

Cost Percentage of Waste Management to Overall Costs in Hospitality Industry

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Abstract: For any business start up this a key part that how to manage finances and what are the initial set up costs and legal documents and procedures for that start up. Every hotel generates a big volume of waste annually so during the Hotel business start up planning it's a very important factor that how the hotel will manage the waste generated from hotel and guests and what will be initial set up cost for waste management system and what are the monthly or annual cost to run the waste management system ideally. Hotel waste management is an essential part of running a successful hotel. Waste is not only expensive to have collected, but also represents a waste of valuable resources and supplies which were paid for in the first place. Hospitality businesses can take some simple actions to minimize their costs by preventing waste and correctly segregating what goes into bins. As staff manages waste every day, they are best placed to identify improved waste management measures so make sure to engage with them and train them for optimize the waste management system.

Keywords

Hospitality waste management, Hospitality industry, Waste mitigation strategies, Waste generation, Waste management cost, Waste management start up cost, Waste management impact on environment.

Introduction

As part of your overall business strategy, a robust business plan is fundamental and will usually be required if you are looking for investment. Really understanding your business and being able to communicate this is an important part of any business plan or funding application. Hotel business has various types of cost, including fixed cost and variable cost. In this paper we will discuss about hotel waste management cost and its ratio in overall costs. Hospitality waste management system also has fixed and variable cost. In fixed cost come the waste management bin's prices and government's waste control agreement's cost, governmental waste management agency's annual visit fees and government's minimum monthly cost for waste dispose off. And in variable cost comes the cost of amount of waste to be disposed off and number of requests to government/private truck for picking up waste as number of guests in hotel fluctuates then this cost also fluctuates[1-4].

The business owner of any hotel must know the cost related to waste management and waste control in prior to business start up of hotels.

The costs of waste collection are rapidly increasing in dozens of Polish cities and municipalities as a result of the European Union's policy and the reform of the waste management system adopted in 2013[5].

For the past several months, Polish local governments have been increasing the fees for waste collection, the so-called waste fees. These are often drastic increases, reaching 30-60 per cent. There have even been examples of fee hikes reaching 250 per cent — in the municipality of Krzywczka in the Podkarpackie Voivodeship (southern Poland), the monthly rate for the collection of sorted rubbish has jumped from PLN3.8 to PLN10.5 (EUR0.88 to EUR2.44) per person, and the rate for unsorted waste rose from PLN8 to PLN21 (EUR1.86 to EUR4.87), since February 2018[6-7].

Why is it getting more expensive?

The rapidly increasing rates of the landfill tax, which is supposed to discourage waste disposal and encourage recycling, has even greater consequences. In the case of so-called mixed waste, the landfill tax rate was PLN16 (EUR3.71) per ton back in 2007. One year later the tax rate jumped to PLN75 (EUR17.39) per ton, and then continued to gradually increase. Until last year the rate was PLN121 (EUR28.05) per ton. Starting from this year, however, the landfill tax amounts to PLN140 (EUR32.46), in the next year it will increase to PLN170 (EUR39.41), and in 2020 it will reach PLN270 (EUR62.6) per ton.

The changes in the environmental protection legislation, which are leading to such large increases in the costs of waste disposal, including the sharp increase in the landfill tax, are the result of obligations imposed by the European Union[8-9]. The EU has the ambition of becoming the global leader in environmental protection. Consequently, the European Union's waste directives are very restrictive and are designed in such a way as to minimize the amount of landfilled waste and to maximize the recovery of the secondary raw materials (recycling).

Expenses for Hotel business:

Fixed Costs-

- Annual- Monthly rents for Hotel building / Building infrastructure setup cost.
- Beds, Linens, Pillows, Blankets, Sofa, Chairs, Tables, TV screens, Security Cameras, Refrigerators, Air conditioners etc.
- Monthly-annual accounting costs.
- Internet-wifi package cost.
- Waste management Bin's cost.
- Salaries and wages.
- Security Company's Cost.
- Building/ business insurances.

Variable Costs:

- Water Bills.
- Electricity bills.
- Heating / Air conditioning bills.
- Cleaning chemicals costs.
- Laundry cost.
- Reservation commission costs.
- Garbage/waste management cost.
- Building Maintenance costs.

On which point to work on this article:

Table No. 1: Overall Expenses of a hotel.

Salaries & Wages	42.3%
Payroll Related Expenses	19.0%
Laundry Linen & Supplies	10.9%
Booking Commissions	11.4%
Reservation Expenses	4.3%
Complimentary services, Amenities & F&B	4.0%
Other Expenses	8.2%
Waste Management Cost	?

Graph 1: Waste Management cost



Breakup of costs related to waste management:

	<p>660 Liters 4 bins monthly rent from Govt. Municipality</p> <p>= 180 PLN per month</p>
	<p>10 Litter Bin for rooms</p> <p>50 PLN per bin x No. of rooms</p> <p>20 room hotel needs 20 bins for rooms</p> <p>Total Cost = 50x20</p> <p>= 1000 PLN</p>
	<p>10 Litter Bin's plastic bag</p> <p>6 PLN per 10 bags</p> <p>20 room hotel needs 20 bags per day</p> <p>Monthly 600 bags</p> <p>Total monthly cost of bags</p> <p>= 360 PLN</p>

	<p>Dust Pan price for set of 4 pans</p> <p>= 40 PLN</p>
	<p>Dusting Brush price for set of 4</p> <p>= 50 PLN</p>

Fig.2 :Breakup of costs related to waste management

Waste/Garbage Dispose of vehicle waste pickup cost



Fig 3: Truck of waste pickup

100 PLN per one time request

For 20 room hotel approximately request 1 time per week to truck for picking up waste.

Monthly Request 4 times

Total monthly cost for requesting truck for waste pickup- 100×4

=400 PLN

Contract Cost with waste management Governmental agencies:

125 PLN once for a year

Annual inspection/certification cost by governmental and environment protection agencies:

500 PLN annually

Cost of Training to hotel employees for waste management by experts or agencies:



Fig 4: Waste management according to type of waste with different bins

200 PLN once a year

Total Waste Management cost calculation:

Table No.3 : Monthly/Annual Cost of waste management including all parameters in waste management

Type of Services	Monthly Cost in PLN	Annual Cost in PLN
660 Liters 4 bins rent from Govt. Municipality	180	2160
Cost of 10 Litter Bin for rooms		1000
10 Litter Bin's plastic bag	360	4320
Dust Pan price for set of 4 pans		40
Dusting Brush price for set of 4		50
Truck request cost for waste pickup	400	4800
Contract Cost with waste management Governmental agencies		125
Annual inspection/certification cost by governmental and environment protection agencies		500
Cost of Training to hotel employees for waste management by experts or agencies		200
Total Cost		13195 PLN

Total waste management annual cost for a 20 rooms Hotel in Poland is approximately 13195 PLN.

Which comprise a big part in total expenses.

This is a case study of Polish hotel in capital region Warsaw and after compiling data of overall expenses of hotel the part of Waste management is 3.2% to overall monthly/annual cost of hotel.

This is a very important factor to consider waste management cost in advance during financial planning of hotel setup.

Related Literature

Why business financial planning important for a waste management services?

Running a small business is tough! Economic cycles bring growth and recessions, while the business landscape is ever-changing with new technologies, regulations, competitors, and consumer behaviors emerging constantly.

In such a dynamic context, operating a business without a clear roadmap is akin to driving blindfolded: it's risky, to say the least. That's why crafting a business plan for your waste management services is vital to establish a successful and sustainable venture[10-12].

This article attempts to find the strongest factors that impact waste management system costs. Case-based studies in three selected voivodeship Polish city Warsaw found waste collection and transport, processing, and system management to be the dominant cost factors. The price of fuel, electricity and the rates of wages indirectly decide the determined management costs in the above-mentioned categories. The increase in waste management costs on a national scale observed in recent years is mainly from actions taken by companies to meet increasingly restrictive legal requirements. For example, the allowed time for waste storage has been shortened and the amount of environmental fees paid for waste landfilling has been increased[13].

Currently, the collection and transport of waste, its processing, and system management have the strongest impact on waste management costs. The charges of the above-mentioned stages of waste management are shaped primarily by the current fuel and electricity prices and staff costs. As presented in Section 4, the costs of these components have increased significantly in recent years, which has transformed into an increase in the overall costs of enterprises' operations[14-15].

On 1 January 2022 new fees for municipal waste management in ACR+ member Warsaw came into force. The rates are now of PLN 85 (EUR 18.74) for a multi-unit household and PLN 107 (EUR 23.59) for a single-family household. The latter amount can be reduced by PLN 9 (EUR 1.98) if bio-waste is composted in a household composter. However, for residents who, contrary to the legal obligation, do not separate waste or do it incorrectly, the waste disposal fees will be doubled. Due to recent changes, property owners and managers must submit a new declaration[16].

Source: <https://um.warszawa.pl> (in Polish)

Methodology

Quantitative and qualitative methodology both are employed in this study. Quantitative methodology is used to collect data from a case study of a polish hotel based in capital of Poland, Warsaw. The name of hotel is Spectrum International hotel with registered company name "Spectrum International SP. Z.OO." Monthly and annual cost spent on Hotel Waste Management system is collected from hotel. Qualitative research investigates business concerns by observations, interviewing business owner and employees.

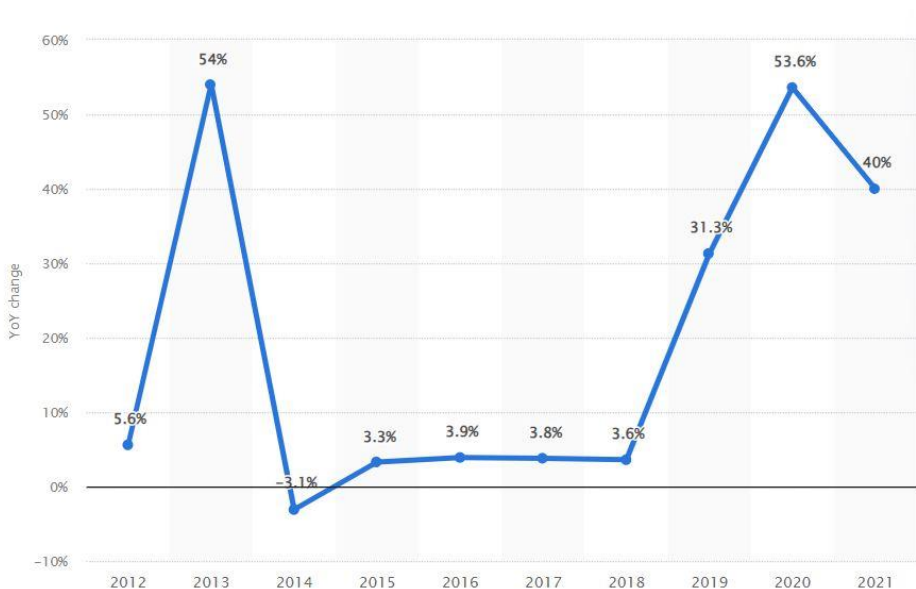
The Scope of Study Includes

- Collection of data on the costs of waste management in Hospitality industry.
- Analysis of rates of fees of municipal waste management.
- Breakdown of different costs included in waste management.
- Analysis of price increase of waste management in Poland.
- Importance of waste management cost planning during new Hotel business setup.

Figures & Tables

Graph No. 2 Year-on-year change of garbage collection prices in Poland from 2012 to 2021

Source: Eurostat

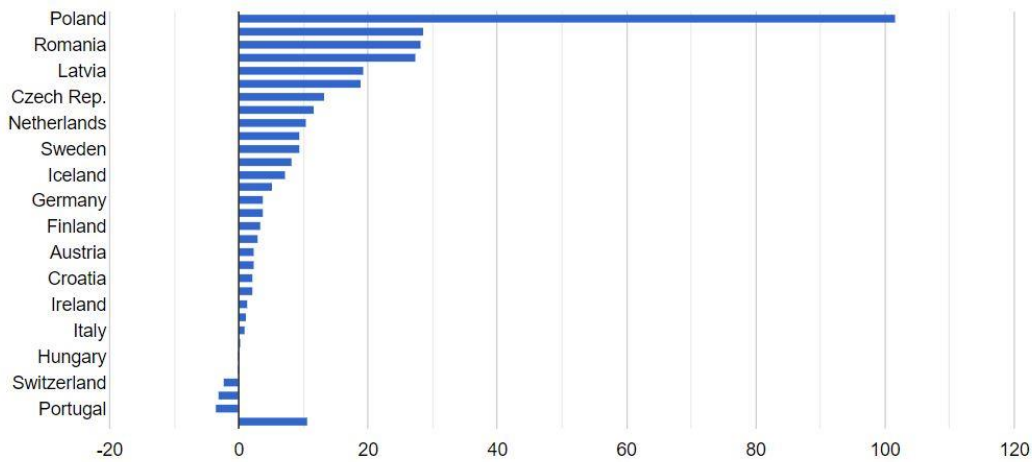


Source: Eurostat

Source: Eurostat

Graph No. 3 Percentage change in household waste disposal charges since beginning of 2019 in Europe

Source: Eurostat



Source: Eurostat

Graph No. 4 Annual Percentage change of waste disposal costs in Poland vs EU

Source: Eurostat

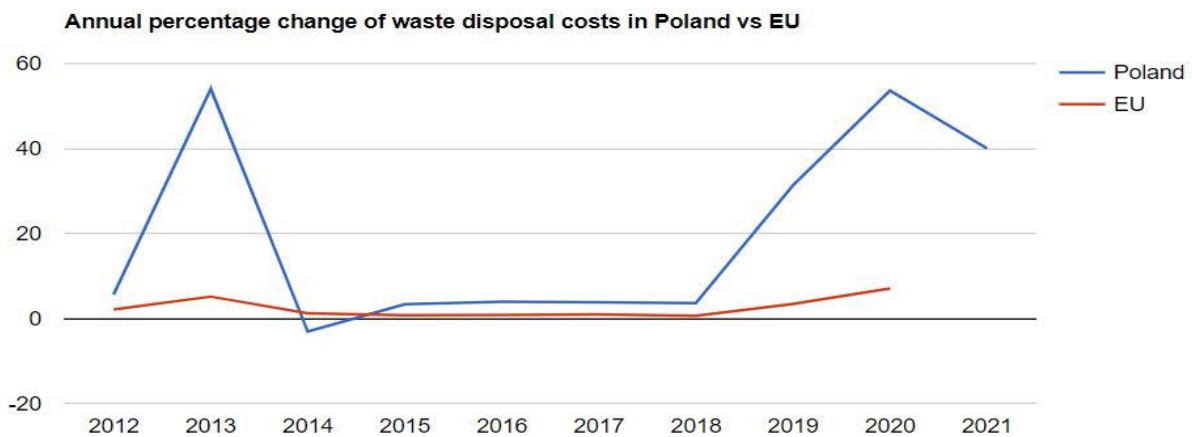


Fig: Annual percentage change of waste disposal costs in Poland vs EU

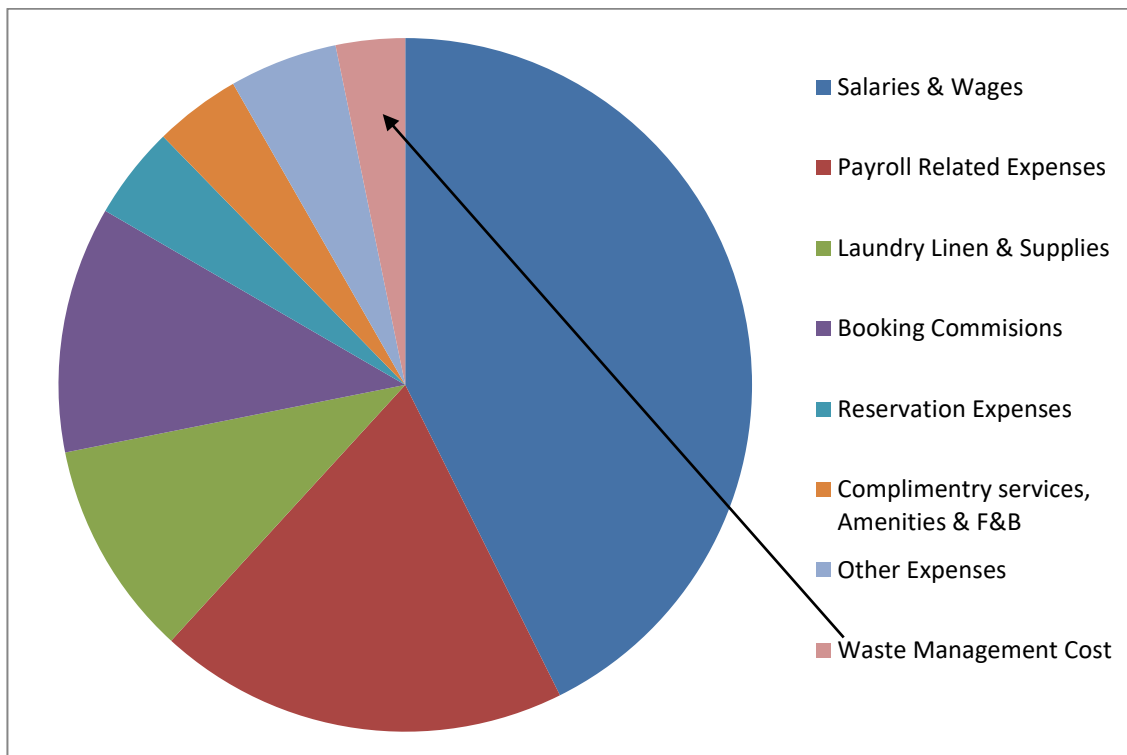
Source: Eurostat

Results & Discussion

Table No.3 Percentage of overall costs also including waste management cost

Salaries & Wages	Payroll Related Expenses	Laundry Linen & Supplies	Booking Commissions	Reservation Expenses	Complimentary services, Amenities & F&B	Other Expenses	Waste Management Cost
42.3%	19.0%	10.0%	11.4%	4.3%	4.0%	5.0%	3.2%

Graph No.5 Pie Chart of Percentage of overall expenses of hotel business including waste management percentage.



Conclusion

During the financial planning for a new hotel setup in Poland/Europe it's a very important factor to consider all fixed and variable monthly/annual cost for Hotel/Hospitality waste management system and government rules and regulation of specific place, city or country, because of highly increase in costs related to waste management system in Europe due to environment protection, waste control and waste recycling laws strictly implemented by European union to Hotel businesses and local population also.

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