COMPARAÇÃO DO ORÇAMENTO PÚBLICO NO MANEJO DE RESÍDUOS SÓLIDOS URBANOS EM SÃO PAULO E LONDRES

GT 23: Resíduos sólidos: gestão, políticas e impactos socioambientais

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Resumo

Esta pesquisa compara a alocação orçamentária e a prestação de serviços públicos de gestão de resíduos sólidos (RSU) nas cidades de São Paulo, no Brasil, e Londres, no Reino Unido. Essas duas cidades apresentam sistemas de planejamento regional contrastantes. A Grande Londres tem uma administração descentralizada, onde cada bairro tem obrigação de contratar e gerenciar seus serviços; enquanto em São Paulo os contratos são centralizados na Autoridade de Limpeza, que estabelece contratos de concessão com duas empresas para cobrir todos os subdistritos da cidade. Este é um estudo preliminar explorando dados secundários de orçamento e RSU em ambas as cidades e o arcabouço teórico de gradualismo, proposto por Eduardo Marques (2021). A pesquisa tem como objetivo discutir como esses dois modelos de governança afetam as finanças e a prestação de serviços públicos. Em ambos os casos, os gastos com contratos de terceiros têm aumentado de forma gradual nas últimas décadas, embora impulsionados por fatores distintos. Por fim destaca-se que esta é uma área dinâmica e há previsão de novos arranjos para os próximos anos, o que reforça a necessidade de acompanhamento analítico de seus custos e resultados.

Palavras-chave: orçamento; resíduos; São Paulo, Londres

COMPARATIVE ANALYSIS OF BUDGET ALLOCATION IN THE PROVISION OF WASTE MANAGEMENT IN SÃO PAULO AND LONDON

Abstract

This research compares budget allocation and public service provision of solid waste management (SWM) in the cities of São Paulo, in Brazil, and London, in the UK. These two cities show contrasting systems of regional planning. Greater London has a decentralised provision, where each borough has the autonomy to contract and manage its own services; while in São Paulo the contracts are centralised in the Waste Authority, which establishes concession contracts with two companies to cover all sub-districts of the city. This is a preliminary study exploring secondary data of budget and SWM in both cities and the conceptual framework of gradualism proposed by Eduardo Marques (2021). The research aims to discuss how these two governance models affect the finance and the provision of public service. Similarly, in both cases studied the spending on third-party contracts has increased gradually over the last decades, but this increase follows different drivers in each.

Keywords: budget; waste; São Paulo, London.

COMPARACIÓN DEL PRESUPUESTO PÚBLICO EN GESTIÓN DE RESIDUOS SÓLIDOS URBANOS EN SÃO PAULO Y LONDRES

Resumen

Esta investigación compara la asignación presupuestaria y la prestación de servicios públicos para la gestión de residuos sólidos (RSU) en las ciudades de São Paulo, Brasil y Londres, Reino Unido. Estas dos ciudades tienen sistemas de planificación regional contrastantes. Grande Londres tiene una administración descentralizada, donde cada barrio está obligado a contratar y gestionar sus servicios; mientras que en São Paulo los contratos están centralizados en la Autoridad de Limpieza, que establece contratos de concesión con dos empresas para cubrir todos los sub-distritos de la ciudad. Se trata de un estudio preliminar que explora el presupuesto secundario y los datos de RSU en ambas ciudades y el marco teórico del gradualismo propuesto por Eduardo Marques (2021). La investigación tiene como objetivo discutir cómo estos dos modelos de gobernanza afectan las finanzas y la prestación de servicios públicos. En ambos casos, el gasto con contratos con terceros se aumentado gradualmente en las últimas décadas, aunque impulsado por diferentes factores.

Palabras-clave: presupuesto público; residuos; São Paulo, Londres

# Introduction

This research aims to understand how the allocation of public budget impacts the provision of public services of solid waste management (SWM). The study compares two contrasting systems of decentralisation: Greater London in the UK has a decentralised provision of SWM, where each of its 33 boroughs has its own system of public contracts with different third-party service providers; while the city of São Paulo, in Brazil, the administration of this public service has been centralised, where the provision of SWM in the 32 sub-district of its territory is divided mainly between two private companies. In other words, in London, each local council administrates its own budget within its territory; while in São Paulo the Mayor establishes concession contracts with two companies to cover all subdistricts of the city. The study compares the similarities and differences in the provision of public services of in these two cities to discuss how the distributive conflict around public funding has been treated in each case.

Research question: How does the allocation of budget impacts the provision of public services of SWM?

# Methodology

This is a conceptual paper based on secondary data and the analysis of the literature about the historical evolution of public service provision in the cities of London and São Paulo. The study seeks to build the first investigation comparing these two case studies.

The study is based on the information collected about waste management and public budget of these cities from the period of 2009 to 2020. The data about SWM in London is available in the system of the WasteDataFlow and the websites of Department for Environment Food & Rural Affairs (Defra), Waste & Resources Action Programme (WRAP) and Greater London Authority (GLA) Reports.

The information about budget and waste management in São Paulo were collected from different sources. The data about spending in SWM were estimated exploring the information available in the Open Budget Transparency Portal (in Portuguese: Portal da Transparência da Cidade de São Paulo); the Participatory Budget of São Paulo (In Portuguese: Orçamento Cidadão de São Paulo) published by the Municipal Secretariat of Finance, providing an estimation of budget for the following year, and finally, the data found in a publication of Official Gazette of the City of São Paulo. The contracts with spending from Amlurb (Waste Authority of the City of São Paulo) are outdated from the time of the signature of contracts.

## Limitations

The comparison involving currencies were converted to the British Pound Sterling. The British Pound was worth an average of 4.1182 Brazilian Reais in 2017 (i.e. £1 = R$ 4.1182, in 2017). This research adopted this currency because most data in São Paulo are dated from that period. Thereafter, the economic crisis in Brazil and the Covid crisis created several fluctuations in the price of the Brazilian Real.

This is a conceptual paper based on secondary data and the analysis of the literature about the historical evolution of public service provision in the cities of London and São Paulo. The study seeks to build the first investigation comparing these two case studies, and it aims to evolve into a second phase, exploring interviews with the key actors involved in decision-making and provision of these services in both cities.

## Theoretical framework

This research explores two distinct areas related to public service provision, the study of public budget and the study of sustainable development, exploring the solid waste management as a case study.

Waste management is a statutory service for local authorities. Local governments are obliged to provide this service for the population under their jurisdiction. SWM comprises the services of street cleansing, collection, transport, treatment and final disposal of the waste generated by the population under their jurisprudence. The waste framework was European Directive launched in 2008 establishes the hierarchy of measures to protect the environment and public health, which define a series of steps of waste management passing through reduction, reuse, recycling, recovery of energy and only sending the residues to landfill, after all alternatives have been eliminated. Therefore, the increasing recycling rates should be the target of all governments and business; trying to minimise waste generation and improve all alternatives to reuse and recycle the post-consumer waste.

This study explores the concept of gradualism, proposed by Eduardo Marques (2021) and Ursula Peres (2021) to explain the incremental increase of spending in public services. Marques’ (2021) research shows a gradual and progressive process of inclusion of citizens with public services throughout all the municipal territory in São Paulo, in several sector policies, such as public transport, social housing and urban cleansing. This process faced some interruptions under different governments tenures, tending to the left, to the right or to center orientation. What was evaluated over more than a decade was a process of progressive incrementalism, as latency moments. What was evaluated over more than a decade was a process of progressive incrementalism, with some latency moments. The network of ideas and people responsible for the more progressive policy proposals - both from government to civil society organizations and vice versa according to political party in tenure - allowed the maintenance of ideas in the political subsystem of these public policies (Sabatier, 1998; True, Jones and Baumgartner, 2019) and then their reemergence in the political macrosystem, but mainly under left-wing governments.

The budget analysis process of this progressive incrementalism resulted the increment, which is the space of discretion of the mayor, to be used to advance with these proposals of more progressive offer of urban policies. This additional budget began to be incorporated as a new cost of the city to belong to the budget base (Peres, 2021). That is, for much of this programming, such as urban cleansing, the assumption of a new, more comprehensive service comes to be seen as an everyday and necessary offer and its contract grows incrementally. Then, new governments face challenges to interrupt the process, becoming the future budgets in a path dependence process (Pearson, 2000).

This process of incremental construction and progressive change in urban cleansing can be perceived in both London and São Paulo. This area is permeated, in recent decades, by changes in regulatory frameworks, with new national and international rules in waste management, which makes the dispute for the provision of services to the public sector more intense and oligopolized, especially in São Paulo. Then, services become more expensive. One of the main findings of this research is that spending on urban cleansing continues to increase, even though it has been sought to reduce the amount of solid waste generated and the increase in selective collection.

# Results

The allocation of public budget has direct impact in provision of public services. In both cases studied the spending on third-party contracts has increased significantly over the last decades, but this increase follows different drivers in each case. The study aims to understand the main causes of the increasing of third-party contracts in this sector.

This session is divided in four parts. This session starts with a brief contextualisation comparing the history of SWM in both cities to understand events that have been shaping the provision of SWM both in London and São Paulo; then the study provides some demographic characteristics important to compare budget allocation in both contexts; then the third and fourth subsections detail SWM and spending in each city, separately. The final session discusses the main findings of this comparison.

## Main historical benchmarks that shaped SWM in London and São Paulo

The first contract outsourcing the provision of SWM to private contractors started in the late nineth century, both in London and São Paulo. Table 1 provides a timeline comparing the main events shaping the history of SWM in London and São Paulo. Gandy (1994: p.39) explains that the decentralisation of the provision of public services to local councils in London is the result of a long process under the administration of the London County Council (LCC), from 1889 to 1965. Then, during the 1980s, he argues that the Conservative administration started a process of ‘demunicipalisation’ of waste management services, transferring the responsibility of waste management to the private sector, and consequently, weakening the influence of democratic elected representatives in decision-making in this sector. In 1996, the city introduced the Landfill Tax aimed to divert waste from landfills (GLA, 2010: p.163). The Tax add an additional cost to the cheap method of landfilling the waste, forcing the local authorities and business to find other sound environmental alternatives to treat or dispose the waste. In 2016, waste authorities had to add a tax of £84.40 per tonne of waste send to landfill (WRAP, 2016 cited in GLA, 2018).

Table 1: Major benchmarks of SWM in London and São Paulo

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **London** |  |  | **São Paulo** | |
| Metropolitan Board of Works | 1856 |  |  | | |
|  |  | 1869 | First private contract for urban cleansing | |
| London County Council | 1889 |  |  | |
| First law for compulsory collection | 1893 | 1892 | Provision of door-to-door collection | |
| First incinerator with generation of electricity | 1896 |  | |  |
|  |  | 1990s | | Several irregularities in contracts and emergency contracts |
| Landfill Tax | 1996 |  | |  |
|  |  | 2002 | | Municipal law 13,478 - Concession of services |
| MWM Strategy | 2003 | 2003 | | Waste Tax (TRSD)  Co-operative of recycling |
| Landfill Allowance Trading Schemes (LATS) | 2005 | 2005 | | TRSD was revoked |
|  |  | 2006 | | State Polity on Solid Waste (Law 12,300/2006) |
| National Indicators (NIs) |  |  | |  |
| Producer Responsibility Obligations (Packaging Waste) Regulation | 2007 | 2007 | | Contract concession of 20 years  1st carbon credit auctions |
| Diversion from landfills | 2010 | 2010 | | National Policy on Solid Waste (Law 12,305) |
| Waste Management Plan for England | 2013 |  | |  |
|  |  | 2014 | | Municipal Solid Waste Master Plan (PGIRS) |

Source: Author’s illustration

During the 1990s and 2000s, the contracts of public services in the city of São Paulo passed through a series of reforms, after several irregularities in contracts of waste management. After recurrent emergency contracts and allegations of irregularities in the bidding process under the tenure of mayors from different political parties, in 2002, the Legislative Assembly established a parliamentary commission of enquiry to investigate the infamous case of the ‘Cartel of Contractors’ , where a group of nine large companies, which had dominated the contracts for cleansing services in the city over decades, were accused of buying favours in exchange for election campaign donations (TI, 2010). In response to those scandals, in 2002, Mayor Marta Suplicy introduced a new waste policy, based on three pillars: a waste tax, an autonomous government body responsible for the policy implementation and its administration and a longer concession contract. In this way, in 2002, the mayor created the Household Solid Waste Tax (TRSD), which separated out the fraction of SWM from the existing Urban Building and Land Tax (IPTU), arguing for a more transparent disclosure of spending and to encourage householders to increase recycling (Ferreira, 2003). In that same year, it was proposed the creation of the AMLUR, an waste authority which would be in charge of the waste management in the city. And finally, in 2004, the previous contracts were cancelled, and the contract of concession of 20 years with two contractors were established by the City Hall. The assumption was that the tax revenue would bring a more transparent disclosure of spending and to encourage householders to increase recycling (Ferreira, 2003). However, the tax gained a political contentious with protests led by opposition parties, with allegations of corruption and fraud and the tax ended revoked in 2005 (Soares, 2005). Nowadays, part of the costs of municipal solid waste management is cover with the IPTU.

## Demographic context

Although, Table 2 shows some quite comparable numbers between London and São Paulo that affect the provision of SWM in terms of the size of the territory and the population, number of households and generation of waste both total and per capita; it is important to notice that the purchase power of the population and the quality of housing have strong impact on the waste management. The GDP per capita in London is more than the double of São Paulo and Londoners pay a high price for public service provision.

Table 2: Comparative demographic data of London and São Paulo

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **London** | | **São Paulo** | |
| Area (thousand Km2) | 1,572 | IBGE 2010 | 1,523 | IBGE 2010 |
| Population | 9,039,390 | ONS, 2020 | 11,869,660 | 2020 |
| Number of households | 3,036,142 | 2019/20 | 3,573,509 | 2010 |
| GDP per capita | £32,527 | 2019 | £14,251 | 2020 |
| Total urban waste collected | 3,593,000 | 2019/20 | 3,393,933 | 2017 |
| Total household waste collected | 2,937,000 | 2019/20 | 3,619,316 | Amlurb 2020 |
| Average amount of household generated per household/year | 967.35 | 2020 | 949.75 | 2017 (SNIS, 2021) |
| Spending in waste management | 675,783,105 | 2020 | 546,534,320.20 | 2020 |
| Expenditure per capita with SWM | £ 1,075 | (Oxygen and EY, 2020: 8) | £ 42.19 | 2017 (SNIS, 2021) |

Source: IBGE Census (2010); Prefeitura/SP (2021); ONS, 2021; LondonDataStore (2021); Amlurb; Oxygen and EY, 2020.

It is also important to highlight that this research compares the Greater London with the city of São Paulo. We cannot mistakenly compare the City of London, which is one borough within the Greater London and the Greater São Paulo (i.e. Metropolitan Region of São Paulo, RMSP), which is a conurbation of 39 other municipalities, with more than 21 million people.

According to the official data in the City Hall of São Paulo (Prefeitura Cidade de São Paulo, 2018), the city had in 2017 some 391,043 dwellings (12.6% of the city) situated in 1,565 favelas. The collection of household waste in favelas, and in some vulnerable settlements on the city’s outskirts, is difficult due to the lack of suitable areas for storing waste, as well as the fact that some houses do not have access to the street and many of the roads are unpaved and too steep or narrow for a dumper truck to pass through. Despite this, according to data from data from SNIS (2021), the collection covers 99.10% of the city. Although in London, some boroughs have high index of deprivation, Jones (2018) explains that geography, such the provision of services in rural areas have more impact on costs them deprivation.

The next two subsections describe the characteristics of management and spending in waste management in London and in São Paulo, separately.

## SWM in London

The Great London Authority (GLA) is not a waste authority. The local councils have the statutory duty to provide the public services of SWM for the population under their jurisdiction (NAO, 2018). Fig. 1 shows that Greater London is divided into 33 waste authorities (32 boroughs and the City of London), of which 12 are Unitary Authorities responsible both for the collection and disposal of waste. The other 21 are organised into four statutory waste disposal authorities (London Waste & Recycling Board, 2010), while the four boroughs of Croydon, Kingston, Merton and Sutton form the South London Waste Partnership (SLWP) for collection and disposal. Contracts on SWM are arranged by each local authority independently and have different types of agreement, service provision and timespans. There are more than 50 private companies of waste management providing services across the Greater London. The major private suppliers are Veolia Group, Serco Group, Viridor, SUEZ Environment, Urbaser among many others. Therefore, collection systems vary widely for the population across the boroughs. Each local authority has its own type of bin containers, categories of waste-sorting and frequency of collection.

Map

Description automatically generated

Figure 1: The division of Greater London boroughs between the waste authorities

Source: Author illustration adapted from a GLA map

London boroughs spend around 7% of their budget in Waste & Environmental services with third party providers (Oxygen and EY, 2020: 15). Londoners pay their waste disposal as a percentage of the Tax Council (CIPFA, 2008 *cited in* The Guardian, 2016). On average 17% of the tax-council revenue is spent in SWM, varying from 11.2% in the borough of Kingston upon Thames to 36.4% in the boroughs of Wandsworth and Westminster.

According to Oxygen Finance, an information company, GLA spent £675.8 million in SWM in 2020. From this amount, some £337 million spent in treatment and disposal, £219 million in collection and recycling and the rest £120 million with other environmental services.

In total, local authorities in the Greater London region collects 3.6 million tonnes of waste per year, from this amount 2.94 million tonnes are household waste, which accounts for 967kg of waste per household per year (LondonDataStore, 2021).

Chart, line chart

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Figure 2: Evolution of waste management and spending in GLA over the last ten years

Source: Defra (2021) and Oxygen Finance (2021)

Fig. 2 shows a comparison of the evolution of spending and the amount of waste collected and disposed in London over the last ten years. Londoners have slightly reduced the generation of waste from 3.8 to 3.6 million tonnes per year; nevertheless, the total costs of waste management continue increasing. From 2013 to 2010, the spending with third-party SWM more than doubled, from £267 million to £569 million per year. Oxygen and EY Report (2020: 39) shows an increase of 26% in third-party contracts on W&E over the last three years and a previous Audit Report (NAO, 2018: 30) on the spending of local authorities from 2010-11 to 2016-17 shows reduction of spending 21% and 6% both in waste collection and waste minimisation respectively, and an increase of 9% in waste disposal.

The graph above shows that, nowadays, the majority of the waste collected in the city (63.3%) is incinerated (2.285 thousand tonnes), the second highest rate of incineration in the UK (Defra, 2021: 16). The graph shows a huge decrease of landfilling from 48.7% in 2009 to only 2.7% in 2019, as result of the Landfill tax and Zero Waste strategies. Incineration became a profitable solution for councils and contractors, with generation of energy from waste. However, neither the public spending on waste management nor the revenue from the recovery of energy from waste are disclosure to taxpayers. It seems that the Zero Waste strategy and the Landfill tax have been benefiting more incinerators than recyclers.

On the other hand, recycling rates have stagnated around 30% throughout the decade (about 1.09 thousand tonnes of waste were recycled in 2019). This recycling rate varies across the boroughs, from 20.3% in Newham to 54.2% in Bexley (Defra, 2021: 18), but London’s recycling rate shows the worst performance compared to other regions in England and one of the lowest compared to some European capitals. This analysis above shows that Londoners are paying more to incinerate than to recycle their waste.

## SWM in São Paulo

The City Hall of São Paulo does not charge waste fee directly from the householders and the cost of SWM is covered with part of the IPTU and the income from large commercial waste generators. The city spends only £42 per household per year with the provision of SWM (SNIS, 2021).

Paulistanos separate their waste into two bins: the wet waste (organic) and dry waste (recyclable materials, such as cardboard, glass, metal, plastic and others). In 2017, the city collected only 2.3% of recyclable waste, far from the target of 10% established in 2007 (Official Gazette of São Paulo, 2018), and this selective collection covers 76% of the population. After collected, the recyclable waste is separated by 21 co-operatives and two mechanised centres of triage operated in partnership between the contractors and *catadores* of recyclable materials (job classification for waste pickers in Brazil, in Portuguese language). Initially, the concession contract had established the implementation of four mechanised centres, however, only two were built in 2014 (Official Gazette of São Paulo, 2018).

Waste management in São Paulo is operated by the private sectors under contracts of concession. Amlurb, the Waste Authority of the City of São Paulo, oversees the contracts and monitor the services provided by third-party providers. In 2004, Amlurb signed two contracts of twenty-year concessions for waste management. At the moment of signature, these were the largest contracts of waste management in the Global South.

Fig. 4 shows the distribution of the territory between the two companies: Loga is responsible 13 subdistricts in the northern, western and central zones and part of the eastern zone of the city; and Ecourbis is in charge of 19 subdistricts in the southern zone and the other part of the eastern area (Amlurb, 2021). According to these contracts, the companies were to be responsible for the collection of recyclable material and healthcare waste (HCW), and the administration of solid waste transfer stations, two sanitary landfills and three inert landfills (Amlurb, 2021). A new concession contract of more 20 years will be established in 2022.

Map

Description automatically generated

Figure 3: The division of municipal waste management in the districts of São Paulo between the two MWM contractors

Source: Author illustration.

Almost all the 3.4 million tonnes of waste collected in the city is disposed of in to two large sanitary landfills (the CDR Pedreira and the CTR Caieiras), both collecting landfill gas (LFG) to generate electricity. The last incinerator in São Paulo was closed in 2004, due to outdated technology and the rising number of complaints from neighbours.

Table 3 shows the division of spending in SWM in São Paulo. The services of cleansing and sweeping the streets are divided between six contractors (Corpus; Sustentare; Locat; Limpa SP; Ecoss and SCK) for periods of three-year-concession; three landfills (Caieiras; Pereira and inert waste Riuma).

Table 3: Spending in waste management in the city of São Paulo

|  |  |
| --- | --- |
|  | Spending in £ (2020) |
| Urban Cleansing Services - Sweeping and Cleansing of Public Spaces | 218,089,847.29 |
| Landfills | 11,691,518.50 |
| Concession | 316,752,954.40 |
| Total | 546,534,320.20 |

Source: Amlurb, 2021

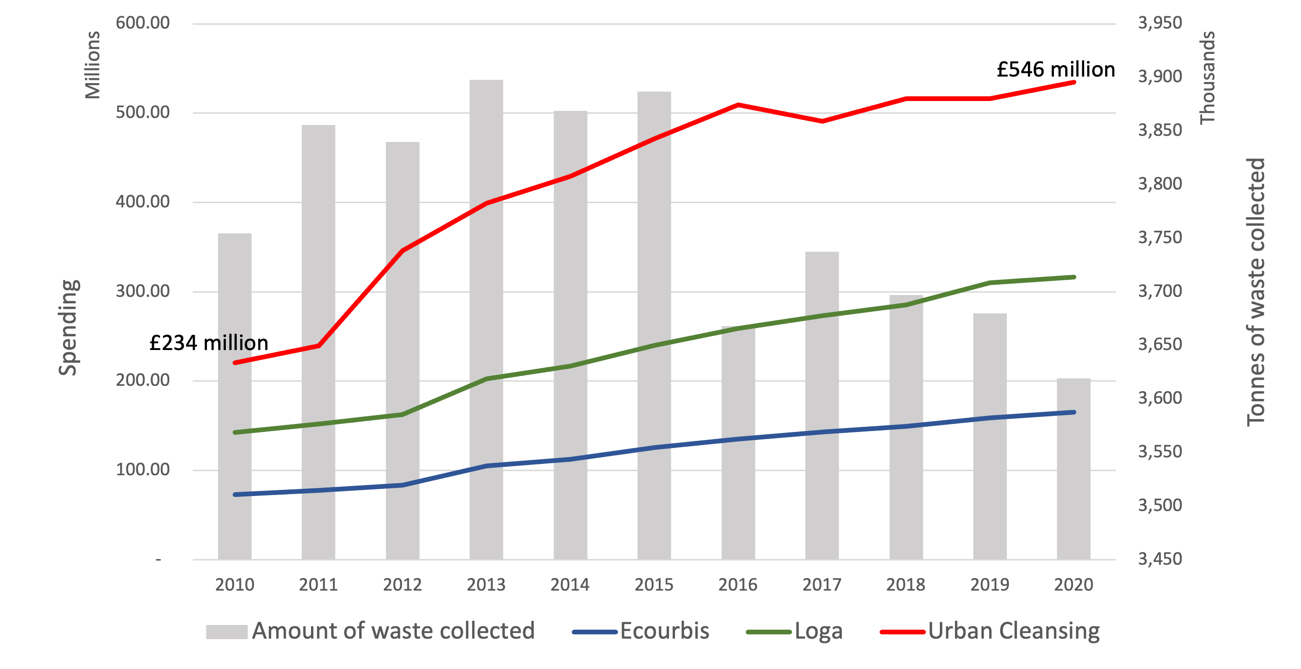


Figure 4: Evolution of spending on SWM and amount of waste collected in São Paulo over the last ten years

Source: Amlurb; ObservaSampa (2021)

Fig. 4 shows that the spending in SWM almost double in one decade, from a total of £234 million in 2010 to £546.5 million in 2020. The population maintained quite stable over this decade with a small growth of 0.06%, reaching some 11.9 million inhabitants in 2020. Staggering, the graph shows while the of amount of waste collected has reduced from some 3,950 to 3,619 thousand tonnes per year and the annual spending in the concession contracts has steadily increased. The spending almost doubled in one decade from £234 million to £546 million in 2020.

# Discussion

This research aims to discuss three main points: explanations for the increasing of spending in SWM; the public-private drivers in decision-making and the environmental sustainability of the systems.

## Increasing spending in third-party service provision

The literature and the sector of SWM tend to attribute the increasing costs to an ever-growing demand of generation of garbage resulted from population growth and consumerism (ABRELPE, Medina, 2000: p. 7). This study explores the concept of gradualism proposed by Marques (2021) to shows a contrasting perspective. Even generating less waste, third-party spending in waste management both in London and São Paulo continues to rise; however, this gradual increasing of spending follows different drivers in each city.

It seems that the pressure for increasing spending in London are the result of policies and strategies that benefits the profitability of certain types and technologies, such as the case of diverting waste from landfills to incineration and generation of energy from waste; while in São Paulo, the access to public budget is dominated by the politics of small number of players in the market and a high institutionalised and politicised sector.

Differently from London’s spending, São Paulo shows a different history of the increasing of spending in waste management. Godoy (2015: p.75) shows a gradual increase of spending in after 1987, when 100% of waste services were transferred to the private sector. His study shows singular moments of jumps of spending in SWM and also the transfer to concession of services previously carried out by the public administration, between 1994 to 2014, during the administration of centre-right mayors from different political parties.

## Waste management sector and public policies

Throughout the Brazilian history, many public health experts and sanitarians have assumed public office, including mayoral positions in the major cities (Pereira, 2018). Nowadays, SWM sector is strongly institutionalised and plays strong influence in politics, increasing the knowledge about and importance of waste management. Budget decisions are dominated by economic sectors and oligopolies (Peres, 2021). Pereira’s (2018) research shows how State and non-state actors from the city of São Paulo played central roles in the decision-making of the National Policy on Solid Waste, enacted 2010 in Brazil.

Godoy (2015: 80) argues that the outsourcing of services of waste management in São Paulo changed over the last decades, where the private went from being providers (translated from the Portuguese: *operador*) to becoming managers and partners of the government. Through the contracts of concession, all the services, the infrastructure and responsibilities were transferred to the private sector for a period of 20 years of concession. Godoy (2016: 71) provides a research about the organisation of the SWM market in São Paulo. He explains that the market of service provider in São Paulo is divided by few companies that domain the contracts with the public sector and several small companies providing services to those contractors. Godoy (2015: 84) argues that this concentration of few companies seeks to guarantee contracts of public service provision to increase their capital and power. Which means that older and larger companies tend to guarantee more contracts and ‘prestige’. His research also shows that the partners and directors of those companies also operate in other sectors, such as real estate, construction and industrial sectors, guaranteeing the provision of services in few hands. Their experts also set the technical and political agenda in the sector and in governance. Some of the companies and directors, which in the past were involved in the irregularities in contract in the 1990s, are some of those partners of concessions. Instead of competing, companies institutionalised their participation.

## Sustainable development

In the case of London, the main drivers follow the European Directives aimed to guarantee and improve the environmental sustainability of the public services. However, Gandy (2918: 68) claims that with the ‘demunicipalisation’ of waste management towards a ‘more progressive market-oriented approach’, focused on the profitability of the waste industry has led to a reduction in funding for pollution control and waste minimisation (Gandy, 1994: p.46), affecting negatively recycling. In terms of sustainability, recycling should be the priority of SWM, contributing to the effort to reduce the impact on climate change, measures to reduce of waste generation and packaging with impact on the consumption of natural resource and reduction of pollution through the enforcement of the waste hierarchy framework. Several debates in the media and the literature have criticised the low recycling rates in London to the system of contracts with third-party companies. This present study shows that the increase of spending on SWM does not reflect on the increase of recycling rates, conversely, it follows the path of increasing of incineration rates. Therefore, this study demands a revaluation of the Zero Waste strategy and Landfill Tax in London. It seems that the Zero Waste strategy does not mean generate zero waste but diverting all the waste to incineration.

Since austerity measures were introduced in the UK, there has been a strong pressure from the central government to cut costs of local services. Council faces real-term cuts to provide public services. These cuts in investments have impacted campaigns to minimise waste, leading to the stagnation of recycling rates. Gandy (1984) argues that recycling demand funding to local government. Although, the London Waste and Recycling Board (LWARB) spent £6.4m between 2017 and 2020 supporting local authorities with waste minimisation and recycling (London Mayor: 257); these accounts to only 0.3% of investment of the total expenditure in waste prevention. These cuts also affect funding for waste minimisation, in 2016 organisations, such as Waste & Resources Action Programme (WRAP), a leading research program in charge of campaigns to reduce packaging and food waste in Britain had its fund cuts considerably (Defra, 2013).

Despite the investments to improve recycling in São Paulo, including also co-operative of *catadores*, recycling rates in the city continues very low. Nowadays, there is a significant pressure and projects under evaluation to reintroduce new incinerators in São Paulo and other capitals in Brazil. Several experts have argued for the introduction of a similar Landfill Tax or some sort of Zero Waste strategies in São Paulo. It is important to reflect on policies and contracts that introduce technologies that keep the population trapped to increase of costs to its maintenance. Who would these tax and strategies benefit? Further research is needed, nevertheless, according to the numbers presented in this research, it seems that Londoners are paying more money for incinerators than recyclers.

# Conclusion

This research aimed to compare the budget allocation and the provision of public services on solid waste management (SWM) in the cities of São Paulo, Brazil, and the Greater London, in the United Kingdom. Despite important differences between the two models of service delivery of these two cities, the research allows us to perceive similarities in expenses and gradual changes that put pressure on urban cleansing and waste collection systems. The distinctions of the two cities are mainly linked to the fact that London has a decentralized model, where the Boroughs have the responsibility of service provision, while in São Paulo, waste management are mainly the responsibility of the central administration. Another important distinction is the existence of a specific rate in London for the issue of solid waste that in São Paulo was created but extinguished in less than three years by political pressure generated by its unpopularity.

Given these distinctions we can understand that the London model brings the problematization of this public policy closer to the population, making it more concerned with the generation of waste and in São Paulo this issue is much more fluid given the centralized characteristic of the model without individualized tax. Thus, we could expect the generation of waste to be lower in London and that there was also greater support to the selective collection model.

However, what the study showed was that this process was stagnant given the difficulty of storing waste and there is a growing tendency to use incinerators in London's urban waste policy. This trend seems to be associated to two issues. First to the adoption of a national policy of permanent fiscal austerity that since 2010 has reduced resources from the Boroughs and forced them to seek less costly alternatives (but less sustainable solutions as well). And secondly to a more recent international change, with the ban of countries like China trading solid waste from European countries. This is an open question that needs further research to be able to understand the consequences for the London model. It is interesting to see, however, that despite the Boroughs' control efforts to reduce spending, there has been no success and the annual total of expenditure continues to increase.

In the São Paulo model, the adoption of a long-term concession with only two contractors already indicated the risk for the constant increase in third-party spending, given dependence on this duopoly. This issue becomes even more complex with the extinction of the waste tax. What is perceived in the city of São Paulo is that even though there has been an effort to raise awareness among individuals, groups and companies about the need for sustainable waste management, the selective collection of this is still little disseminated among the different districts of the city.

In the end, even with the important differences in both cases, we have two models with increasing costs and with great difficulty in implementing a sustainable process of waste generation and collection. How to change this reality depends so much on the new contours that will be given to this public policy in both cities and also on the pressure of the population to form sustainable and less costly to manage this policy.

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