>
Department of EU Integration and Policies Coordination - Ministry of Local Government Administration	Is there any strategy to promote the publishing of information at the municipal level?	<i>“So this challenge has been also reported, so we have started to prepare, to draft an action plan and to monitor this directly in municipalities in order to increase the transparency in general (...) <u>One of the main challenges was technical, was the lack of municipal websites. The second one is the hesitation of the municipalities to offer access to public documents.</u>”</i>

In conclusion, this section allowed the researcher to understand the influence of the international developing agencies in the implementation of the institutions: laws and policies. In short the influence can be seen in two ways. The first one is in the formulation of the laws and the policies, especially by introducing international practices, the EU’s directives and standards into the context of Kosovo. The second way is by consolidating the information about waste management and recycling when it comes to Prishtina. In this sense the author can state that the GIZ is the authority that knows the most about the evolution of the sector in the city, and the donor agency that seems to be substituting the municipal duty of gathering and publishing information on the sector.

#### **4.2.3 Decentralization of the waste management service in Prishtina.**

Besides analysing the influence of the international organizations in the institutions related to recycling, the researcher also inquired about the progress of the decentralization process in the country. The curiosity of the author regarding decentralization aimed at understanding to what extent can the municipality impact the recycling market that is taking place in the city. Hence, this section will guide the reader through the findings on this regard.

Kosovo is a decentralized country. In 2008 the country issued the Law on Local Self-government in order to start the process of political, administrative and fiscal decentralization.

This law establishes three different types of competencies for the municipalities, the Own Competencies, Delegated Competencies and Enhanced competencies. The first type of competencies refer to the ones the municipalities have “full and exclusive power” (Law on Local Self-government, 2008, p.6). The second type are the competencies the national government delegates to the municipalities, such as cadastral records, civil registration, voter registration, etc. Finally, the third type are specific responsibilities on health, education, and cultural affairs when there is a presence of ethnic minorities within the territory (Ministry of Local Government Administration, 2017).

In the case of Prishtina, the municipality has the three types of competencies, however it is the first type, the Own Competencies, the one this thesis is focused on since the provision of waste management is one of them.

### **a) National and Local Competencies towards municipal recycling of paper and plastic.**

Despite the fact that the Law on Local Self-government was issued in 2008, it was until 2012 when the Ministry of Environment and Spatial Planning achieved the approval of the National Law on Waste. In this law, the government specifies how the service should be organized, what type of activities are allowed, as well as the different responsibilities between the national and local government. According to the Law, the national level comprises its competencies in 20 responsibilities while the local level has 19. The different responsibilities that relate to waste management and recycling can be grouped as it is shown in Table 5.

**Table 6 - National and local competencies on waste management and recycling according to the National Law on Waste**

<b>National Government</b>	<b>Local Government</b>
To draft the national plan, strategy, regulations in regards to waste.	To develop local plans for waste management under the principle of waste hierarchy, the plans should be harmonized with the national plan.
To implement the national plan and strategy of Kosovo for waste management.	The Municipality is responsible for the implementation of the plan.
To issue and enforce the licensing for waste management as well as the permits for importing, exporting and transit of waste.	To submit to the Ministry an annual report on waste management.
To manage the information system for waste management as well as to keep the records of licenses and permits.	To regulate the responsibilities and obligations to perform services for waste management, implement them and organize the waste management in the territory.
To implement international cooperation agreements.	To determine the fee for the collection of waste as well as the way the fee is collected.
To define the fees for waste disposal in the regional landfills.	To undertake procurement procedures to select and organize the licensed persons for the collection, gathering, storage and transportation of solid waste.

The funds for waste management can be used to stimulate the process of recycling, also to stimulate division in types of waste in the place where are produced and their collection.	
To designate environmental inspectors to supervise the correct implementation of the law.	When there is a common interest, the municipality is allowed to make agreements with other municipalities.
	To supervise the implementation of the regulations through the municipal inspectors on environment.
	<u>To regulate the manner of collection system, separation, processing and recycling, waste collection schedule, type, number and manner of distribution and deployment of containers for garbage, maintenance of places where garbage is collected and the manner of transporting wastes.</u>
	To implement the provision of this law with the necessary municipal sub-acts.

As it can be seen, the Ministry's responsibilities are largely about drafting regulations, gathering national information about the sector, implementing the national plan and strategy, provide licensing and supervising the correct application of the law, in other words as the Waste and Chemicals Division from Ministry of Environment and Spatial Planning said,

*"(...) under the EU Directive of waste management there is many principles, the basic one for us is prevention for waste, reduction, reuse, recycling and the landfilling. The Ministry is responsible for drafting the laws and all of the secondary acts. Monitoring the implementation of laws and other legal acts"*

On its part, the Municipality is in charge of the operation of the waste management service in the components of collection, transportation, and recycling, but excluding the landfill management. "The responsible one about collection and transportation is the Municipality, not the Ministry. Every Municipality is responsible to create their own regulation" (MESp, 2017). In view of this, the researcher realized that the decentralization process have given to the municipalities the full responsibility of the law enforcement, service provision and hence the promotion of recycling, however, this raised another question about the budget, is the fiscal decentralization equally developed in order to provide the necessary budget to properly achieve the competencies? How is this affecting the procedures to enforce the law?

In order to answer the latter, the researcher inquired documents and also asked the interviewees about their perception on the decentralization process. The next Table 8, shows the triangulated results of this comparison among documents and answers.

**Table 7 - Documents and answers on the decentralization process**

DOCUMENTS	
Document: Law on Municipal Finances	What are the revenue resources for the Municipalities? 1) Own sources revenue: municipal taxes, fees, user charges, rents, municipal sales, donations from foreign governments. 2) Operating grants: a general grant

	for general purposes, specific grant for education, and a specific grant for health. 3) Grants for enhanced competencies, 4) Transfers for delegated competencies, 5) Extraordinary grants, 6) Financial assistance from the Republic of Serbia, and 7) Municipal borrowing.	
Document: Analysis On Own-source Revenues in the Municipalities of the Republic of Kosovo.	<p>How is the city performing the own sources collection?</p> <p>There is a decrease of 8% of collection.</p> <p>2010: 18,747.300€</p> <p>2011: 18,810,353€</p> <p>2012: 23,160,238€</p> <p>2013: 21,748,614€</p> <p>2014: 19,904,415€</p>	
Document: Budget Analysis for the municipalities of Peja and Prishtina 2015.	<p>How is the composition of the budget of Prishtina? And how much is allocated to public services?</p> <p>For the year of 2015, the overall budget was 62,114,156.00 €. From which the Municipal Own Source Revenues (43.7%), following Education Specific Grant (25.0 %), Government General Grant (23.7%), and Health and Social Service Grant (7.6%).</p> <p>Wages and Salaries (43%). Capital Expenditures (39%). Less than 15% of municipality's total expenditures goes for Goods and Services, Subsidies and Transfers, and Utilities.</p> <p>13.6% goes to public service sector, which includes the Unit of Waste Management, along with the sectors of Security and Emergencies and Sector for Transport and Traffic.</p>	
<b>Interviewee</b>	<b>Question</b>	<b>Answer</b>
Department of EU Integration and Policies Coordination - Ministry of Local Government Administration	Is the financial decentralization completely achieved?	<i>"No, is not" (...), due to the lack of competence and capacity of the municipalities, local structures, because they are very small".</i>
Unit of Waste Management of Prishtina.	Where are the funds for the waste management coming from? are they coming from national transfer or from the budget of the municipality?	<i>"Well, the national government takes taxes from Prishtina, then they separate the funds depending on how big is each city, with this money the Municipality separates the funds for every sector. After the Tender process to select the waste collection company of Prishtina, the Municipality will start collecting the tax itself and hence the municipality will have money, this is next year"</i>
Expert on waste management reforms at GIZ.	Would you say the municipality is ready to implement all of the competencies given by the law?	<i>"Yes, it is, however as I mentioned before there is a lack of human and financial capacity. The law is ambitious, the law requires municipalities to take over the fee collection, and to plan for the waste management, but there are people in the municipality that have never been trained in the waste management. (...)"</i>

According to the table above, the researcher found that the decentralization process, in regards to the competencies related to waste are in an early stage. The municipality of Prishtina is directly in charge of the sector, however its revenue composition does not seem to be strong

enough to financially implement the competencies. According to the interviews, the municipality has not received enough revenue to invest in policies and/or programs to boost recycling, the only support the sector has directly received is the one given by the GIZ. In this sense, there is a disparity between the administrative and the fiscal decentralization (MLGA, 2017).

In order to find a way out to the aforementioned disparity, the municipality approved the Local Ordinance on Waste in 2016. This ordinance allows the municipality to select its own waste collection company and to determine a fee that could cover operational and investment cost. Within the same ordinance it is stated that the municipality will start collecting the fee, making out of this fee a municipal revenue. The implementation of the new ordinance will start from 2018 onwards.

#### 4.2.4 A short mention about the recycling market of paper and plastic in Prishtina.

As it was explained in the research strategy, in order to identify the market of recyclable material in Prishtina, the researcher applied the snowballing sampling strategy. From this, the researcher was able to get in contact with 4 formal enterprises and 4 informal waste-pickers. Unfortunately, neither the national Ministry nor the Municipality have consolidated information about the market and did not know the number of companies that formally work with recyclable paper and plastic.

With this in mind, is important to mention to the reader that the findings related to the dependent variable (recycling market) are based on the undertaken interviews with the companies and other stakeholders. As a general finding, the researcher wants to highlight the small number of formal businesses that collect, process and export the waste. As it can be seen in Table 9, there seems to be a small and undeveloped market in the city and country.

**Table 8 - Indicator No. 20 “Number of companies that formally process and export plastic and paper in Prishtina”**

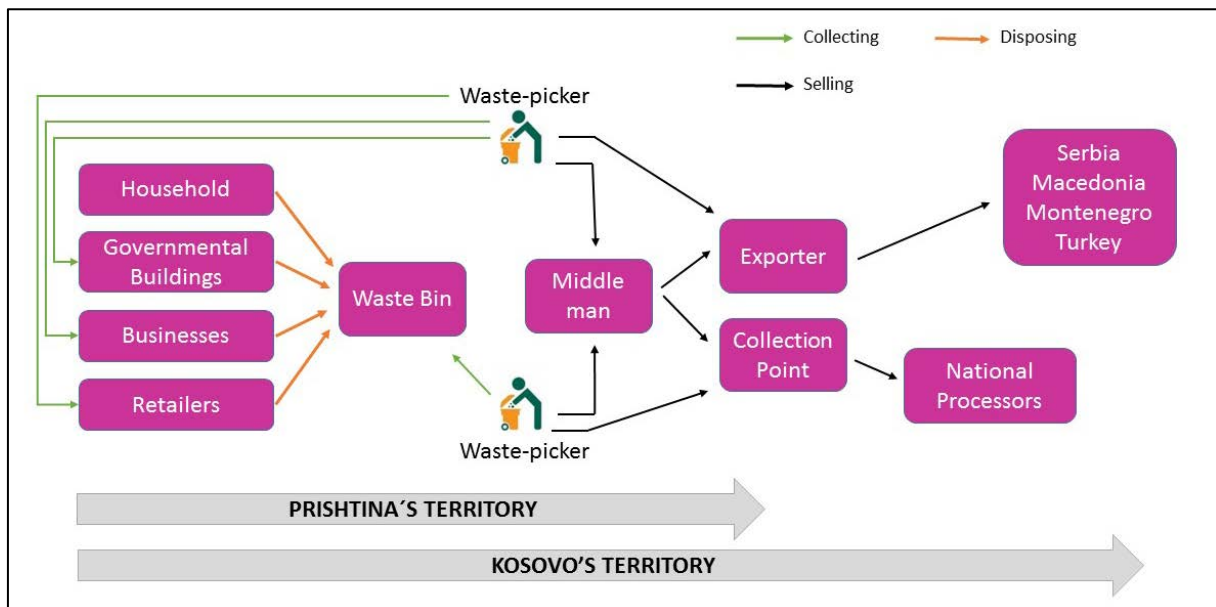
Interviewee	Question	Response
Expert on waste management reforms at GIZ.	How many recycling companies do you know in Prishtina?,	<i>“The recycling market in Kosovo is very immature, is not very well developed, you have few companies that process plastic (...). The paper is mainly exported in Serbia while the PET is exported to Macedonia”</i>
CornetKosova		<i>“No, there is one but I don’t know the name because it is informal”</i>
Green Art Center - Prishtina (GAC)		<i>“Currently, there are small companies that do take recyclable waste, plastic, paper and some kind of folio. They take it from the informal sector, they separate based on color, typical characteristics and then they do, less than 10 companies in the country, they do some processing besides bailing, they do washing, maximum they shredder the material, then press it and then export it”.</i>

RotoEko		<i>“Yes, there are just like three other companies including this one (...) from Kosovo we export 3500 tons of paper per month, out of that, RotoEko exports 1000 tons”</i>
---------	--	---

The small size of the market also helps to understand the extent of the recycling value chain in Prishtina. According to the interviews, the recycling activities that are happening in the country are, waste-picking, transportation to collection points, and from there, few processors buy the material and transform it into new products, while the rest goes for exporting (90% according to Green Art Centre). In the case of Prishtina, the activity that take place the most is waste-picking, transportation of recyclable materials to collection points, and exporting, there is not processing.

Having said that, and based on the interviews, the figure 8 shows the extent of the recycling value chain for the country and Prishtina. The relation among the informal and formal sector will be shown in the section 4.3.

**Figure 8 - Recycling value chain in Prishtina**



After interviewing the stakeholders, the researcher found other constraints that add complexity to the lack of processors in the country and also in the city of Prishtina. The author did not deeply inquire on this other constraints since they are beyond the scope of the current researcher, however the author considers important to mention them so the reader can have a full understanding of the context. The constraints are:

- Electricity supply: according to the processors, there is no continuous supply of energy, this undermines the possibility of working 24 hours per day, and hence to increase productivity.
- Price of land: given the answers, in order to run a processing plant, the companies need to find a large space where they can take the waste and place the machinery. According to the entrepreneurs is not easy to find a place with such characteristics, and the current



price of land of Prishtina is high when comparing with other cities. Subsequently, this situation limits the possibility of placing treatment plants in the city of Prishtina.

- **Justice system:** among the interviewees there is not a good perception about the judicial system since the lawsuit process takes a long time. According to Green Art Center, this situation has discouraged international investors to enter in the country since there is not guarantee of protecting their investments.
- **Environment for start-ups:** the processors and the donor agencies, agreed on the perception of the business environment of the country. According to them there is not incentives to start a company, they entrepreneurs should have “grace period, less taxes, better terms, better government package in terms of taxes” (USAID, 2017)

### 4.3 Specific findings

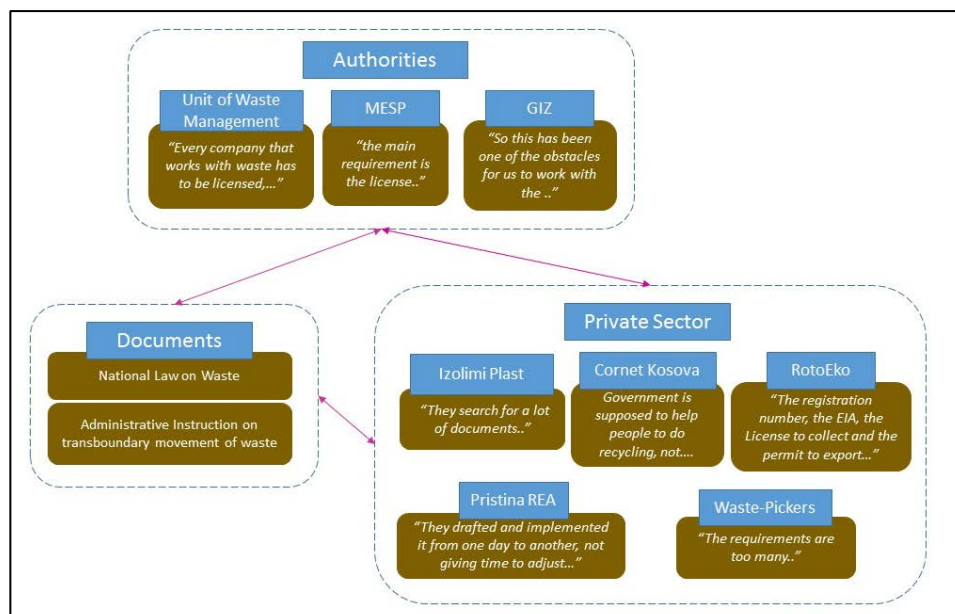
As it was explained in the introduction of this chapter, the researcher will present the results and analysis of the triangulation process per each dimension of the operationalization, the process was already described in the figure No. 6. Therefore, the original answers are not showed in the following tables, just the results and subsequent analysis. In case the reader would like to see the table of responses, it can be found in the Annexe No. 3.

#### 4.3.1 Variable Institutions

In order to analyse this variable, the author divided it into the dimensions of rules and norms, which respectively refer to laws and policies. Each one of the dimensions were accompanied by indicators that helped the researcher to focus on the particular aspects the literature review provided. To start off the analysis, the author shows the triangulation results. Below the tables the researcher analysed the results, and by the end of each dimension the author offers a conclusion.

An example of the triangulation process is shown in the following figure, it belongs to the indicator No.1 of the Dimension rules:

**Figure 9 - Triangulation Process**



## a) Dimension: Rules

**Table 9 - Results for the dimension of Rules**

Variable: Institutions	Dimension: Rules (Laws)	Indicator	Results
		1. Existence of entry barriers for the collection and treatment of plastic and paper recycling in the city.	Yes. To formally participate in the market, the entrepreneurs have to create a company and apply for a license for any activity related to waste management, in this case for collecting the waste, for processing or exporting. In total, according to the Law and the Administrative Instruction on the license of waste management, to get a license the company should present 10 requirements. According to the Administrative Instruction of the permit to export, there is another 7 requirements to fulfil if the company wants to export the recyclable material.
		2. Existence of the principle of Extended Producer Responsibility	Yes. The principle is written in the national law, however it has not been implemented yet. There is a starting process with the cooperation of the GIZ. The reasons why it has not been implemented are explained in the analysis of the dimension.
		3. Existence of mandatory sorting for waste generators	Yes. According to the national law on waste, sorting the waste at the source is mandatory, nonetheless it has not been implemented yet. In order to enforce it, the municipality of Prishtina has decided to offer the appropriate infrastructure first, afterwards the municipality will start issuing the fines about this topic.
		4. Existence of penalties and fines when the rule is not followed.	<p>Yes. Kosovo has the Law on Waste and the Administrative Instruction on Penalties with Mandatory Fines. In the national law on waste, under the chapter XIII, there are penalties for operating (collection, transport, waste treatment, or exporting) without a license, for operating without a waste management plan, when the waste that could be recycled is not classified, transported and stored separately, and for when the citizens and companies do not dispose the waste in the determined places. The Penalties with mandatory fines aim at preventing the dumping of waste out of the destined places. Additionally, the Administrative Instruction allows the police to issue the fines to the citizens. It also establishes the procedure to issue the fines.</p> <p>Regardless the existence of the mentioned mechanism, there is a low capacity to properly implement the fines. The reasons are analysed at the end of the present table.</p>
		5. Existence of subsidies to support recycling activities	Yes. The Law on Waste, allows in its article 60 the use of financial funds to stimulate the process of recycling, however, according to the interviews with the national and local government, there is not any current subsidy implemented yet.
		6. Existence of incentive-based instruments (Deposit-Refund, Take-Back)	Yes. The principle is written in the national law, however it has not been implemented yet. There is a starting process with the GIZ who is in charge of selecting a consultancy firm in order to identify the best model to implement in Kosovo.



		7. Existence of a fee for waste disposal	Yes, it is 6 euros per ton. According to the literature, the fees are a shifting point in the modernization of the waste management system. Once it is established it should incentive the municipality to start adopting programs to promote recycling and reduce the amount of landfilled waste. In Prishtina the incentive seems to be working, the chief of the Unit of Waste Management stated in his interview that reducing the amount waste and its price are the fundamental motivations behind the pilot project in the neighbourhood of Dardania. The mentioned project is further explained in the following dimension (Norms).
		8. Existence of procedures to enforce the laws and bylaws	Yes. The National Law, in its article 62 and 66, creates the inspectorate under the Ministry of Environment and also in the Municipalities, the inspectors are in charge of the law enforcement. In addition, in the Administrative Instruction of Penalties with Mandatory Fines (2016) the Police can also issue penalties. On the other hand, the Municipality has recently approved (2016) the local ordinance on waste, which describes the allowed and prohibited actions when it comes to waste management. It also establishes the fee on waste and the measures to take in case of evasion.  Regardless of what is written on the law, the interviewees agreed on the lack of implementation of the principles and penalties from the national and local government. The analysis of this is below this table.

### Analysis:

Following the institutional theory, punctually the stream of rational choice institutionalism, it can be understood that the National Law on Waste, the Administrative Instructions of the Waste Management License, and the Permit to Export, aim at having a principal-agent interaction between the national government and the stakeholders that perform collection, transportation, processing and exporting. The License and the Permit become the way the government influences the recycling activity by stablishing requirements the stakeholders should follow. In order to ensure the compliance with the laws, the National Law on Waste has created inspectors and contains penalties to which the stakeholders can be subjected to in case they disobey the laws.

However, regardless the existence of the laws and the penalties, there is a low capacity to enforce the instruments. At the national level, the Ministry of Environment has only 8 environmental inspectors for the entire country which are responsible for covering, besides waste, other environmental areas (MESP, 2017). Prishtina also counts with local inspectors, nonetheless they are allocated for the entire Directorate of Public Service, which includes other sectors such as transportation, and water supply as well (Unit of Waste Management of Prishtina, 2017). This lack of law enforcement is also shown by the answers of the waste-pickers, when the researcher asked them whether or not they have been admonished by the authorities while performing their activity, the four informal waste-pickers said no.

On the other hand, the National Law on Waste contains some of the instruments that, according to the literature, could foster the recycling markets. Unfortunately the price for waste disposal seems to be the only one creating the right incentive. As Scheinberg has constantly mentioned, this creates an incentive in the municipalities to minimize the amount of waste that is being

landfilled, which is the case of Prishtina. All of the others that were mentioned in the literature, (EPR, Subsidies, Deposit-refunds instruments, mandatory sorting) are written in the Law but they have not been implemented or enforced. The reasons behind this lack of enforcement were previously mentioned in the section 4.2.3 when analysing the stage of the decentralization process.

## b) Dimension: Norms

**Table 10 - Results for the dimension of Norms**

Variable	Dimension	Indicator	Result
Institutions	Norms	9. Existence of any policy or campaign driven by the municipality towards recycling	<p>Before writing the analysis, it is important to mention about the lack of reports about former national and local policies. The four formal companies and the consulted NGO acknowledged that they have “heard” (CornetKosova, 2017) or “listen” (Izolimi Plast, 2017) about recycling, in television and radio before. When asking the municipality, the author found out there is not a consolidated report of prior actions.</p> <p>With this in mind, the author could only rely on the project that was mentioned and explained by the GIZ, by the Green Art Center NGO, and the Prishtina RAE company. The project’s name is “waste bank”. The project is currently developed by the Municipality and the GIZ in Dardania, one of the densest neighborhoods in Prishtina. (GIZ, 2017). With this project the Municipality and the GIZ aim at implementing the waste separation at a neighborhood scale, to integrate the informal sector and all of the other stakeholders, including the private sector. The project started on May the 23th of the current year (2017), reason why there was not any tangible result the researcher could look into.</p>

### Analysis:

The present research defined the policies as norms that, under the sociological institutionalism, could influence the market by promoting the change on behaviors towards recycling. The evidence shows that up to now there has not been any specific policy or program in the city to strongly promote recycling activities. For the national government, there are still other priorities such as the achievement of the full waste collection service coverage in the country. This statement was also supported by the NGO expert who also said that “Kosovo has a very low economy, is a post-war country, with a very wide and slow transitional phase, we don’t have a developed recycling industry, we have major issues in waste management” (Green Art Center, 2017).

At the local level, there is not any policies either. Nonetheless, the municipality acknowledges the importance of promoting the behavior of sorting recyclable material at the source for the near future. According to the chief of the waste management unit, they “need to prepare the citizens of Prishtina to create awareness of recycling, to know they can benefit of it, and how can we reduce the amount of waste. So, we are trying to do our job” (Unit of Waste Management of Prishtina, 2017).

When determining the reasons why there has not been any solid policy yet, the researcher found that, as mentioned in the general findings, the early stage of fiscal decentralization has been a constrain. Only, until next year, the municipality will start the waste fee collection, and will have a tender process to select a specific operator for the waste collection and transportation in Prishtina. In that sense, the municipality will have more influence on the collection, and on the allocation of the waste revenue to invest in the area of recycling.

### **c) Conclusion**

As the theory says, institutions can create incentives to stimulate the recycling market. In the case of Prishtina and Kosovo, the researcher could identified that the institutions the country has could boost recycling. Given the influence of the European Union Directives, the national Laws and Administrative Instructions are based on the European good practices and standards. Likewise, the institutions are mandatory, in case they are not followed there are also penalties and fines, which according to the theory it should be understood by the stakeholders in order to shape their actions by weighing costs and benefits.

However, as it was mention in the general findings, the early stage of the decentralization process also has an effect on recycling. The implementation of the related institutions is just starting, most of the institutions are not yet in use, the incentives are not clear, and hence, it is not possible to attribute to them the emergence of the current recycling market. As the USAID mentioned, “everything is private sector driven”.

## **4.3.2 Variable Recycling Market**

The recycling market is the unit of analysis of the current research. However in order to make it more tangible and measurable, the author decided to analyze the recycling market in two dimensions, first the value chain of recycling, and second the market conditions. As stated in chapter 2, this helped the researcher to understand the interaction of the stakeholders that participate in the recycling activities, and to identify the existence of market failures. Finally, since this variable is the dependent one, the conclusion of this variable will take into consideration the effect that some of the institutions are having over the market.

### **a) Dimension: value chain of recycling**

**Table 11 - Results for the dimension of value chain of recycling**

		Indicator	Results
--	--	-----------	---------

Variable: Recycling Market	Dimension: Value chain of recycling	<p>10. Subjective perception of the number of requirements to formally participate in recycling activities (too many, not too many, few)</p>	<p>This indicator was asked to the four formal companies, to the 4 informal waste-pickers, and to the national and local government in order to contrast their perception.</p> <p>Three of the four companies rated the number of requirements as too many, and one as few. According to their experiences, the requirements are time-consuming and demand expertise on how to present the documents, reason why sometimes an additional requirement for the companies is to hire an intermediary to help the companies in the process of applying for the license and other permits.</p> <p>The 4 waste-pickers said the requirements are too many as well. The researcher could identify that they have limited information about the real requirements and procedures, however they have a negative perception of the governmental bureaucracy, that perception could be attributed to other experiences such as the applying procedure for the Social Assistance, which according to them is long and corrupted.</p> <p>Finally, the national and the local government gave a different perception and rated the requirements as few. For them, the procedures are necessary in order to avoid pollution by hazardous material, hence the requirements are fair enough to ensure that the treatment of waste does not affect the public health of the cities.</p>
		<p>11. Existence of the informal (non-regulated) procedures in the recycling chain.</p>	<p>Yes. According to the interviews, there are informal practices in the steps of the recycling chain with the exception of the exporting activity. This activities are explained in the Figure No.10 (below). When is about exporting, the entrepreneur has to be formal since there is a transboundary movement of waste, and both international trade authorities (from the sending and receiving countries) require documentation.</p>
		<p>12. Subjective perception of the level of profitability of the business in the activities of waste picking, collection points, processing and exporting (low, medium, high)</p>	<p>The indicator was discussed with the four companies and the four informal waste-pickers since they are the ones undertaking recycling activities in the market.</p> <p>From the interviews, the two processing companies (Izolimi and CornetKosova) rated the profitability as low. For them, if the energy supply were for 24 hours, and the government supported them the profitability would increase.</p> <p>The same perception is shared by the four waste-pickers, who rated their activity with low profitability. As it will be explained in the following analysis and dimension, the waste-pickers are the first step in the value chain, and their activity has a lower value compared to the others. Likewise, according to them, the time they spend collecting the recyclable material is underrepresented with the price they get.</p> <p>Finally, for the case of RotoEko and Pristina REA, the profitability is medium. The reason will be explained in the following analysis.</p>

### Analysis:

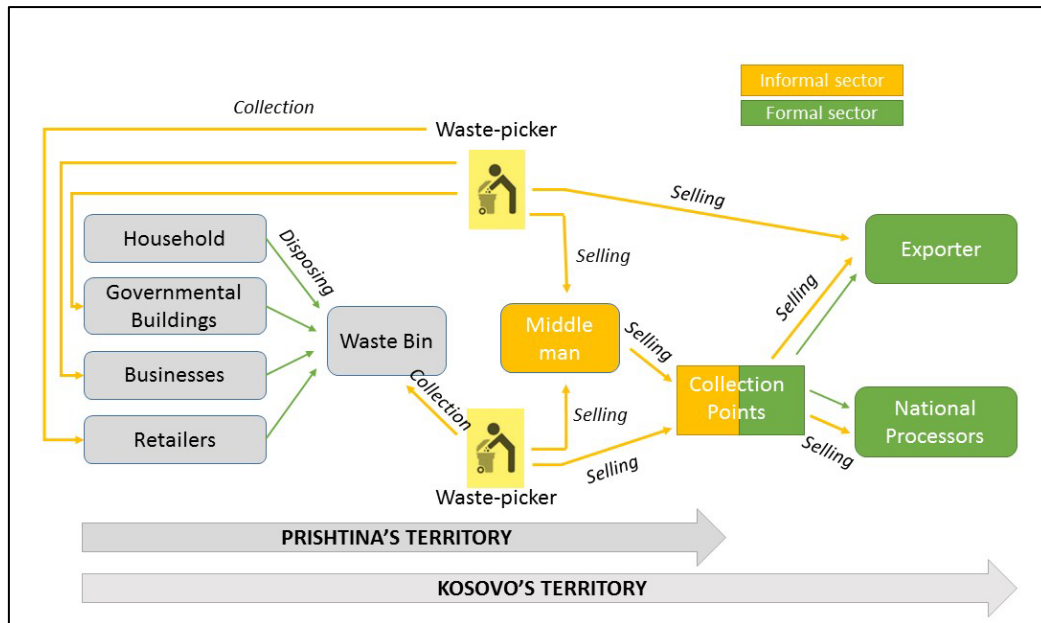
“The value chain valorisation dominates in low-income country cities” (Scheinberg and Simpson, 2015, p.984), and Prishtina is not the exception. After identifying the steps of the value chain, the researcher inquired whether or not there is a creation of value. As the answers showed, it is interesting to confirm what was mentioned in chapter 2, “each step adds value to the product and often generates more revenue than the previous step” (Jaligot, Wilson, et al., 2016, p. 81). As it will be explained in the paragraphs below, each step of the chain has a profit, where the most profitable activity is the exporting of waste.

Following the literature, the researcher can say that the city of Prishtina is moving from a pre-modern value chain towards a modern value chain of recycling. There is a price for waste disposal but recycling is mainly driven by the private sector, by formal and informal entrepreneurs. In this sense, taking into consideration the challenges that have been mentioned before (fiscal and administrative decentralization, lack of enforcement) the scenario where the municipality promotes recycling is hardly an option. Nonetheless, the municipality of Prishtina is conscious about the importance of recycling, and has shown efforts by implementing the “Waste Bank” pilot project (mentioned on the section of norms). The municipality seems to be following the tendency of the middle-income countries, which is the creation of innovative, hybrid and inclusive municipal/value chain systems (Scheinberg and Simpson, 2015).

Regarding the analysis of informal and formal interactions, it is important to mention that the existence of requirements (license, permits, EIA) draws a line between the formal and the informal sector. Both sectors agreed in perceiving the number of requirements as too many. Moreover, the mentioned perception reaffirms what was stated in the analysis of the indicator No.1: the requirements disincentive the entrepreneurs when realizing about the time and money they have to spend on the procedures. From its part, the informal waste-pickers also shared the same view, and emphasized in the fact that they did not have enough knowledge or capital investment to start a business.

Despite the fact that there are requirements to formally participate in the recycling market, the researcher analysed that the lack of law enforcement gives room for the informal sector to emerge. With this in mind, the researcher next questions was to understand to what extent are the informal and/or formal sector performing recycling activities in the value chain. Based on the interviews, the researcher found out that in Prishtina there is a high level of informality, and the activity that occurs the most within its territorial boundaries is the informal waste-picking.

### **Figure 10 - Extent of the informal sector in the value chain of recycling**



To further understand how the recycling value chain is working, the author decided to describe the functioning of it. To start with, there are informal waste-pickers that collect the recyclable paper and plastic directly from retailers, businesses and governmental buildings, as well as from the regular waste bins that are allocated by the municipality in the city. After this, the informal waste-pickers gather the recyclable material in small amounts and sell it to a middle man who is informal as well. The difference between the informal waste-picker and the middle man is that the last one has a financial capacity to either own or rent a bigger vehicle gather bigger amounts of material and transport it to a bigger collection point. In this process there is a first transaction between the waste-picker and the middle man.



Waste-picker



Middleman's vehicle

The collection points, according to the interviews are not located in Prishtina, they are located in other municipalities near by the cit. However, the researcher was able to interview one collection point that is located in the outskirts of the city, RotoEko. When the material arrives



to the collection point, a second transaction occurs between the middlemen who sell the material to the collection point. Subsequently, the collection point still sorts the material, in this case the paper is segregated in white paper, mixed paper and cardboard, while the plastic is segregated in vinyl. After this separation, the collection point has baling machines to compress the different material in tons. The baled material is after sold to a processing company, to an exporter, or the collection point itself undertakes exporting. Those who export are mostly formal (Mucaj, 2017).



Baling machine



Baled recyclable white paper

The presence of the informal sector in the recycling value chain of Prishtina can be framed as a survival strategy. When asking the informal waste-pickers the reasons behind working in recycling, the four of them gave answers related to the lack of job opportunities “because there’s no other job I could find”. This has placed them in socio-economic difficulties in which the only support they receive from the government is the Social Assistance Scheme, which is targeted to poverty alleviation. In order to be eligible for the Scheme, the families must fit in one of the two existent categories: “a) families in which all of the members are dependent and not working, or b) families in which there is one family member able to work and registered as unemployed with the Employment Offices of the Ministry of Labour and Social Welfare” (Elezai, 2014, p.6).

As a consequence, since there is a lack of law enforcement of the law on waste, the waste-picking activity allows waste-pickers to work without being registered, hence they keep the two incomes, the one given by the government and the revenue they make out of picking and selling recyclable material. In that sense, the Social Assistance Scheme, and the income security it provides disincentives the waste-pickers in pursuing formal activities in the recycling chain.

Finally, the literature review shows that in the recycling chain there is also a final consumer, the last step in the chain. However, the researcher could not get in contact with a processor company within the territory of Prishtina to inquire about the end consumers of the products made of recyclable material. The two processing companies that were interviewed (one of paper and the other one of plastic) were located in other municipalities where their final

products are also sold to construction purposes or for eggs packaging. This lack of a final consumers in the city is attributed to the size of the recycling market, an aspect that would be further analysed in the following section of the market conditions dimension.

## b) Dimension: market conditions

As stated in chapter 2, the market conditions analysis was chosen in order to understand the current situation and the incentives around the recycling market. Following Elinor Ostrom, the researcher wanted to understand if the “rules, are insufficient to motivate individuals to produce, allocate and consume these goods” (2005, p.23). The results of this section are mainly based on the interviews that were undertaken with the formal companies and the informal sector. All of the questions were oriented to ask just about paper and recyclable plastic.

**Table 12 - Results for the dimension of Market Conditions**

Variable: Recycling Market	Dimension: Market conditions	Indicator	Result
		13. Subjective perception of time invested on the search and selling of recyclable material (few, not too much, too much)	<p>The four formal companies perceived that the time invested in searching for the recyclable material is between few and not too much. They attributed this to the fact that they have already built their own supply chain of material. For the case of RotoEko (Collection point and exporter) and Prishtina REA (exporter) they attributed their supply network to the power of mouth and their previous connections. For the case of CornetKosova and Izolimi, they mentioned they have established agreements with collection points in order to continuously provide them with suitable material for the companies.</p> <p>When talking with the waste-picker, the perception is the opposite. For them, the invested time in looking for material to sell is too much, according to the interviews they could work every day for 12 hour. The fact that there is not sorting in the waste bins of the city requires more time from the waste-pickers when searching and selecting the correct material.</p>
		14. Subjective perception of the price of the material the recyclable material (low, medium, high)	The 4 formal companies as well as the informal waste-pickers agreed on perceiving the price they sell the material at as medium. The reasons behind this are explained in the analysis that is described below this table.
		15. Estimated percentage of contaminated material (paper and plastic)	<p>None of the 4 formal companies answered to this indicator with a specific percentage, they did not have a calculation about this. Nonetheless they mentioned the measures they take into account in order to check the quality of the material.</p> <p>On the waste-picker side, the answer was similar by the fact that they do not know how much material could be polluted. Only one of them was aware about the drop in the price if the material is polluted.</p>
		16. Existence of procedures to test the quality of the purchased recyclable material	The 4 formal companies explained to the researcher the procedures. In general they have had to hire personnel in order to check the material they receive is not mixed with pieces of



		metal or any other material that could add extra weight, or material that could damage the processing machines.  In the case of the 4 informal waste-pickers, they did not mention any specific procedure to ensure that the material that is being collected is clean. From the indicator No. 15, the author could understand that since the waste-pickers are not aware of the importance of proving clean material, they do not undertake any specific procedure to ensure the collection of the proper material.
	17. Subjected perception of the diffusion of the issued regulations that affect the sector (low, middle, high)	The 4 waste-pickers did not know about the law on waste, reason why their answers rated the diffusion of the issued regulation as low. For the 4 formal companies, three rated the diffusion as low, and for CornetKosovo was medium. According to the interviews, it seems that most of the information can be found online but the companies are not notified about changes in the law or in the administrative instructions. Therefore, sometimes it is difficult for the companies to know all of the rules and procedures they should comply with. As an alternative, they regularly visit the Ministry's premises in order to keep informed.
	18. Existence of risk aversion of consumers with goods manufactured from recyclable material (low, middle, high)	As it was stated before, the researcher could not find end-consumers in the city of Prishtina. The two processing companies are located in other municipalities, and according to their clients there is not risk aversion, they know the final products come from recyclable material.
	19. Existence of products with a high cost of recycling due to its manufacturing components.	Given the fact that the two processing companies are the ones transforming the material into new products, this questions was only asked to them. According to their answers, they have not found any material, within plastics and paper, that their machines cannot process.
	20. Number of companies that formally process and export plastics and paper in Prishtina.	As it was mentioned, the researcher did not find enough information about a specific number of companies that formally work with recyclable material. The municipality has just started to gather systematic information about the sector. However, as it was written in the Table No. 9, the interviewed stakeholders said there is a small number of formal companies.

### Analysis:

As it was mentioned in the literature review, recycling markets can be undeveloped depending on the number of companies and the extent of the value chain. According to the statements of the NGO expert and the GIZ (Table 9), there is a small number of formal companies in the market. To understand the reason behind this, the literature advises to take a look on the market conditions in order to identify possible failures. Therefore, the researcher decided to ask the companies about their perception on the conditions of the market.

The first market failure is the search and transaction cost, which comprises the analysis of price and time in finding the appropriate material. When it comes to the invested time on searching for recyclable material, it seems it is not an issue neither for the processors nor for exporters,

however, the time invested becomes too much for the waste-pickers who spend significant time when looking for the material. While it is true that the processors and exporters did not complain about the invested time, the GIZ provided a point of view that is important to take into account. It is that, nowadays the supply of the recyclable material is all depending on the informal sector and the informal sector is not completely reliable, “one day is raining and they just don’t go out to pick, and then the recyclables won’t reach the collection centers (...) so I think for now is okay, but for the future we have to think” (GIZ, 2017). In this sense, this market failure does not seem to be a problem for the current entrepreneurs, however, it might be an obstacle for new entrepreneurs. Since there is no official information about the supply, they will have to make projections based on assumptions, and spend time in identifying the suppliers, which imply an additional cost as well.

When it comes to the price, it is important to mention that most of the recyclable paper and plastic are being exported, the price in Kosovo follows the international tendency of Europe. According to RotoEko, when they export the paper material the maximum they can sell the price at is the double they pay when buying the material from a middleman, which is 8 cents/kg. According to Prishtina REA, they buy the plastic material at 12 cents/kg and get a profit of 2 cents per kilogram when they export. However, the waste-pickers and the companies perceived the price as medium. The reason behind this perception is explained by Prishtina REA and Izolimi, who mentioned the non-competitive position of the Kosovo exporters. According to them, the Macedonian government as well as the Serbian one, support the recycling industry by sharing the cost of the manpower, in this sense a competitor from those countries can easily get more profit when selling the material in the international market.

The following market failure is about the mismatches in the information about the recycling market, which refers to the quality of the recyclable material. As it was explained in the recycling value chain, the waste-pickers collect the waste, while doing this they do a first step in sorting the material before selling it to the middleman, however, they do not check if there are substances that could affect the quality of the material. Since the middleman receives the recyclable paper and plastic from different waste-pickers, the middleman has to re-sort it in bigger quantities and take it to the collection point. In this collection points, the material is gathered in tons, in this process there is also sorting involved in order to check the quality of the material.

The other reason why the actors of the chain undertake re-sorting activities, is the risk of paying extra weight for the material, or getting inadequate material that could damage the machinery. Having said this, it seems to exist a mistrusted relation in the different transactions of the chain, which also represents an additional cost. Both, the exporters and the processors, are forced to hire extra personnel in order to re-check the material before the material gets inside the machines. In sum, the information failure is currently taking place, and it is causing an extra cost for the entrepreneurs.

Additionally, on the same failure of information, it was important to inquire how the government has informed the stakeholders about the laws that impact their activities, in other words, the researcher wanted to know if the stakeholders were aware of what is allowed, not allowed, and the penalties they can be subjected to. According to the theory, this will shape

their behavior when knowing the consequences of their actions. As it is seen in the table above, the companies and the waste-pickers rated the communication process as low. The companies are aware of the laws, since they are formal they comply with them, however, they attributed this awareness to their own initiative on checking the website and constantly visit the Ministry's premises. For its part, the interviewed waste-pickers did not know about the laws, which raises the question about their perception of the legality of their own activity.

In conclusion, there is also a failure in informing all of the stakeholders about the rules of waste management, this has affected the market in the past already. According to Prishtina REA, when the Administrative Instruction about the permit for exporting waste was issued, there was not proper communication, some companies did not know about the requirement, and they had to close their businesses since they were no longer allowed to export recyclable material. In other words, there is available information but is not easy to have access to it.

Finally, in regards to indicators 18, 19, 20, the researcher could not find enough information to properly analyse them, which also re-affirm what was stated by the GIZ, there is lack of information about the market, "there is not enough data, and no one would dare to invest in a processing machinery without knowing the exact percentage of the recyclables that are being produced, and how much that would be, is a simple business analysis".

### **c) Conclusion**

The recycling activities that are occurring in Prishtina are driven by the remaining economic value of waste. The theory mentions that when the waste disposal is priced, recycling often becomes a service that is provided by the municipalities. However, in low and middle-income cities a hybrid between approaching recycling as a service or as a commodity rises. This particular situation is due to the existence of a value chain that creates added value for the economy.

The aforementioned paragraph, is the case of Prishtina. Recycling creates an added value, but particularly interesting it does it in both, the informal and the formal sector, from the waste-pickers to the exporters. For the informal sector, it is a survival strategy to make a living. Even though the recycling activities are regulated, the lack of law enforcement leaves an open window for the informal sector to engage in the market. As for the formal sector, it is motivated for the opportunity to increase the profitability of their businesses, reason why the formal companies are located in the upper steps of processing and/or exporting, where they can sell bigger quantities and products.

According to the interviews, the companies become formal not necessarily to comply with the laws, but in order to have more profit. In this sense, the interaction among both sectors is not completely rival since the informal sector provides the material to the formal sector, however, due to the characteristics of the informal sector and the lack of liabilities, the formal sector could be negatively affected in its supply chain.

In terms of the market failures, the researcher can conclude that given the lack of enforcement, there are unattended market failures. As stated before, the information failure regarding the quality of the material is adding cost to the formal companies, and even though the license could avoid this, the enforcement of the license is still in progress. Additionally, in terms of

price, the formal sector faces a disadvantageous position in the international market, where the subsidized companies from other countries can manage to offer lower prices.

## **Chapter 5: Conclusions and recommendations**

### **5.1 Introduction**

Having in mind all of the findings presented above, in this final chapter the author will answer the research questions that guided the current thesis as well as the main research questions. Subsequently, a final conclusion will be provided and a small set of recommendations as well will be given.

### **5.2 Research questions**

#### **5.2.1 What are the institutions around the recycling market in Prishtina?**

According to the literature, the study of institutions is important when trying to identify what are the incentives around a market. In this sense, there is a common tendency on focusing only on the institutions that come from the authority that is in charge of the sector. However, in several occasions, there are some other institutions, from different sectors, that also have an influence on the recycling markets. This is precisely the case of Prishtina. After interviewing the stakeholders, the researcher could understand that the institutions that have an impact on the market not only belong to the local and environmental sector, but also belong to the national level and to other sectors.

When it comes to recycling in Prishtina, most of the laws and bylaws are national, out of the sixteen, just three are from the municipality, two of them are policy documents and the other one is a bylaw that was recently approved. Regarding the sectors, eight regulations were issued under the Ministry of Environment and Spatial Planning, three under the Directorate of Public Services of Prishtina, and the other five belong to other sectors, to know they are social welfare, trade and industry, public finances, public administration, and local governance. The List of the institutions, the summary and their state of implementation are described in the Annex No. 1.

After reading the institutions, and in line with the literature, the researcher could identify that the country has the recommended institutions in a context of market failures, such as the subsidies, the Extended Producer Responsibility, the incentive based instruments, and the campaigns. However, neither the country nor the city have fully enforced the specific rules. This situation has lead the researcher to the conclusion that there is not incentives coming from the institutions, the only incentive the entrepreneurs find to participate in the recycling market is the remaining value of the recyclable material, which is mostly demanded by the international market, reason why the 90% of the material is exported (Green Art Center, 2017).

Having said the aforementioned, the author can conclude that the goal of the city and country in improving the recycling rates, entirely relies on a private sector that instead of being supported is being constrained. The constraints will be mentioned when answering the main research question.

## **5.2.2 What are the differences in the recycling market of plastic and paper in terms of quantities, market conditions and value chain?**

### **a) Quantities**

In terms of quantities it was not possible to find consolidated information about the amount of paper and plastic that is being recycled in Prishtina, according to Pastrimi, the “waste that can be recycled is usually collected from containers by the informal sector, so there is no statistics on the quantity” (Pastrimi, 2017).

### **b) Value chain of recycling**

After interviewing and understanding the recycling value chain of paper and plastic in Prishtina, the researcher can say that the only difference among the two materials is the price, being the price of plastic higher than the price of paper (paper 8 cents/kg, while plastic 12-15 cents/kg). One of the reasons of the similarity of each chain is that both start with the same informal waste-pickers, who select both materials (paper and plastics) at the same time. Afterwards, the materials follow the same value chain, according to the interviews, sometimes the materials even go through the same collection point or stakeholder. The specialization of materials occurs when the material is sold to a processor or to an exporter.

Finally, in regards to the value chain of both materials, the researcher have one last conclusion. The fact that both value chains are missing the step of the end-user in the city, also means that a bigger part of the value of recycling paper and plastic is going abroad, and it is not remaining in the country. If the city and/or country implemented the institutions and support processors by matching their products, the country could keep more value of the recycling chain within the country. As mentioned by Izolimi Plast and Prishtina REA, this is possible since the country could replace some of its imports, such as granulated plastic and white paper.

### **c) Market Conditions**

As well as the value chain, the market conditions of the paper and plastic recycling market do not differ from each other. Both materials are facing the same challenges that were mentioned in chapter 4. Based on the results, the researcher can conclude that the market conditions that are affecting the market the most is the search cost and information failure. On one hand, the time the waste-pickers spend when looking for material, could be more efficient in terms of collecting more material in less time, this could generate a better income for the waste-pickers, and it could increase the amount of the supply. On the other hand, the information failure increases the cost for the exporters and processors when investing capital on quality checks, as mentioned before, there is a mistrusts between the informal and formal sector that could be intermediated by an institutional instrument.

### **5.2.3 Have the institutions boosted the recycling market of plastic and paper in Prishtina?**

Not entirely. Taking into account the theory, the specific and the general findings, the researcher can say that the authorities have prioritized the implementation of the institutions that instead of promoting are constraining the recycling market of paper and plastics in Prishtina.

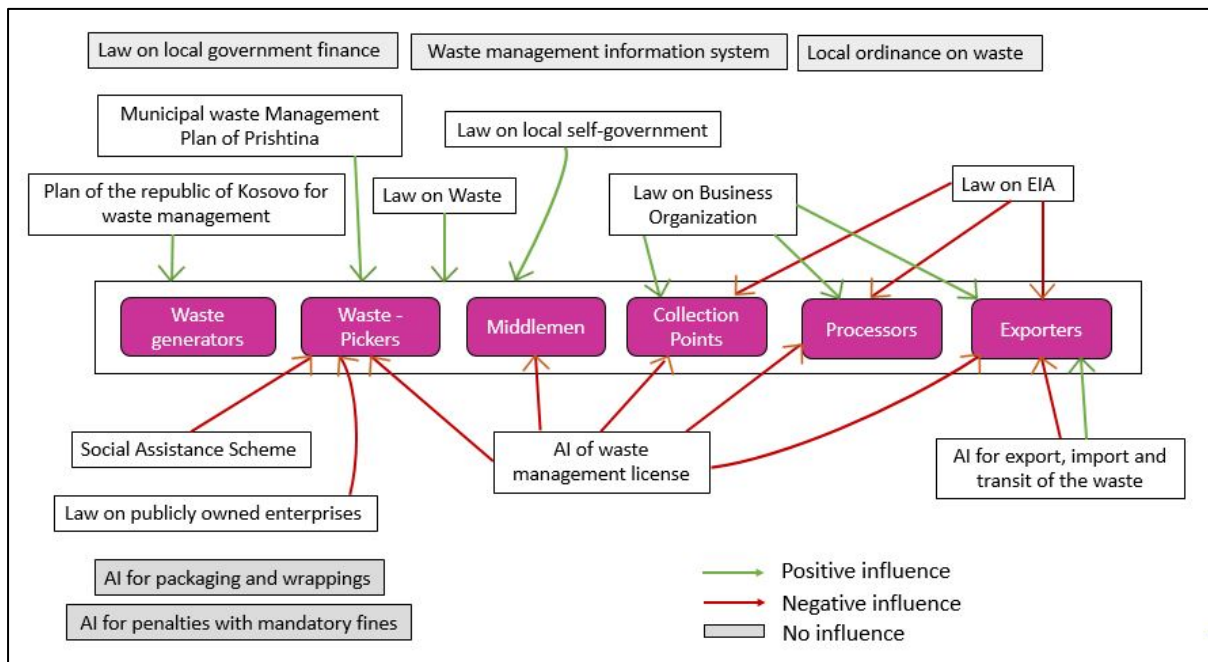
On one hand, the lack of budget, the lack of capacity from the national and local government to implement the laws, and the goal of servicing the country with the waste collection, have resulted in the prioritization of the institutions that create entry barriers for new companies in the recycling market. The implementation of the license and permits is a way to organize and regulate the market, however, according to the interviews, the cost, the procedure and time discourage and disincentive any entrepreneur that is willing to start a formal recycling business. On the other hand, the institutions that are not in use, are precisely the recommended ones by the literature as instruments that could incentive the markets.

In this sense, the author shares the opinion of USAID, when affirming that the existing recycling activities of the city are mostly derived from the private initiative. Nonetheless, even though the institutions are not providing incentives, there are two institutions that facilitate the recycling activities. The first one is the Law on Business Organizations from the Ministry of Trade and Industry. It has resulted in an easy and fast procedure to open and formally register businesses. The second one, is the permit to export, although the author presents it below as an additional requirement that discourages the market, there is another point of view that cannot be denied; it is the fact that without this permit no company could export waste to another country. The international Basel Convention on the Control of Transboundary Movements of Hazardous Wastes demands from the States a legal notification about any kind of waste movement. According to the Basel Convention “the movement may only proceed if all States concerned have given their written consent” (The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes, 1989, p.16). In this way, the Kosovo government is somehow complying with the international rules and therefore enabling the exporting of waste to happen.

### **5.2.4 How do institutions affect the paper and plastic recycling markets in Prishtina?**

Taking into consideration the aforementioned, the author affirmed that the institutions have not entirely boosted the market, however it is true that the institutions have affected the market. Based on the findings, the researcher organized the relation of the institutions in the existent recycling market of paper and plastic of Prishtina as positive and negative influences. By positive the author refers to all of the institutions that somehow have facilitated the recycling market, by negative the author means the institutions that have constrained or impeded a faster development of the markets.

**Figure 11 - The influence of institutions in the recycling market of paper and plastic**



### a) Positive influence

As it can be seen in the Figure 11, the Law on Business Organization has had a positive influence on recycling, especially for the companies. It allows the businesses to emerge as enterprises. According to CornetKosova, the Ministry of Trade and Industry has made easy the system by allowing an online registration. The average time to open a business in Prishtina for 2016 was 3.09 days, which is an improvement from the average of 2015 that was 3.32 (USAID, 2016). For its part, the national law on waste has, to some extent, positively influenced the market. The fact that it includes the waste management hierarchy as the country's target, shows that the law has institutionally embraced and allowed recycling within its territory. Nonetheless, as it was stated before, some of the mechanism to boost recycling has not been implemented yet.

Likewise, the national and local plans for waste management have also had, in general, a positive influence in the market, not directly on the recycling companies but in the step of the waste-generators and the waste-pickers. Regardless the fact that the prioritized action for the national and local government is to improve the collection and transportation service, the plans acknowledge recycling and include actions to be developed, this openness to recycling has facilitated and welcomed the cooperation of the GIZ with some attempts of waste segregation, such as the current Dardania pilot project.

Finally, as explained in the section above, even though the administrative regulation for exports establishes a arduous procedure to get the permit (documentation and an insurance), it has also allowed the transboundary commerce of waste with other countries, which nowadays is the main recycling activity that occurs in Kosovo.



### **b) Negative influence**

On the contrary, the administrative instruction of the waste management license, has had a negative influence. It is because the number of requirements it demands in order to formally allow a business to operate. All of the interviewees perceived the process as a disincentive to start the business and have more profit. At the same time, the author analyses that this administrative regulation is the one that draws the line between the informal and the formal sector when it comes to recycling. Similar to the license, the Environmental Impact Assessment is another requirement that the entrepreneurs interpreted as an extra procedure to comply with, that besides time it also demands additional investments and technical capacities.

On the side of the Administrative Instruction for the permit to export, the reader can see in the Figure No. 8 that it was rated with a negative and positive influence. The positive influence was already mentioned, while the negative refers to the requirements the companies have to fulfil to be able to export as well as the financial guarantee they must present, which is of minimum 30.000 euros, this is perceived as an extra requirement for an activity that “is helping the country to be cleaner” (Prishtina REA, 2017).

Finally, the social assistance scheme and the law on public owned enterprises has affected, in a negative way, the waste-picking activity. The social assistance is generating a negative incentive for the waste-pickers to remain as informal, therefore the chances of organizing themselves, have better job conditions, and get more profit are low. This situation shows the informal sector as a survival strategy. Another negative influence is perceived from the law on public owned enterprises, this is in particular due to the fact that is the regional company the one in charge of the fee collection, fee that is mostly allocated for the operation of the company (Unit of Waste Management, 2017), this has impede the investment of it in other type of initiatives to promote recycling.

### **c) No influence**

Some of the institutions that were classified as non-influencing were categorized as such due to the lack of implementation of the institutions. The Waste Management Information System and the administrative instructions for packaging and wrappings are not implemented yet, the Local Ordinance on Waste is in an early stage of being fully enforce as well as the Administrative Instruction of penalties with mandatory fines. In regards to the Law on Local Government Finance, it has been implemented but due to what was mentioned on the section 4.2.3 the process is still being trickled down, especially for the solid waste management service.

## **5.3 Final Conclusion and Recommendations**

The Integrated Sustainable Waste Management Framework is precise when acknowledging the complexities around the waste management systems. One aspect can affect a component of the system and vice-versa. The case of Prishtina clearly shows how the institutional aspects can have an effect on the recycling component, either negatively and positively. Having said that, the author can also conclude that there is not real incentives yet in the city, the relation among the independent variable and dependent variable is disrupted in the case of Prishtina.

On the institutional aspect, the author would like to add that the mismatch among what is written on the law and the actual implementation derives from, the influence of international agencies in the law making, and the lack of institutional capacity of Kosovo and Prishtina. In this regard, the GIZ has played a very important role by cooperating with the national and local government in the design of policies, and recently in the implementation of them<sup>24</sup>. However, this also shows dependency of the authorities from the cooperation agencies, which rises another important issue for future researchers about to what extend are the cooperation agencies building local capacity in the recycling sector in the city.

On the side of the depended variable (the recycling market), as stated before, the recycling activities are driven by the vision of waste as a commodity from which the private sector can make a profit. This has had a positive outcome for the city since it is diverting waste from landfilling and there is an added value in the economy. In the same sense, the formal sector of exporting and processing of plastic and paper material is highly dependent on the informal sector. In this sense the Municipal Unit of Waste Management is correctly approaching the sector under the ISWM framework when recognizing the role of the informal sector. Rather than exclude it, the municipality has started a process to analyze its nature and explore innovative ways to include them within the system. As the recycling value chain concepts advocate for, Prishtina could design a hybrid between a non-modern and modern recycling chain that could be scaled up in other cities of Kosovo.

In addition, it is important to recall that the markets of recyclable paper and plastics are facing market failures, especially the information asymmetry, transaction and search cost. In order to tackle them, the country already have the recommended instruments, however their implementation must be enhanced.

Finally, in order to connect this section with the recommendations, the author would like to add another point of view of the mismatch between what is written in the law and the lack of implementation. The current institutions could also be approached as long-term instruments that could increase the recycling rates of the country and city. The questions now is how to get there? Based on the literature and the findings the researcher respectfully recommend to the local government the following actions.

### **5.3.1 Recommendations**

a) Based on the interviews with the private sector, the researcher could perceived a high awareness about the environmental and economic benefits their activities bring to the city and to the country. In that sense, the private sector showed its willingness to cooperate with the municipality and national government in the case there is a solid program to promote recycling. Therefore, the local government could create sectorial partnerships with big waste generators, waste-pickers, exporters and processors to increase the rate of recyclable material. Since there is a constraint on allocating money to the sector, this partnership could also provide capital to invest on the sector.

---

<sup>24</sup> Pilot project in Dardania – Prishtina, and consultancy for the selection of the Extended Producer Reasonability model that suits the national context the better.

- b) The processing companies are an important step in the value chain of recycling. Strengthening this step of the chain will increase the amount of products from recyclable material and end-consumers. Subsequently, this would help the country to keep the created value within its territory and offer an opportunity to substitute imports, and hence, to contribute to the economy of Kosovo. This could be done by fostering the approval of the law on start-ups, which will create a package of discounts and incentives to support the entrepreneurs. Based on the interviews, a key partner would be USAID, especially, the Empower Private Sector program and their expertise in supporting businesses with job creation potential.
- c) In terms of local capacity to enforce the law, the municipality is one the step closer to finally manage the collection fee from the waste collection service, which also will contribute the generation of the municipality revenues. In other words, the municipality is achieving the decentralization of the service, and punctually of recycling. With this progress, the municipality could plan ahead and invest the generated revenue in smart infrastructure that allows the municipality to provide bins for source separation, gather information, and enforce the law.
- d) Finally, the researcher recommends to the municipality to build a website dedicated to recycling. The website could contain accessible information on quantities of waste and recyclable material, number of companies, characterization of the waste-pickers, and information about the new reforms, updates or new laws that could impact the sector. The availability and accessibility to the information could open the door for new private investments in the sector.

## Bibliography

- Akerlof, G., 1970. The market for 'lemons': quality uncertainty and the market mechanism. *The Quarterly Journal of Economics*, 84 pp. 488-500. [Accessed 26/04/2017].
- AlSayyad, N., 2004. Urban informality: transnational perspectives from the Middle East, Latin America, and South Asia. In: Lexington Books ed., 2004. Oxford: pp. 7-27. [Accessed 21/05/21].
- Bettencourt, L. M. A., 2013. The kind of problem a city is : new perspectives on the nature of cities from complex systems theory (SFI working paper : 2013-03-008). Santa Fe: Santa Fe Institute. Available at: <http://www.santafe.edu/media/workingpapers/13-03-008.pdf> [Accessed 28-09-2015].
- Botetzagias, L., Dima, A. and Malesios, C. 2015. Extending the Theory of Planned Behavior in the context of recycling: The role of moral norms and of demographic predictors. *Resources, Conservation and Recycling*, 95 pp. 58-67. [Accessed 15/06/2017].
- Boussauw, K., 2011. Challenges, threats and opportunities in post-conflict urban development in Kosovo. *Habitat International*, 36 pp. 143-151. [Accessed March 29th, 2017].
- Callcot, P. and Walls, M. 2005. Waste, recycling, and "Design for Environment": Roles for markets and policy instruments. *Resource and Energy Economics*, 27 pp. 287-305. [Accessed 1/07/2017].
- Carlson, A., 2001. Recycling norms. *California Law Review*, 89 pp. 1231-1300. [Accessed 1/06/2017].
- Chen, M., 2005. Rethinking the informal economy: from enterprise characteristics to employment relations. *Rethinking Informalization. Poverty, Precarious Jobs and Social Protection*.
- Dukagjin, G., 2017. Garcia, C., et al. Municipality of Prishtina. [Accessed 06/12/2017].
- Duranton, G. and Puga, D. 2004. Micro-Foundation of Urban Agglomeration Economies. *Handbook of Regional and Urban Economics*, 4 pp. 2063-2117. [Accessed 12/08/2017].
- Edwin, A. and Kelly M, R. 2010. Institutional Theory. In: K. Leicht and J. Jenkins eds., 2010. *The Handbook of Politics: State and Civil Society in Global Perspective*. New York: pp. 15-39. [Accessed 10/05/2017].
- Elezai, E., 2014. The real value of social assistance. Prishtina: UNDP. [Accessed 22/06/2017].
- Ellen MacArthur Foundation, 2012. Towards the Circular Economy. 1), Ellen MacArthur Foundation. Available at: <https://goo.gl/LG68Bz> [Accessed 27/05/2017].

- European Union Directive 2008/98/EC, 2008. (Waste Framework Directive), Brussels.
- European Commission, 2016. Waste Statistics. Available at:  
[http://ec.europa.eu/eurostat/statistics-explained/index.php/Waste\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Waste_statistics) [Accessed 2017].
- Garstka, J., 2009. Post-conflict urban planning: the regularization process of an informal neighborhood in Kosovo. *Habitat International*, 34 pp. 85-95. [Accessed March 29th, 2017].
- GIZ, 2017. Solid Waste Management in Kosovo: assessment of a Waste Bank Model in Dardania, Pristina.
- Gunsilius, E., Spies, S., García-Cortés, S., Medina, M., et al., 2011. Recovering resources, creating opportunities Integrating the informal sector into solid waste management. Eschborn: Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). [Accessed 20/05/2017].
- Hernández, J., 2008. Perspectivas del institucionalismo y neoinstitucionalismo. *Ciencia Administrativa*, 1 pp. 47-58.
- Hollingsworth, J., 2000. Doing Institutional Analysis: implications for the study of innovations. *Review of International Political Economy*, 7 (4), pp. 595-644. [Accessed 10/05/2017].
- Jaligot, R., Wilson, D., Cheeseman, C., Shaker, B., et al., 2016. Applying value chain analysis to informal sector recycling: a case study of the zabaleen. *Resources, Conservation and Recycling*, 114 pp. 80-91. [Accessed 2/07/2017].
- Johnstone, N. and Tilly, S. 2006. Public Policy and Recycling Markets. In: OECD ed., 2006. Improving Recycling Markets. Paris: [Accessed 11/3/2017].
- Kaplinsky, R. and Morris, M., 2012. A Handbook for Value Chain Research. Ottawa: IDRC. Available at: [http://asiandrivers.open.ac.uk/documents/Value\\_chainHandbook\\_RKMM\\_Nov\\_2001.pdf](http://asiandrivers.open.ac.uk/documents/Value_chainHandbook_RKMM_Nov_2001.pdf) [Accessed 3/07/2017].
- Klundert, A. v. d. and Anschütz, J., 2001. Integrated sustainable waste management - the concept : tools for decision-makers : experiences from the Urban Waste Expertise Programme (1995-2001). Gouda: Waste. Available at:  
[http://www.waste.nl/sites/waste.nl/files/product/files/tools\\_iswm\\_concept\\_eng1.pdf](http://www.waste.nl/sites/waste.nl/files/product/files/tools_iswm_concept_eng1.pdf) [Accessed 20-01-2016].
- Krasniqi, F., Nushi, P., Islami, H., Basha, E., et al., 2013. Kosova a monography survey. Prishtina: Akademia e shkencave dhe e Arteve e Kosovës. [Accessed 19/06/2017].
- Law on Local Self-government, 2008. Prishtina.

- Lindfield, M. and Steinberg, F., 2012. Urban Development Series: Green Cities. The Philippines: Asian Development Bank. [Accessed 1/07/2017].
- Marina Moscoso (unpublished) 2015. The Informal Waste Sector in the Metropolitan Area of Pristina, Kosovo. Master Thesis.
- Mazzanti, M., Montini, A. and Zoboli, R. 2008. Municipal Waste Generation and Socioeconomic Drivers: Evidence From Comparing Northern and Southern Italy. *The Journal of Environment & Development*, 17 (1), [Accessed March 28th, 2017].
- Metro Vancouver, 2012. Recycling Market Study. [Accessed 28/07/2017].
- Nicolli, F., Johnstone, N. and Söderholm, P. 2012. Resolving failures in recycling markets: the role of technological innovation. *Environmental Economics and Policy Studies*, 14 pp. 261-288.
- Ostrom, E., 2005. Understanding the diversity of structured Human Interactions. Understanding the diversity of structured Human Interactions. 2005. Understanding Institutional Diversity. Princeton: Princeton University Press. [Accessed 11/3/2017].
- Prishtina Municipal Solid Waste Management Plan 2012-2016, 2012. Prishtina.
- Querimi, R., 2017. Garcia, C., et al. Interview with the Deutsche Gesellschaft für Internationale Zusammenarbeit - GIZ. Prishtina: .
- Rathi, S., 2006. Alternative approaches for better municipal solid waste management in Mumbai, India. *Waste Management*, 26 (10), pp. 1192-1200. Available at: <http://www.sciencedirect.com/science/article/pii/S0956053X05002308/pdf?md5=e6cf5ab3b52bc41689d34cb8cfae0a39&pid=1-s2.0-S0956053X05002308-main.pdf> [Accessed 20-01-2016].
- Research and Markets, 2017. Global Waste Recycling Market Outlook. ( ; Dublin: Available at: <https://goo.gl/vDU1rR> [Accessed 28/07/2017].
- Ruijsink, S., (unpublished) Spatial Planning in Kosovo. Belgium: Katholieke Universiteit Leuven.
- Scheinberg, A., 2011. Value Added: modes of sustainable recycling in the modernisation of waste management systems. Wageningen: Wageningen University.
- Scheinberg, A., 2012. Informal Sector Integration and High Performance Recycling: Evidence from 20 Cities. *WIEGO: Working Paper (Urban Policies)*, 23 [Accessed 25/06/2017].
- Scheinberg, A. and Simpson, M. 2015. A tale of five cities: Using recycling frameworks to analyse inclusive recycling performance. *Waste Management & Research*, 33 pp. 975-985. Available at: 22/05/2017 .
- Scott, A. J. and Storper, M. 2014. The nature of cities : the scope and limits of urban theory. *International Journal of Urban Regional Research*, 39 (1), pp. 1-15. Available at:

<http://onlinelibrary.wiley.com/doi/10.1111/1468-2427.12134/pdf> [Accessed 28-09-2015].

Strategy of the Republic of Kosovo on Waste Management 2013-2022, 2013. Prishtina.

The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes, 1989. Basel

Thiel, S., 2012. Research Methods in Public Administration and Public Management, an introduction. London: Routledge. [Accessed 17/05/2017].

Thoenig, J., 2007. Institutional theories and public institutions: Traditions and appropriateness. *Handbook of Public Administration*, pp. 22. [Accessed 10/05/2017].

Torres, E., 2015. El nuevo institucionalismo: ¿hacia un nuevo paradigma? *Estudios Políticos*, 34 pp. 117-137. [Accessed 9/05/2017].

UN-Habitat, 2010. Solid waste management in the world's cities. London: Earthscan Ltd. [Accessed 15/04/2017].

UN-Habitat, 2010. Solid Waste Management in the World's Cities. Washington: Earthscan. [Accessed 22/02/2017].

UN Resolution No.1244, 1999. New York.

USAID, 2016. Basic Performance Indicators for Business Registration in Kosovo. [Accessed 25/06/2017].

Wilson, D., 2007. Development drivers for waste management. *Waste Management & Research*, 25 pp. 198-207. [Accessed 23/06/2017].

Wilson, D., Rodie, L., Cowing, M., Whiteman, A., et al., 2015. Benchmark Indicators for Integrated and Sustainable Waste Management. *International Journal of Integrated Waste Management, Science and Technology*, 35 pp. 329. [Accessed 15/04/2017].

World Bank, 2012. What a Waste: a Global Review of Solid Waste Management. Washington: Available at: <https://goo.gl/FZgqZp> [Accessed March 28th, 2017].

Yin, R., 2014. Case study research design and methods. 5th. Thousand oaks: SAGE. [Accessed 26/05/2017].

Zerbe, R. and McCurdy, H. 1999. The Failure of Market Failure. *Journal of Policy Analysis and Management*, 18 (4), pp. 558-578.

## Annex 1: Semi-Structure Interviews Guides

Questions to the Ministry of Environment	Variable	Indicator	Research Question
<b>Introduction</b>			
1. What is the role/responsibility of the Ministry when it comes to waste management and recycling in cities?	Independent	1,2,3,4,5	R1
<b>Previous institutional organization</b>			
2. The municipality has issued a bylaw to organize the waste management in the city, how was the organization of the waste management system before, and punctually, what was the role of the ministry back then?	Independent	1,2,3,4,5	R1
3. Regarding recycling, since when do you recall there has been recycling activities in the Prishtina? – MATERIAL ¿To what would you attribute the installment of the businesses back then?	Dependent	8,9,10,11	R2,R3
4. Is there any information about total quantities of recycling of plastics and paper?	Independent		R2
<b>Current laws and regulations</b>			
5. According to your knowledge, what are the laws or/and regulations around recycling activities in Prishtina.	Independent	1,2,3,4,5	R1
<b>About the National Law on waste</b>			
6. What is the difference between the Broker and the Dealer?	Independent Dependent	14	R1
7. Who is considered as a waste holder and who is the waste owner?	Independent		R1
8. How is the support of the Ministry with the Municipality of Prishtina in terms of waste management and recycling? ¿In terms of Management and budget?	Independent	1,2,3,4,5	R1
9. The law mentions that the Ministry is in charge of issuing a license for collection, processing and exporting: ¿How long does it takes to get the license? ¿What type and how many requirements are asked in this process? ¿Does it have a financial cost? ¿Is there any difference in the procedure when it comes to recycling paper and plastic?	Independent Dependent	1,8	R1,R2



<p>According to you ¿what is your perception about the number of requirements of the licensing process, are they too many, fair, or few?</p> <ul style="list-style-type: none"> <li>• Collection</li> <li>• Processing</li> <li>• Exporting</li> </ul> <p>¿Why do you think is the reason why the waste pickers cannot access to the license?</p>			
10. When a new business opens in the city, is there any procedure or requirement that obliges the company to present a plan for recycling?	Dependent	3,4	R1,R2
11. Is there any inclusion of the Extended Responsibility of the Producer in the law? ¿How is the enforcement of this principle?	Independent Dependent	2, 19	R1,R3
12. Can you explain to me how the enforcement of the law is?  How is authorized to make effective the penalties?	Independent	3,4,7	R1,R3
13. In your opinion, How much diffusion of the national law, punctually about the penalty, have been done? Too many, fair, or few?	Dependent	17	R3
<b>Other Laws</b>			
14. Is there any other particular law, or regulation that you think enforces or discourage recycling of plastics and paper.	Independent		R1,R3
<b>National Strategy and Plan</b>			
15. What is the vision of the country in terms of recycling?	Independent		R1
16. How is the support of the Ministry to accomplish the National Strategy?	Independent		R3
17. Who is the ultimate responsible for recycling in the country?	Independent		
18. Who is the ultimate responsible for the implementation of the principle of the extended responsibility of the producer?	Independent	2	R1,R3
19. As medium cost investment of the National plan, there is an activity of “Curriculum development and educational environmental program for waste at all levels (kindergartens, schools, colleges, universities”. Was it implemented? - What was the objective - What materials were prioritized	Independent	6,17	R2,R3

<ul style="list-style-type: none"> <li>- Inquiry about the cities where it was implemented</li> <li>- Did they work with the private sector</li> <li>- Did they socialize what is written in the law</li> <li>- How much budget</li> </ul>			
20. The National Plan, contains as an activity about the developing of rise awareness campaigns, how have they been implemented? <ul style="list-style-type: none"> <li>- What was the objective</li> <li>- What materials were prioritized</li> <li>- Inquiry about the cities where it was implemented</li> <li>- Did they work with the private sector</li> <li>- Did they socialize what is written in the law</li> <li>- How much budget</li> </ul>	Independent	6,17	R2,R3
21. As a low cost investment, the plan contains an activity of “Supporting waste recycling through subventions”. - Was this activity implemented? <ul style="list-style-type: none"> <li>- Did include support for paper or plastic recycling?</li> </ul>	Independent Dependent	5	R2,R3
<b>Market conditions</b>			
22. According to your opinion, what is the level of the profitability of the business (Low, medium, High), and why?	Dependent	9,11	R2,R3
23. What is your perception of the financial cost (low, middle, high) of the recycling paper and plastic, why?	Dependent	13	R2,R3
24. What is your perception on the degree of risk aversion of consumers with goods manufactured from recyclable material (low, middle, high)	Dependent	18	R2
25. To what would you attribute the existence of recycling of paper and plastics in the city?	Dependent		R2
26. To what would you attribute the existence of informal procedures in recycling?	Dependent		
27. What type of influence have institutions had in the emergence of a recycling market of plastics and paper?			R3

Questions to the Donor Agencies	Variable	Indicator	Research Question
<b>Introduction</b>			
28. How has USAID/GIZ been involved in the recycling industry of Kosovo? Is there any special focus in Prishtina? <ul style="list-style-type: none"> <li>- What did you focus in plastics in 2009?</li> </ul>	Independent	5	R1,R3

<ul style="list-style-type: none"> <li>- What were the outcomes</li> <li>- Is there any information about total quantities of recycling of plastics and paper?</li> </ul>			
<b>Previous institutional organization</b>			
29. If the answer of the Q1 shows that USAID has been in the topic before 2012, then ask: The municipality has issued a bylaw to organize the waste management in the city, how was the organization of the waste management system before?	Independent	1,2,3,4,5	R1
30. Regarding recycling, since when do you recall there has been recycling activities in Prishtina? – MATERIAL ¿To what would you attribute the installment of the businesses back then?  Do you know how many companies are working with recycling?	Dependent	8,9,10,11	R2,R3
<b>Current laws and regulations</b>			
31. What is your opinion on the institutional framework of the country and city in order to enable the emergence of recycling companies?	Independent	1,2,3,4,5	R1
32. The law on business organizations mentions a registry or license processes, how difficult is to open a firm in the city?¿Is there any difference when it comes to paper or plastic recycling?	Independent	1	R1,R3
33. When a new business opens in the city, is there any procedure or requirement that obliges the company to present a plan for recycling?	Dependent	3,4	R1,R2
34. ¿what is your perception of the number of requirements to participate in recycling activities, are they too many, fair, or few?  Is there any difference when the company is willing to work with paper or plastic?	Dependent	1,8	R1,R2,R3
35. Cross Chek question – The recycling company must register first and then apply for license?			
<b>About the National Law on waste</b>			
36. The law mentions that the Ministry is in charge of the licensing process for collection, processing and exporting: According to you ¿what is your perception about the number of requirements of the licensing process, are they too many, fair, or few? <ul style="list-style-type: none"> <li>• Collection</li> <li>• Processing</li> <li>• Exporting</li> </ul>	Independent Dependent	1,8	R1,R2

¿ Why do you think is the reason why the waste pickers cannot access to the license?			
37. Is there any inclusion of the Extended Responsibility of the Producer in the law?	Independent Dependent	2, 19	R1,R3
38. What is your perception of the law enforcement?	Independent	3,4,7	R1,R3
39. In your opinion, how much diffusion of the national law, punctually about the penalties, have been done? Too many, fair, or few?	Dependent	17	R3
<b>National Strategy and Plan</b>			
40. As medium cost investment of the National plan, there is an activity of “Curriculum development and educational environmental program for waste at all levels (kindergartens, schools, colleges, universities”. Do you know if it was implemented? - What was the objective - What materials were prioritized - Inquiry about the cities where it was implemented - Did they work with the private sector - Did they socialize what is written in the law - How much budget	Independent	6,17	R2,R3
41. The National Plan, contains as an activity about the developing of rise awareness campaigns, how have they been implemented? - What was the objective - What materials were prioritized - Inquiry about the cities where it was implemented - Did they work with the private sector - Did they socialize what is written in the law - How much budget	Independent	6,17	R2,R3
42. As a low cost investment, the plan contains an activity of “Supporting waste recycling through subventions”. - Was this activity implemented? - Did include support for paper or plastic recycling?	Independent Dependent	5	R2,R3
<b>Market conditions</b>			
43. Why do you think the business choose to recycle more plastics than paper?	Independent Dependent		R2

44. According to your opinion, what is the level of the profitability of the business (Low, medium, High), and why?	Dependent	9,11	R2,R3
45. What is your perception of the financial cost (low, middle, high) of the recycling paper and plastic, why?	Dependent	13	R2,R3
46. What is your perception on the degree of risk aversion of consumers with goods manufactured from recyclable material (low, middle, high)	Dependent	18	R2
47. To what would you attribute the existence of recycling of paper and plastics in the city?	Dependent		R2
48. To what would you attribute the existence of informal procedures in recycling?	Dependent		
49. What type of influence have institutions had in the emergence of a recycling market of plastics and paper?			R3
<b>Other questions</b>			
50. Is there any other particular law, or regulation that you think enforces or discourages recycling of plastics and paper.	Independent		R1,R3
51. Do you know how many companies are nowadays undertaking recycling activities?			
52. Contact of the national agency of business registration.			

Questions to the private and formal companies	Variable	Indicator	Research Question
<b>OPERATION</b>			
53. Can you explain what type of processing you undertake with the material?			
54. How many tones do you receive daily?	Dependent		R2
55. At what price do you buy the material? ¿at what price do you sell the material?¿why is this price lower than the plastic?	Dependent		R2
56. Why did you decided to work with paper/plastic, instead of plastic/paper?	Dependent		R2
57. How long has your company been working on recycling?	Dependent		R2
58. Since when do you recall there has been recycling activities in Prishtina?	Dependent		R3
59. Why did you decided to participate formally rather than informally in the recycling business?	Dependent	5,6,10	R2,R3
60. Can you explain to me the procedure you followed to be officially register with the ministry?	Dependent	8,10	R2,R3

61. What is your perception about the number of requirements to be able to participate in the recycling activities in Prishtina, are they too many, not too many –fair-, few.			
62. Have you received any type of subsidy or benefit to support your activity?	Independent	5	R2,R3
63. What is your perception of the level of the profitability of the business, is it low, medium, or high.	Dependent	9,11	R2
64. What is your perception of the time invested on the searching of the recyclable material (few, not too much, too much)	Dependent	12	R2,R3
65. What is your perception of the price of the recyclable material, is it low, middle, high? – Supply.	Dependent	13	R2
66. Can you explain to me how do you have access to the materials? Relation with the other steps of the chain	Independent Dependent	7,14	R2,R3
67. What is the estimated percentage of contaminated material that you receive? ¿does it affect your operation?	Dependent	15	R3
68. Do you implement procedures to test the quality of the purchased material?	Dependent	16	R2
69. What is your perception on the consumers when they have the opportunity to buy goods manufactured from recyclable material, is a low, middle or high factor when buying?¿Are you able to easily find end consumers of your products?	Dependent	18	R3
70. Are there products with a high cost of recycling?	Dependent	19	R2
<b>INSTITUTIONS</b>			
71. Have you seen any public policy or program that promotes recycling in the city?	Independent	1,2,3,4,5 ,15,16,17	R1
72. Are you aware of the fines of the law on waste? ¿What is your perception on the diffusion of the laws, regulations and penalties, is it low, middle or high?	Independent		
73. What is your opinion on the law enforcement of the municipality and country?, Is it low, enough or high?	Independent		R1,R3
74. Do you know any other company that works in the same business?.			

<b>Waste Picking Activity</b>
2. Why did you decide to start working as a waste collector?
3. Where do you collect the waste? – Why Prishtina (or the city the person says) and no other cities?

4. What materials do you collect the most?¿Why?  
 - How much waste per day?  
 - How do you know when the prices change?  
 - Do you care about collecting clean material (non-polluted) – Does it make any difference when you sell the material?

5. Who do you sell the collected material to? Do they give you any invoice when paying you?

6. What is your perception of the price of plastic/paper that you sell, is it few, not too much, or too much?

7. How much time do you invest in the searching of material? According to you is it few, not too much, too much?.

8. What is your perception of the level of the profitability of your activity, is it low, medium, or high. Why?

### **Public Institutions**

9. Have your received any type of subsidy or benefit to support your activity?

10. Have you seen any public policy or program that promotes or support recycling in the city?

11. Have you tried to have you own company or business of recycling?

- Are the requirements too many, not too many, few.

12. Are you aware of the regulations that affect the recycling activities?

13. What is your perception of the diffusion of the regulations on waste, is it low, middle or high?

14. Have you ever been bothered by the police or any institution when collecting the waste in the city?

## Annex 2: Reviewed Documents

Authority	Institution	Summary	Implementation
Ministry of labor and social welfare	Social Assistance Scheme (2003)	This law strives for the poverty alleviation in the country. It establishes two categories to provide a monetary subsidy. Some of the waste-pickers fit in one of two categories and are getting the subsidy.	The law has been implemented. Is a source of revenue for the waste-pickers.
Ministry of trade and industry	Law on Business Organization (2007)	This allows the creation of enterprises in the country for different activities, including recycling.	The law has been implemented. According to the interviews, the registry process takes one week, is not perceived as a difficult requirement (CornetKosova, 2017).
Ministry of local government	Law on publicly owned enterprises (2008)	This law allows and describe the public entities to create joint enterprises to provide public services in their territories.	This law has already been implemented. PASTRIMI is the Public Owned Enterprise that has been servicing Prishtina and other 6 municipalities with waste collection and transportation. At the same time is the Company the one that collects the waste collection fee.
Ministry of Finance	Law on local government finance (2008)	This law establishes the fiscal decentralization of the country, punctually it describes the sources of revenues and criteria for the allocation of national grants.	As it was explained above, the law have been partially implemented. The local government is receiving the national grants, however, some of the local revenues are still in process to be collected. The case of Prishtina shows that the municipality is just in the starting process to do their own waste tax collection.
Ministry of local Government Administration	Law on local self-government (2008)	The law determines the political and administrative decentralization model of the country, the different competencies among the tiers of government and the regime to protect the minorities.	The law has been gradually implemented since 2008. However, as mentioned, for the case of waste management in Prishtina, the decentralization process is still in an early stage.
Ministry of Environment and Spatial Planning	Law on Environmental Impact Assessment (2010)	This Law requires to the recycling businesses to present a EIA in order to operate. The business that are required to present the EIA are the collection points, the exporters and the processors.	The law has been implemented by the Ministry and it is enforced by the environmental inspectors.
Ministry of Environment and Spatial Planning	Law on Waste (2012)	The law organizes the waste management in the country, including recycling, by, describing the competencies from the national and local government, the principles to follow, the allowed activities, the procedures to follow, the penalties and the supervision of the service.	The law has been partially implemented. On one hand, as described before, the law contains mechanism that could boost recycling, however they have not been implemented yet. One the other hand, what have been implemented are the requirements to formally participate in the market (The license and the export permit).
Ministry of Environment and Spatial Planning	Administrative Instruction for export, import and transit of the waste (2012)	This regulation is based on the national law on waste. It describes the requirements, procedures and needed documents to be allowed to export recyclable paper and plastic. For both materials the requirements are the same.	The administrative regulation has been implemented. Since the exporters are few, the national government has been capable to enforce the law.
Ministry of Environment and Spatial Planning	Plan of the republic of Kosovo for waste management 2012-2017	Is the national policy on waste, which establishes the priorities of the national government in terms of waste. Based on the planned actions of the document, the current priority is improving the	According to the interview with the Ministry, the implementation of the plan has been oriented to improve the coverage of the waste management service. For the case of recycling, the government has not implemented the planned



		waste collection, transportation and disposal. Nonetheless, the plan includes actions towards recycling, mostly related to raise awareness.	actions. However, the existence of the plan frames the cooperation of the GIZ in Prishtina towards promoting recycling activities, punctually separation at source.
Municipality of Prishtina	Municipal waste Management Plan of Prishtina 2012-2016	The plan contained an assessment of the sector and the priorities, which were oriented towards the formulation of the local ordinance of waste, to improve the public relations with the community, to better understand the waste composition of the city, and to start working towards the separation of secondary raw material, including plastics and paper.	The plan, was formulated and implemented with the technical assistance of the GIZ. The results of the plan, according to the interview with the GIZ, were the organization of the municipality towards the issuing of the ordinance on waste, its approval, and the recent pilot project in Dardania to introduce a separation model that could be scaled-up for the city.
Ministry of Environment and Spatial Planning	Administrative Instruction for waste management by packaging and wrappings (2014)	This law obliges the importers and manufacturers of packaging material, made of paper or plastic, to plan about the collection of the packaging material after it has been used.	This regulation has not been implemented yet.
Ministry of Environment and Spatial Planning	Administrative Instruction of waste management license (2014)	As it was stated before, when explaining the dimension of rules (laws), this law has been implemented and the requirement is mandatory to become formal in the recycling industry of paper and plastic.	The law has been implemented, although there is a lack about its enforcement when it comes to the lower sections of the recycling chain, punctually about the middleman and waste-pickers. The majority of them remain in the informal economy.
Ministry of Environment and Spatial Planning	Administrative Instruction for penalties with mandatory fines (2015)	As it was explained before, this regulation contains penalties in order to avoid the dumping of waste in places different from the designated ones.	As it was stated before, even though the administrative instruction has been enforced, the municipality focus is to offer infrastructure first and then increase the enforcement with the environmental inspectors and the police.
Ministry of Environment and Spatial Planning	Decision for the establishment of waste management information system (2016)	This rule attempts to create an information system to gather data about licensed operators, register of waste, plans, laboratories, indicators of waste conditions and the reports on the state of waste. The information is intended to be part of a system accessible for governmental institutions, businesses, and industries.	The institution has not been implemented yet.
Municipality of Prishtina	Local ordinance on waste (2016)	This bylaw is part of the implementation of the national law on waste. It executes the competence of the municipality of fully determine the organization of the system in its territory. According to the interviews, the importance of this ordinance is that the city will be able to collect the tax on waste and invest it to other areas such as recycling.	So far, the implementation of the ordinance has been in two ways, the creation of the Unit of Waste Management as the appointed body in charge of waste management, and the formulation of a tender process in order to select a private operator as the collecting and transportation company for Prishtina.
Municipality of Prishtina	Update of the Municipal Waste Management Plan of Prishtina 2016-2020	The objectives are related to the capacity building of the new Unit of Waste Management, improving the waste collection service, and different from the previous plan, this one has 2 objectives related to reduce the amount of the landfilled waste thru recycling and engagement of the community.	The plan is currently being implemented by the municipality with the support of the GIZ.

### Annex 3: Triangulation Table

[illegible]

14. Existence of penalties and fines when the rule is not followed.	Consent: Analysis/Interview	National Law on Waste Municipal Ordinance on Waste Administrative Regulation on penalties and mandatory fines										None of the interviewees have received any subsidy from the national or local government.	Yes, if there are penalties in the law, but you need to put them into practice.		Consent Bureau law with Penalties and Administrative Regulation on Penalties with Mandatory Fines in the law they are under the chapter 40, particularly about recycling, there is a penalty for burning (oil, wood, coal, waste, metal waste, or paper) with about 10000, when big generators it is not present and comply with their waste management plan, when the waste that could be recycled is not disposed, transported and stored separately, when the citizens and companies don't dispose the waste in the determined places. The results is when mandatory fines are at generating the drop of awareness of the correct places. Additionally, the Ad allows the police to issue the fines to the citizens, it also available in the present and to issue the fines. The behaviors that are prohibited go to drink cigarettes, chewing gum, drinking, using, glass, etc, cars.	
15. Existence of subsidies to support recycling activities	Consent: Analysis/Interview	National Plan of Environmental Protection Municipal Solid Waste Management	There is not any for now.	Yes, this is not a priority now.		There is not initiative from the government. Yes, despite the fact that some of our waste is sorted or properly managed, still you have companies that have found a good business model.		All the requirements for the company were bought from me. We have apply for help with the government but they don't count so much in this business.	It not a big one. I want to buy a truck to go to collect the waste from the government where the cost of management because the people working on this they are disadvantaged, so the government could come and see who they are and offering to pay part of what we pay. If the other companies are doing this, so for us is sometimes a hard to compete like that.			Yes, not necessarily with money, but they participate by giving us the space to work into the schools or even better, they make the concept like saying "it's all yours please to have a place a particular school", so even though they don't give a right cent to support us, this is my positive approach		The Law on Waste, allows in its article 32 the use of financial funds to stimulate the process of recycling.		
16. Existence of incentive-based instruments (Deposit-refund, ... see below)	Consent: Analysis/Interview	National Law on Waste Municipal Ordinance on Waste National Plan of Environmental Protection Municipal Solid Waste Management	OK, so, this a national scale, the EU and the Ministry	Yes, it is being supported with the EU. We will work this year and the coming years to develop an initiative about this.			Yes, we are now and in the process of getting an international consultancy company for supporting the Municipality on project on finding the best EPR scheme. Whether that would be like DAS - Deposit Return System - or any other?									
17. Existence of a fee for waste disposal	Consent: Analysis	National Law on Waste	It around 0.8 euros per ton. It is paid by MCH/MB, which is the collection company. I know, our intention is to generate recycling with the citizens and companies, with the citizens	Yes, the municipalities have to pay a fee to dispose the waste in the landfills.			Yes, the municipality pay for it.									



10. Subjective perception of the number of requirements to formally participate in recycling activities (too many, too many, few)	interview		to him.	is low, the procedure is not complicated.			the things you saw here?	there	so much procedures, we are doing something good in a sense that we are solving the problem of garbage for the procedures are a lot much.	is flow. It is just to get registered the business, within 10 days they will give license to start. Give a letter to the government, you go to the office of the municipality of the Ministry of Trade. Now, I have heard that now you can do it online, so it is faster. I like that, instead of waiting for the paper to get one time, and the rest by e-mail.	everyone you ask will tell you that it is a big system. Because they are informing you the policies of government, and we have to follow, they just want to be as and we have to play their game, and it is not easy.	My perception is that the government should not set barriers, they are here to facilitate participants, and they are not doing it. What is the sense of asking a company to be a member if they don't ask to register the informal waste collector. Right now I don't have to report when I pay the waste from, I am free.	don't know what are the procedures				
11. Subjective perception of the level of profitability of the business in the area of waste collection, recommendations and processing (satisfactory, low, need are, high)	interview								low, I am being proactive with the company but I could be more if I had security.	low	low is middle, because of the government, because there is no support from the government.	Midway, it is not because to collect very profitable, it is a tricky business, because for me as a collector, at the end of the day we could profit 2 cents per kilogram, and 2 cents of a truck of 10,000 about 20,000 euros, not a big thing.	Two waste pickers report at low and the other two as medium.				
12. Existence of informal business and procedures in the recycling chain.	interview		They are considered illegal because according to the law, they should have a license. We also understand from Dardania 2012 that they are there, we cannot regulate, we don't have law, you will have to send 20 or 30 inspectors to go there and get them, they will then to another place in the city, you cannot stop it. So we decide to make a plan to do how to deal with them, we have to understand who are they, who is identifying them, to work with them because this is a labor, we want to know who is the problematic one and to deal with. Maybe in the future we can do a tender a person to have a company that can include them. But for now, there are others, we cannot close our eyes.	Waste that can be recycled is usually collected from the informal sector by the informal sector, we have no idea about it in the country. The informal sector knows other people and it is a good network for agents and also helps the realization of any waste separation project and their recycling.	Despite this, I think the private sector has found the way, you find a lot of informal waste collectors, and they go to the bins, they see if the waste to the nearest collection center.	The middle man is completely informal, he has a storage place, he has a small van, he goes and it is up from the informal sector, the biggest middle man would have a place where they collect the waste. At this point without the informal sector itself they don't like to be formalized because even they will lose their social assistance, because normally they have a social assistance from the state and now if they get formalized and get regular how much they earn, then they can lose the social assistance for their families. But for further organizing there is kind of early.	There is an agreement with the collection center. Okay, I have not formal agreements with this collection center. They know what I need, they material and we are a nice informal. Some of this policy are formal and some others are informal. In the benefit that they receive is much, they pay to the waste pickers, they pay the collection center and the collection center pays the waste collector. There is also another companies, but some of them are informal, sometimes they ask me to do an interview on their behalf. They do this, because they don't pay taxes and they compete with me, so they have cheaper prices.	Yes, I buy the material from the informal sector, it is a good thing. I pay the people to go and collect the paper to the business go in one place. There is a chair, some people collecting the paper for free, they will ask a price, they pay them, they go to the house to pick it and sort it, then they have a small amount of things, because the prices are not the same. Plastic is higher than paper, usually, I have heard, someone is buying plastic from, who is to go.	Are also we are here, because the collection center is the one collecting the waste, so we are also placed here.	There is too much informality. When we have talked to them they say they know who is collecting, in every part of Dardania, so they will divide the area. Besides that, they also are engaged in transportation, so they go with their vehicle and they have to be careful, they try to pick it and sort it, then they have a small amount of things, because the prices are not the same. Plastic is higher than paper, usually, I have heard, someone is buying plastic from, who is to go.	They get social benefits, so they don't have to register as working, because they will see this kind of social benefits.	It is known the informal sector is very organized, the informal sector is very organized. They always have a network, you know, people that are not coming to work one day and not the other day, but they care about their community, they are very close. They make a lot of noise, since they make a lot of waste around the community, it will be bad, so they have created relationships, they are in the area that is the end of the day will go to the collection center, without talking, so they have built their own network, so we can identify them to be closer to the private companies with informal sector, so faster, there is no possibility.	Informal sector wants to be organized if they are working for somebody, they cannot take the social assistance which is 10 euros, so they don't want to be organized.	As for the informal sector, since the business is stable.			
Search waste transaction costs:																	

[illegible]

[illegible]

## Annex 3: IHS copyright form

In order to allow the IHS Research Committee to select and publish the best UMD theses, participants need to sign and hand in this copy right form to the course bureau together with their final thesis.

Criteria for publishing:

A summary of 300 to 500 words should be included in the thesis.

The number of pages for the thesis is about 60.

The thesis should be edited.

Please be aware of the length restrictions of the thesis. The Research Committee may choose not to publish very long and badly written theses.

By signing this form you are indicating that you are the sole author(s) of the work and that you have the right to transfer copyright to IHS, except for items cited or quoted in your work that are clearly indicated.

I grant IHS, or its successors, all copyrights to the work listed above, so that IHS may publish the work in *The IHS thesis series*, on the IHS web site, in an electronic publication or in any other medium.

IHS is granted the right to approve reprinting.


The author(s) retain the rights to create derivative works and to distribute the work cited above within the institution that employs the author.

Please note that IHS copyrighted material from *The IHS thesis series* may be reproduced, up to ten copies for educational (excluding course packs purchased by students), non-commercial purposes, providing full acknowledgements and a copyright notice appear on all reproductions.

Thank you for your contribution to IHS.

Date : 21/10/2017

Your Name(s) : Cindy Paola Garcia Buitrago

Your Signature(s) : 

Please direct this form and all questions regarding this form or IHS copyright policy to:

The Chairman, IHS Research Committee Burg. Oudlaan 50, T-Building 14 <sup>th</sup> floor, 3062 PA Rotterdam, The Netherlands	j.edelenbos@ihs.nl Tel. +31 10 4089851
--	--