

# **Analysis Of Strategic Cost Management Assisting In Decision Making: A Case Study Of A Company That Provides Cleaning, Conservation And Sanitation Services**

**Yuri Barroso, Armando Souza Junior**

Federal University of Amazonas

Brazil

## **Abstract**

*This work presents a study on the cost formation process of a third-party service provider from the Federal Public Administration to draw a parallel with the strategic cost management using the absorption and variable costing methods. As a methodology, a qualitative-quantitative research strategy, of an applied nature, was used, through a case study in a company that provides cleaning, conservation, and sanitation services. Data on 13 types of inputs (the highest values) were analyzed over six months. The values were highlighted referring the input data of the Bidding Notice that led to the contracting of the service provider company, the inputs consumed by the client, and the inputs purchased by the company. The results of the study indicate that the company bought twice as much (119%) than the amount foreseen in the notice on the analyzed period. Using the precepts of Strategic Cost Management, in parallel with the absorption and variable costing methods, it can be observed that in terms of making managerial decisions, the second (variable costing) forwards more critical information to the manager than the first (absorption costing), resulting from the concern of complying with Brazilian tax legislation, without considering the inherent tax costs (not only) in the operational structure of the type of service object in this study.*

**Keywords:** Strategic Cost Management; Absorption Costing; Variable Costing; Decision Making;

## **1. Introduction**

Nowadays, the search for greater competitiveness has been emphasized as a great challenge for organizations, which rely on information with more quality to assist the decision-making process. Managers need to be more and more aware of good cost management practices to ensure organizations survive, and this survival is the result of the relationship between cost, productivity, and quality of products and/or services.

(Berts & Kock, 1995) reinforced by (Megliorini, 2012) and (Piva & Caraffini, 2018) portray that the expansion of competition in the business environment has had an impact on the service sector, reflecting on greater importance in the use of accounting information, especially in information referring to planning, control, costs and decision making and complement that the type of company does not matter, but that knowledge of the industry and having good management are fundamental factors for the success of the

business and in what concerns to a competitive market about the need to manage, control and calculate costs.

In this sense, (Martins, 2018) clarifies that cost accounting is no longer a mere inventory cost assessor and has become a significant instrument in supporting managerial decision-making because, with greater competition, organizations no longer reach their goals. prices just considering the costs and yes, adding the wishes of the market. (Raupp & Michels, 2015) add that for a company to have cost management it is critical to manage, know, and control the expenses of products and/or services.

Regarding the provision of services, concerning outsourcing, in Brazil, this had a significant increase, mainly in the late 1960s with the advent of Decree-Law No. 200, of February 25, 1967.

(Fernandes, 2002) corroborated by (Almeida, 2018) cite that the Public Administration used the concept of outsourcing to become more flexible, to provide the downsizing of the administrative machine and reduce unemployment in the country, in addition to reinforcing the idea that the Public Administration should focus on its main activity and reduce its costs, with a redirection of its activities.

Previous studies such as (Boas, 1998; Backes, Souza & Silva, 2008; Filho, Peixe, Passos & Peixe, 2016; Castro, Oliveira, Cisne & Bezerra, 2018; Nunes & Ferrari, 2019) emphasize the importance about the thematic of the study, using Strategic Cost Management as a tool to assist in managerial decision-making, relying on administration, control, and analysis of costs to foster management strategies.

In this sense, the objective of this work is to present a study on the cost formation process of a third-party service provider from the Federal Public Administration to draw a parallel with strategic cost management using absorption and variable costing methods.

The work is structured in 05 (five) parts: After the introduction, the theoretical framework is presented dealing with Strategic Cost Management and Costing Methods in the literature. Then, the methodology applied in conducting the research and the results of the study are described. Finally, the final considerations about the study are presented, followed by the references used.

## **2. Theoretical framework**

The theoretical framework will deal with Strategic Cost Management, 02 (two) costing methods, and outsourcing.

### **2.1 Strategic Cost Management**

Strategic cost management is an analysis of these through a more comprehensive prism, which gives a more sophisticated look to the organization seeking to obtain competitive benefits. Costs are collected to contribute to the development of strategies aimed to obtaining competitive advantages. Furthermore, in competitive environments, it is primarily sought to obtain high-quality products and/or services, productively and efficiently (Shank & Govindarajan, 1997; Piva & Carafinni, 2018; Martins, 2018).

When it comes to data related to costs, (Carmo, Lima, Martins, Pereira & Soares, 2013) corroborate that the number of companies that use electronic spreadsheets for data formation and as used for the elaboration of decision making is significant. In this sense, (Colpo, Medeiros, Amarin & Weise, 2015) reinforce that good management of an organization is a determining factor in the goals it intends to achieve, highlighting

the importance of the manager in detecting and pointing out limitations and the number of available resources.

Following this bias, strategic cost management supports the implementation of management instruments, providing solid bases for management decision making and in the planning process. Also, the organization can structure itself more efficiently, enabling better results through the cost system, acquiring advantages in the market through better use of resources and ensuring responses with greater relevance for management (Megliorini, 2007; Reis & Santana, 2012; Moura & Lima, 2016; Martins, 2018).

In this sense, (Lima & Cunha, 2016), state that costs can have multiple positions depending on the scenario in which they are employed. (Bruni & Famá, 2009) point out the difference in the view of costs between a consumer and a company. While the former sees the cost in several ways - opportunity, accounting, financial, among others, the latter sees the cost more rigidly - the monetary value to be disbursed.

The difference between costs and expenses must also be highlighted. Costs are consumption related to the production of other products or services. Expenses are consumption directly linked to administrative expenses, that is, they seek the generation of revenue (Bruni & Famá, 2012; Ribeiro, 2017; Martins, 2018). Complementing this thought, Cost Accounting brings several terminologies about other concepts that are commonly confused (or put as synonyms) in the organizational environment, but that it is necessary to make a distinction as shown in Table 1

Table 1 - Cost Terminologies

<b>Expenses</b>	<b>It is a generalized term for expenditure. It translates financial sacrifices that the company makes to obtain a product or service;</b>
<b>Disbursement</b>	Payments arising from the purchase of a good or service;
<b>Investments</b>	Expenses activated due to attributable gains in the future;
<b>Cost</b>	Expenses related to goods or services made for the production of other goods and services;
<b>Expense</b>	Values of goods or services consumed directly or indirectly to obtain revenue;
<b>Loss</b>	Values of goods or services consumed exceptionally and involuntarily, treated as non-operational, not constituting part of the production costs.

Source: Adapted from Martins, 2018.

### 2.2 Costing Methods

Costing methods support the determination of cost objects, which can be a department, an operation, a product or a service, that is, when thinking about identifying costs in activities, departments, operations or products and services, it is used some costing method (Megliorini, 2012; Martins, 2018; Vieira, Holanda & Souza, 2018). In this work, 02 (two) costing methods very common in the literature will be addressed: Absorption Costing and Variable Costing.

Absorption Costing is the costing method in which all costs, whether fixed or variable, direct or indirect, are appropriated to the costs of products or services (Maher, 2001; Reis, 2005; Megliorini, 2012; Martins, 2018). Variable costing is also known as direct costing. In this type of cost, only variable costs are allocated to products or services, whether direct or indirect, and fixed costs are therefore considered expenses for the

year (Dias & Padoveze, 2007; Backes, Souza & Silva, 2008; Martins, 2018; Vieira, Holanda & Souza, 2018). In Table 2 there is a comparison between the methods with their advantages and disadvantages.

Table 2 - Comparison between Absorption Cost x Variable Cost

Costing Method	Advantages	Disadvantages
<b>Absorption</b>	Assistance to tax authorities, a survey of the total cost of products, as both direct and indirect costs as well as fixed and variable costs are attributed to products and compliance with the principle of competence (Wernke, 2005; Backs, Souza & SILVA, 2008; Martins, 2018).	The method is criticized when it comes to decision making, for prioritizing compliance with legislation and not the managerial scope and for causing distortions in the apportionment, mainly of fixed costs, using arbitrariness and subjectivity to allocate them (Pamplona, 1993; Motta, 2000; Wernke, 2005; Castro, Oliveira, Cisne & Bezerra, 2018; Martins, 2018).
<b>Variable</b>	The mitigation of the arbitrariness of the apportionment method, mainly, but not only, of those related to fixed costs, since this method assumes little relevance for managerial observation. The emergence of the concept of contribution margin, that is, it is a method focused on managerial decision making (Souza, Clemente, Kreuz & Rosseto, 2003; Abbas, Gonçalves & Leoncine, 2012; Martins, 2018).	The injury of the Accounting Standards for not complying with the principle of competence, the non-acceptance by the tax legislation for external audit and the fact that in practice, the distinction between fixed and variable costs is not so clear (Viceconti & Neves, 1995; Souza et al, 2003; Gnisci, 2010; Castro et al, 2018; Martins, 2018).

Source: Prepared by the authors (2020).

### 2.3 Outsourcing in the Public Service

(Almeida, 2018) states that outsourcing is used in industries, companies or institutions, to hire another company, industry, or organization to provide a certain service, the practice of which operates in both public and private services.

He adds that the outsourced service is deficient and that there is more intense exploitation of the worker, under the justification that a higher quality in the provision of the service and the mitigation of unemployment.

Still (Almeida, 2018) shows that, from the perspective of the Brazilian market, Public Administration is one of the prevalent employers, in all 03 (three) spheres. In this sense, (Vieese, 2012) adds that the public sector acts in the fight against unemployment, which may cause the extension or retraction of the so-called public services and, consequently, causing certain privatization as a strategy from outsourcing.

In this bias, the contract for the outsourcing of public service is made through a public notice that is known and accessible to the public. There is, therefore, a need to demonstrate public interest in contracting this service, that is, it must have a lower cost, a better profit and be essential and justifiable, since the Administration itself should perform it (Valente, 2009; Silva, 2016; Almeida, 2018).

### **3. Methodology**

A qualitative-quantitative research strategy was applied that is based on the use of two types of data, also called mixed data, to provide a better understanding of a particular research problem (Creswell & Clark, 2015; CRESWELL, 2017), of an applied nature, which is the research produce knowledge for applicability and the solution of practical characteristic problems (Silva & Menezes, 2005; Domingues, 2017).

To operationalize the study, a case study was carried out in a company that provides cleaning, conservation, and sanitation services. As explained by (Yin, 2015), the case study is applied because it is a meticulous method of research, through a systemic and sociological approach, being treated as a considerable methodological strategy, allowing a focus concerning the object to be studied, or better, a practical investigation of a phenomenon within the context of real-life (Yin, 2015).

The methodology of the theoretical framework was to preferably adopt the search results between 2016 to 2020, focusing on research in English, the database was Google Scholar, using CAPES journals as support. The keywords were: strategic cost management, costing method, absorption costing, variable costing, and outsourcing. The criterion used for the selection and filtering of articles was the degree of relevance of the information. Other external articles from this range were added to serve as a foundation for theoretical concepts.

To analyze the data in the composition and valuation of the inputs more fluently, the systematic was limited to 13 (thirteen) items of Notice XXX/201X (whose object was the contracting of continuous cleaning, conservation and sanitation services, with a the supply of materials needed under contract) which are the ones with the greatest quantities and value: common toilet paper, interleaved paper towels, bleach, hypochlorite, disinfectant, detergent, liquid soap, glass cleaner, multipurpose, flavoring, a plastic bag of 30 liters, a plastic bag of 50 liters and a plastic bag of 100 liters. Besides, the analysis period from July to December 2018 and the 5 (five) customer supply sectors, hereinafter referred to as sector 1 to sector 5, was limited.

The units were consolidated into “standardized units” to compare the consumption measures provided for in the Public Notice, which were consumed by the customer and the measures that were purchased by the company, in addition to scaling the bid adjustment to a monthly amount for the item comparability, dividing the amount of the notice (annual) by 12 (twelve) months.

The data were processed using Microsoft Office Excel 2016® software and was based on input data provided by the Public Notice, input data consumed by the customer, input data purchased by the company and its value implications in module 3 and module 5 since modules 1, 2 and 4 have little or no variability due to legal obligations or collective agreements.

Table 3 - Parameters used for data analysis

Parameters
IN 05 Cost Spreadsheet for employee pricing
Quantity of Public Notices x Quantity of Input Consumed
Quantity Input Notice x Quantity Input Purchased
Amount Input Consumed x Amount Input Purchased
Edict Profit Margin x Profit Margin Quantity Consumed
Edict Profit Margin x Profit Margin Quantity Purchased
Indirect Costs Margin Notice x Indirect Costs Margin Quantity Consumed
Indirect Costs Margin Notice x Indirect Costs Margin Quantity Purchased
Absorption Costing x Variable Costing

Source: Prepared by the authors (2020).

#### 4. Analysis and Results

The hiring of a third party by the Public Administration is preceded by a bidding process. This process is divided into 05 (five) sequential steps - Preliminary bidding phase, Internal bidding phase, External bidding phase, Contractual phase, and Post-contracting phase, as shown in Figure 1. For analysis of the proposed work, consideration the stage External phase of the bidding, from the perspective of the service provider company.

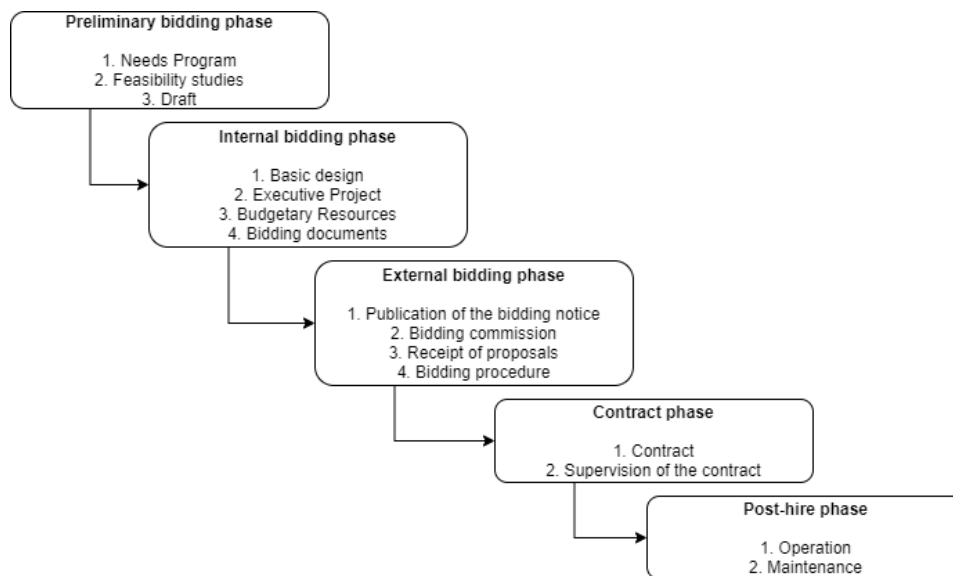


Figure 1 - Flowchart of the Bidding Process

Source: Adapted from TCU (2014).

From the publication of the bidding notice, the company conducts several internal analyzes to find out if it can participate in the bidding. Starting with the financial-economic analysis up to the analysis of the activities according to the National Classification of Economic Activities - CNAE, in addition to verifying that the notice is following the laws in force in all applicable aspects. If the company's CNAE does not

meet the need for the notice, the company is not qualified to participate in the bidding process. Figure 2 shows the flowchart of the bidding process from the company's perspective.

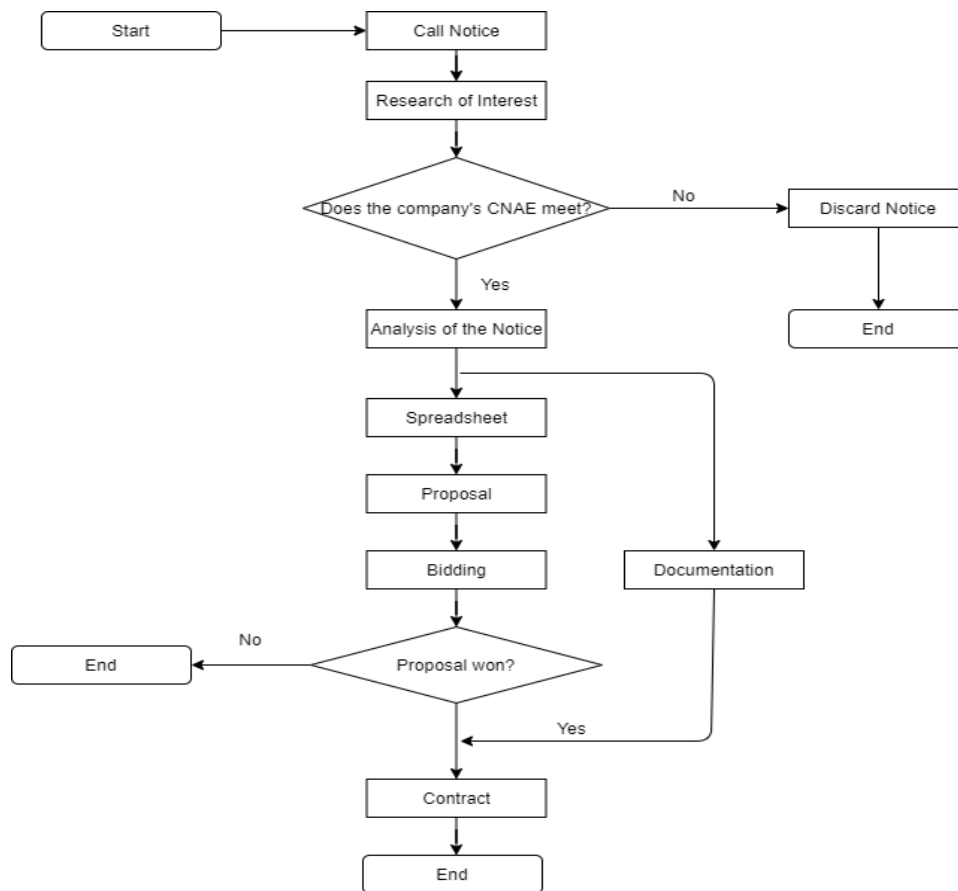


Figure 2 - Flowchart of the Public Notice from the Company's perspective

Source: Prepared by the authors (2020).

Being able to participate in the Bidding and after analyzing the public notice, the company will compose the cost spreadsheet according to the characteristics contained therein. Then, there is the phase of proposals and bids, in which the company aims to provide the lowest value, and then, it wins, according to the rules of the bidding process. The profit margin and subjective cost reduction can occur at this stage.

It should be noted that there are two types of bidding: face-to-face or electronic. In the face-to-face auction, it takes place in traditional bids, in the physical presence of the auctioneer. In the electronic auction, bidders register on the public procurement website, in the case of the Federal Government, Comprasnet, for a specific offer that interests them.

The locus company in the study acts as a provider of cleaning and outsourcing services to public institutions. It has 13 years in the market and arose from the need for a company in the cleaning market with clarity and commitment to the customer and its employees. Its client portfolio includes medium and large organizations in the government, federal and private sectors having a high commitment its values and the satisfaction of the client and our employees in general.

To operationalize the study, the proposal submitted to a Public Institution of the Federal Government of Brazil (notice XXX/201X) was selected, the whose estimated value for contracting continued cleaning, conservation and sanitation services, with the supply of necessary materials under contract, it was up to R\$

7,547,127.61 per year. The company submitted a bid with a value of R\$ 6,940,712.15 per year, being declared the winner of the contest. Figure 3 shows the comparison between the estimated value and the company's bid.

Also, the study is based on the specifications provided for the announcement under the company's economic-financial view, since it is where there is the greatest influence of strategic cost management on the possible room for maneuver on the composition of its commercial proposal to be presented with the bidding agency, that is, the perspective of the work will be to present the impact on a possible result if the company already employed strategic cost management when participating in the bidding process.

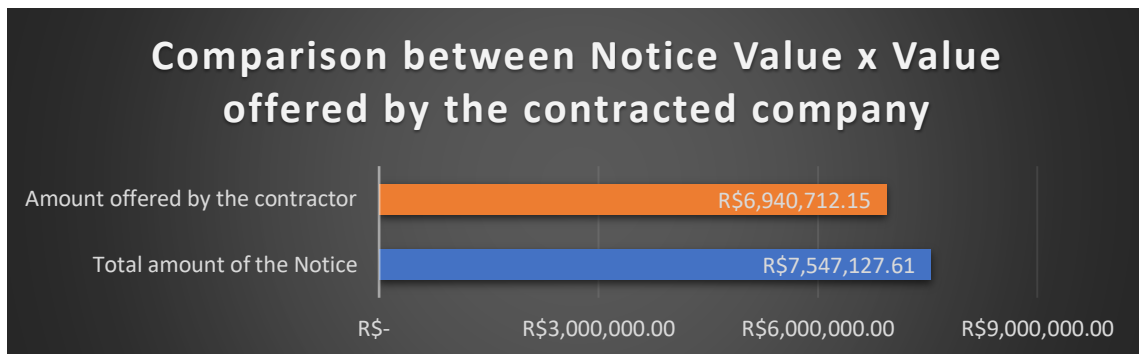


Figure 3 - Comparison of the bid notice x value offered by the contracted company

Source: Prepared by the authors (2020).

In this sense, the present work carried out an analysis of the value of R \$ 6,940,712.15 (which is equivalent to 92% of the maximum value of the bid), which made the company win the bidding process and drew a comparison with the values that would be possible if the company adopted strategic cost management.

Initially, it should be noted that this amount, as well as the maximum amount proposed by the notice, is detailed by a cost spreadsheet whose legal basis is Normative Instruction 05 of May 26, 2017, of the Ministry of Planning, Development, and Management that governs the hiring of the Federal Public Administration. Such spreadsheet is composed of 05 (five) modules, which are: Module 1 - Compensation Composition; Module 2 - Monthly and daily benefits; Module 3 - Miscellaneous Inputs; Module 4 - Social and Labor Charges; and Module 5 - Indirect Costs, Taxes, and Profits, which are summarized in Table 4.

Table 4 - Summary table of cost per employee

SUMMARY TABLE OF COST PER EMPLOYEE		
Labor linked to contractual execution (value per employee)		Percentages and Reference Values
<b>A</b>	Module 1 - Composition of Remuneration	-
<b>B</b>	Module 2 - Monthly and Daily Benefits	-
<b>C</b>	Module 3 - Miscellaneous Supplies	-
<b>D</b>	Module 4 - Social and Labor Charges	-
<b>E</b>	Module 5 - Indirect Costs, Taxes and Profit	-
<b>TOTAL AMOUNT PER EMPLOYEE</b>		-

Source: Prepared by the authors from IN 05/2017 (2020).



Following this bias, Modules 1, 2 and 4 are the same for companies in the same industry, as they are items that are governed by the CLT, Collective Labor Agreements, such as labor rights (transportation, food, health assistance, etc.), social security charges and FGTS, 13th salary, provisions for termination, among others. However, Modules 3 and 5 (Miscellaneous Inputs and Indirect Costs, Taxes, and Profit) that will be the object of analysis, since strategic cost management is more relevant to their composition. Module 3 deals with Raw Materials, Uniforms and Maintenance / Depreciation (CIF's), and module 5 on other indirect manufacturing costs, profit, and federal taxes that will make up the cost of the service provided. The analysis started from module 3 (Miscellaneous Inputs) which is divided into 03 (three) items: Uniforms, Materials (Inputs), and Maintenance and Depreciation. Of the 03 items, Materials represent 87.76% of the total of Miscellaneous Inputs and that was where the analysis was directed. Table 5 shows the details of module 3.

Table 5 - Module 3 - Miscellaneous Inputs

MODULE 3 - MISCELLANEOUS SUPPLIES		Percentages and Reference Values	
A	Uniforms	9.55%	R\$ 45.15
B	Materials	87.76%	R\$ 415.05
C	Maintenance and depreciation	2.69%	R\$ 12.73
<b>TOTAL MISCELLANEOUS INPUTS</b>		<b>100%</b>	<b>R\$ 472.93</b>

Source: Research data (2020).

It was structured from the form of acquisition of inputs to the form of transfer to the customer and its internal distribution. Figure 4 exemplifies the flowchart of this process.

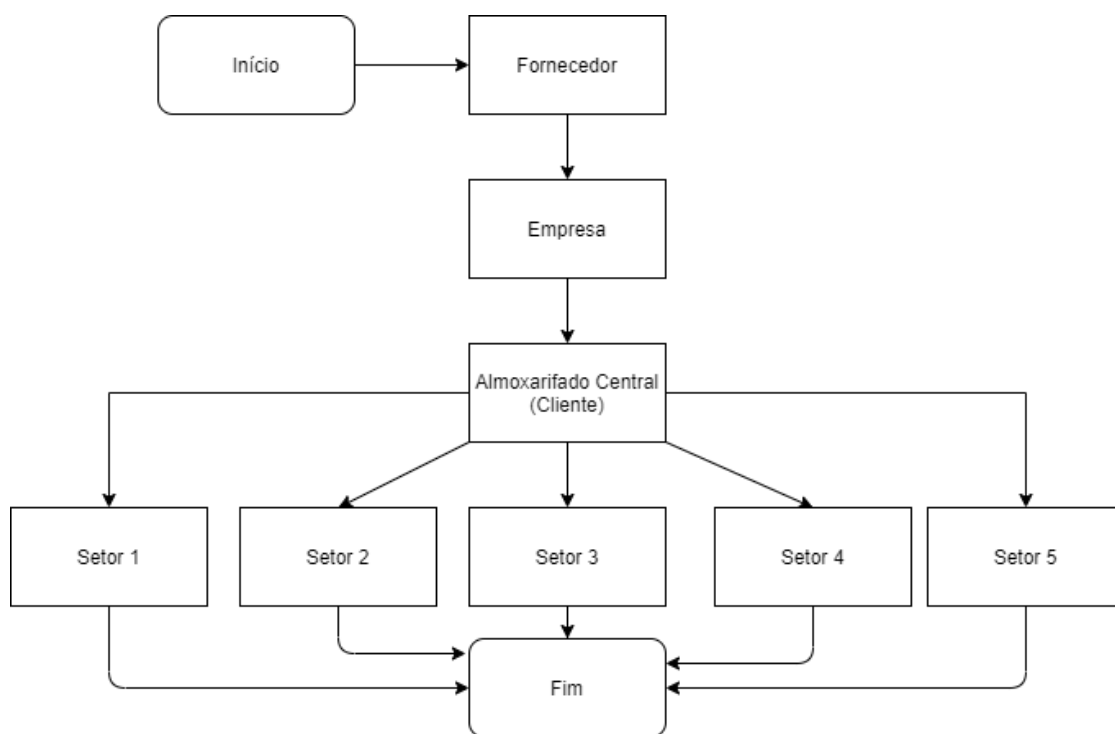


Figure 4 - Input Distribution Flowchart

Source: Prepared by the authors (2020).

According to Figure 4, the company requests a certain amount of material from the supplier, which delivers it to the company in its central warehouse that is at the customer, and from there it distributes to the demanding sectors, which have sub- stocks. It is noteworthy that the period of data collection and analysis of the values was 6 (six) months - July to December 2018.

Initially, it was found that the company did not carry out any inventory control method. Purchases were made based on the average consumption of the last few months and all customer requests for replacement of inputs were promptly answered even if there was no need to verify the contract. Then, it was determined that an initial inventory was made for data collection, and later so that the method for control called the periodic inventory control method could be implemented, which is the company does not continuously control its inventories, but it does so for a period (weekly, monthly, etc.). In addition, a physical inventory count, called balance sheet, is necessary (Montoto, 2015).

Throughout the analysis, the values required by the notice, the values that the company bought and delivered to the customer, and the values that the customer consumed were taken as a parameter.

Mathematical standardizations were carried out so the units contained in the public notice served as a parameter for the values purchased and the values consumed. Besides, 13 input items were worked on, which are those that had the greatest volume or financial impact during the analysis. Table 6 summarizes the stock generated by the company (inputs acquired) in the final 6 (six) months of 2018 by sector, a period that was used for data analysis.

Table 6 - Inputs purchased in the second half of 2018

MATERIAL PURCHASED IN THE SEMESTER									
MATERIAL	STOCK						FINANCIAL		Percent
	Sector 1	Sector 2	Sector 3	Sector 4	Sector 5	Total	RS Unitary	RS Total	
Common hygienic role	1,850	1,800	1,800	1,500	1,650	8,600	RS 27.05	RS 232,630.00	45.95%
Interleaved paper towel	3,950	3,955	3,515	2,848	4,500	18,768	RS 9.90	RS 185,803.20	36.70%
Sanitary water	1,350	1,830	1,830	1,430	850	7,290	RS 1.80	RS 13,122.00	2.59%
Hypochlorite	1,200	800	800	200	150	3,150	RS 2.00	RS 6,300.00	1.24%
Disinfectant	480	480	480	200	150	1,790	RS 3.10	RS 5,549.00	1.10%
Detergent	300	300	300	100	100	1,100	RS 3.40	RS 3,740.00	0.74%
Liquid soap	840	840	840	300	200	3,020	RS 3.90	RS 11,778.00	2.33%
Glass Cleaner	900	800	750	400	300	3,150	RS 2.60	RS 8,190.00	1.62%
Multipurpose	300	225	235	160	140	1,060	RS 3.80	RS 4,028.00	0.80%
Flavoring	540	480	450	250	150	1,870	RS 3.20	RS 5,984.00	1.18%
Plastic Bag of 30 liters	50,000	13,800	4,000	5,500	13,000	86,300	RS 0.05	RS 4,487.60	0.89%
Plastic Bag of 50 liters	35,000	30,000	25,000	8,000	4,000	102,000	RS 0.08	RS 7,854.00	1.55%
Plastic Bag of 100 liters	39,500	29,100	1,000	8,000	18,100	95,700	RS 0.18	RS 16,795.35	3.32%
<b>TOTAL</b>								<b>RS 506,261.15</b>	<b>100.00%</b>

Source: Research data (2020).

It appears that 45.95% of the amount disbursed was for the purchase of common toilet paper and interfaced paper towels with 36.70% of disbursement in the period. The remaining items represented 17.35% of the disbursement. Table 7 shows the customer's actual consumption by sector, that is, his actual need for inputs.

Table 7 - Inputs consumed in the second half of 2018

REAL CONSUMED MATERIAL IN THE SEMESTER - CONSUMPTION									
MATERIAL	STOCK						FINANCIAL		Percent
	Sector 1	Sector 2	Sector 3	Sector 4	Sector 5	Total	RS Unitary	RS Total	
Common hygienic role	1,850	1,650	1,680	1,050	1,038	7,268	RS 27.05	RS 196,599.40	65.66%
Interleaved paper towel	2,350	2,450	163	35	310	5,308	RS 9.90	RS 52,549.20	17.55%
Sanitary water	1,150	1,630	83	20	48	2,931	RS 1.80	RS 5,275.80	1.76%
Hypochlorite	850	650	680	186	135	2,501	RS 2.00	RS 5,002.00	1.67%
Disinfectant	330	430	385	188	139	1,472	RS 3.10	RS 4,563.20	1.52%
Detergent	185	285	275	96	89	930	RS 3.40	RS 3,162.00	1.06%
Liquid soap	750	660	790	275	195	2,670	RS 3.90	RS 10,413.00	3.48%
Glass Cleaner	760	80	85	79	74	1,078	RS 2.60	RS 2,802.80	0.94%
Multipurpose	280	102	196	58	36	672	RS 3.80	RS 2,553.60	0.85%
Flavoring	410	380	370	135	91	1,386	RS 3.20	RS 4,435.20	1.48%
Plastic Bag of 30 liters	10,500	10,800	3,770	4,800	5,500	35,370	RS 0.05	RS 1,839.24	0.61%
Plastic Bag of 50 liters	11,800	4,300	5,560	2,500	170	24,330	RS 0.08	RS 1,873.41	0.63%
Plastic Bag of 100 liters	9,900	10,500	13,000	7,800	6,500	47,700	RS 0.18	RS 8,371.35	2.80%
<b>TOTAL</b>								<b>RS 299,440.20</b>	<b>100.00%</b>

Source: Research data (2020).

Analogously to the previous table, the highest percentages of inputs consumed are common toilet paper and interleaved paper towels, however, their percentages were changed, to 65.66% and 17.55%, respectively. And the rest of the materials, representing 16.80%. Table 8 shows the amounts in quantity and financially by the terms of the notice.

Table 8 - Inputs provided according to the quantities established in the Notice XXX / 201X for 06 months

INPUTS PROVIDED ACCORDING TO THE QUANTITIES ESTABLISHED IN THE NOTICE XXX/201X FOR 06 MOUNTHS				
MATERIAL	NOTICE	FINANCIAL		Percent
	Semester Quantity	RS Unitary	RS Total	
Common hygienic role	1,173	RS 27.05	RS 31,729.65	13.77%
Interleaved paper towel	18,768	RS 9.90	RS 185,803.20	80.62%
Sanitary water	117	RS 1.80	RS 211.14	0.09%
Hypochlorite	783	RS 2.00	RS 1,565.00	0.68%
Disinfectant	235	RS 3.10	RS 727.26	0.32%
Detergent	313	RS 3.40	RS 1,064.20	0.46%
Liquid soap	782	RS 3.90	RS 3,049.80	1.32%
Glass Cleaner	1,251	RS 2.60	RS 3,252.60	1.41%
Multipurpose	469	RS 3.80	RS 1,782.20	0.77%
Flavoring	375	RS 3.20	RS 1,201.12	0.52%
Plastic Bag of 30 liters	313	RS 0.05	RS 16.28	0.01%
Plastic Bag of 50 liters	313	RS 0.08	RS 24.10	0.01%
Plastic Bag of 100 liters	313	RS 0.18	RS 54.93	0.02%
<b>TOTAL</b>			<b>RS 230,481.48</b>	<b>100.00%</b>

Source: Research data (2020).

The estimates provided for in Notice XXX/201X specify that the inputs of common toilet paper and interleaved paper towels are the most important financial material. However, according to the size of the public notice, the largest consumption would be paper towels (80.62%) and not common toilet paper (13.77%). The other inputs represent only 5.62% of the amount that should be disbursed by the winning company.

The results of the analysis indicate that the amount consumed by the customer is 29.92% higher than the quantity dimensioned in the Public Notice, that is, if the company provided only what was foreseen in the Public Notice, there would be a shortage or rationalization of inputs, as the expected consumption is lower than actual consumption, as shown in Figure 5.

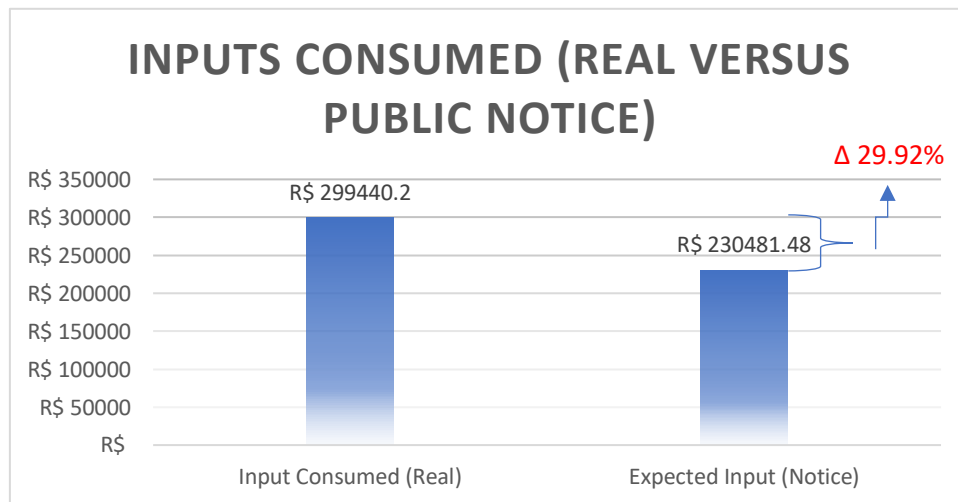


Figure 5 - Inputs Consumed (Real versus Public Notice)

Source: Research data, 2020.

Analyzing the quantities consumed with the quantities purchased by the company, the difference percentage suffers a greater increase, becoming 69.07%, that is, purchases based on the monthly history, aligned with a consumption need greater than budgeted in the public notice. on the part of the client, sub-inventories without carrying out an inventory and without methods of control and the fulfillment of requests made by the client without contractual analysis made the company acquire almost twice as many inputs in 06 (six) months as the client would arrive to consume, as shown in Figure 6.

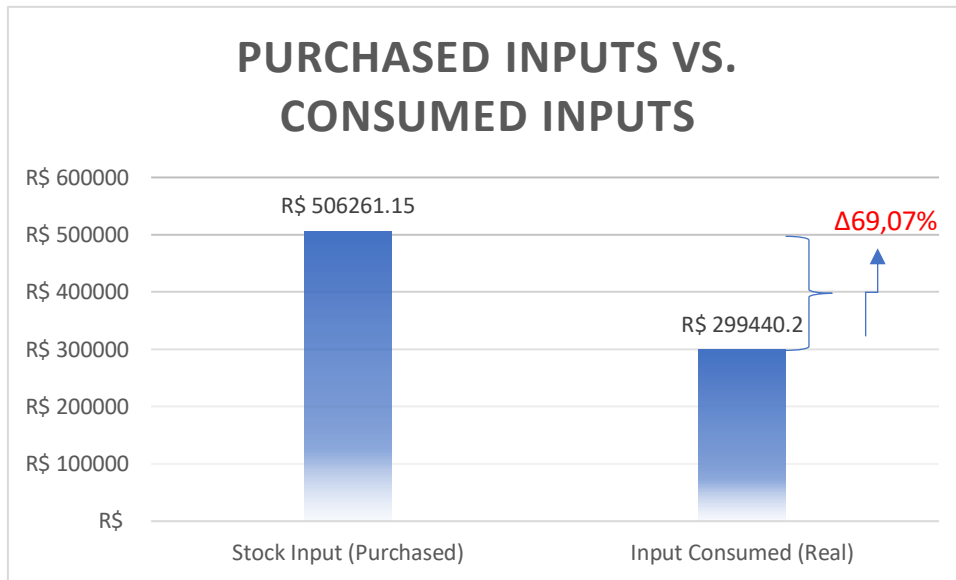


Figure 6 - Purchased Inputs vs. Consumed Inputs

Source: Research data, 2020.

When comparing the quantity purchased and the quantity provided for in the Notice, the difference is even more exacerbated, becoming 119.65%, that is, in 6 months, the company had already acquired more than 2 times the amount provided for in the Notice, in financial terms, as shown in Figure 7.

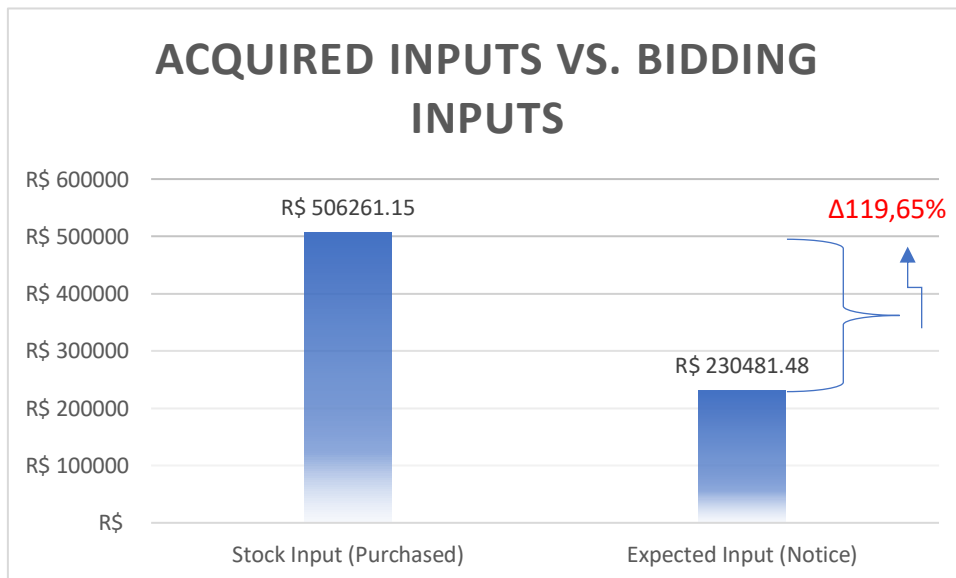


Figure 7 - Acquired Inputs vs. Bidding Inputs

Source: Research data, 2020.

In module 5 (Indirect Costs, Taxes, and Profits) it is divided into 03 (three) items: Indirect Costs, Profit, and Taxes. This, in turn, is subdivided into 04 (four) sub-items: Federal Taxes (PIS and COFINS), State Taxes (specify), Municipal Taxes (ISS), and Other Taxes (specify). Of these items, Indirect Costs and Profits are subject to percentage change. Taxes are legal requirements, no. Table 9 summarizes the items and sub-items according to the terms of the Notice.

Table 9 - Module 5 - Indirect Costs, Taxes, and Profit

<b>MODULE 5: INDIRECT COSTS, TAXES AND PROFIT</b>		<b>Percentages and Reference Values</b>	
A	Indirect costs	3.00%	R\$ 64.34
B	Profit	6.79%	R\$ 150.00
C	Taxes	8.65%	R\$ 2,582.50
C.1	Federal Taxes (PIS and COFINS)	3.65%	R\$ 94.26
C.2	State Taxes (specify)		
C.3	Municipal Taxes (ISS)	5.00%	R\$ 129.13
C.4	Other taxes (specify)		
<b>GROUP "E" Total</b>		<b>18.44%</b>	<b>R\$ 437.73</b>

Source: Research data, 2020.

Module 5, presented a percentage of 3% for the item Indirect Costs that reflect the administrative expenses of the company, expenses with gasoline, expenses with office, among others. Its value is composed of the percentage applied to the sum of the values of modules 1, 2, 3, and 4. For the item Profit, the percentage was 6.79% and its value is found in a similar way to the item Indirect Costs with the addition of Indirect Costs.

Regarding the item Taxes, its composition is made by the sub-items Federal Taxes and Municipal Taxes. The company, by adopting an income tax taxation regime called Presumed Profit, is supported by to adopt the cumulative incidence regime for PIS and CONFINS, hence the 3.65% rate. And the ISS, according to Complementary Law 116/2003, establishes 5% for this type of service, totaling 8.65%. Its value is calculated on the sum of modules 1, 2, 3, and 4 and the items Indirect Costs and Profit. R \$ 2,582.50 is the amount referring to the cost of an employee, according to Table 10, a summary of the cost per employee.

Table 10 - Summary Table of Cost per Employee

<b>SUMMARY TABLE OF COST PER EMPLOYEE</b>			
<b>Labor linked to contractual execution (value per employee)</b>		<b>Percentages and Reference Values</b>	<b>Public Notice</b>
A	Module 1 - Composition of Remuneration	29.43%	R\$ 760.00
B	Module 2 - Monthly and Daily Benefits	13.12%	R\$ 338.74
C	Module 3 - Miscellaneous Supplies	18.31%	R\$ 472.93
D	Module 4 - Social and Labor Charges	22.19%	R\$ 573.10
E	Module 5 - Indirect Costs, Taxes and Profit	16.95%	R\$ 437.73
<b>TOTAL AMOUNT PER EMPLOYEE</b>		<b>100.00%</b>	<b>R\$ 2,582.50</b>

Source: Research data, 2020.

Table 11 summarizes the room for maneuver on Indirect Costs and Profit items. It is noteworthy that the percentage values of these items over the total of the module in their sum represent less than 50% of the module, that is, 48.97% of the total. 51.03% are tax obligations imposed by law. Also, Indirect Costs (administrative expenses in general) represent 2.49% of an employee's total value. And the profit, 5.81%, making a sum of 8.3% of range for the company to maneuver in eventual losses.



Table 11 - Comparative table of item / module and item / total percentage

<b>MODULE 5: INDIRECT COSTS, TAXES AND PROFIT</b>		<b>% Item/Module 5</b>	<b>% Item/Total</b>
A	Indirect costs	14.70%	2.49%
B	Profit	34.27%	5.81%
C	Taxes	51.03%	8.65%
C.1	Federal Taxes (PIS and COFINS)	21.53%	3.65%
C.2	State Taxes (specify)		
C.3	Municipal Taxes (ISS)	29.50%	5.00%
C.4	Other taxes (specify)		
<b>GROUP "E" Total</b>		<b>100.00%</b>	<b>16.95%</b>

Source: Research data, 2020.

Keeping all other fixed costs and using the variation of inputs as a parameter due to consumption and what was purchased by the company, Table 12 was obtained, which shows a loss of 4.81% for the first case (inputs consumed by the customer) and 19.23% for the second case (inputs purchased by the company).

Table 12 - Comparison between value per employee Notice x Consumed x Purchased

<b>SUMMARY TABLE OF COST PER EMPLOYEE</b>				
<b>Labor linked to contractual execution (value per employee)</b>		<b>Public Notice</b>	<b>Value Consumed</b>	<b>Purchased Value</b>
<b>A</b>	Module 1 - Composition of Remuneration	RS 760.00	RS 760.00	RS 760.00
<b>B</b>	Module 2 - Monthly and Daily Benefits	RS 338.74	RS 338.74	RS 338.74
<b>C</b>	Module 3 - Miscellaneous Supplies	RS 472.93	RS 597.11	RS 969.55
<b>D</b>	Module 4 - Social and Labor Charges	RS 573.10	RS 573.10	RS 573.10
<b>E</b>	Module 5 - Indirect Costs, Taxes and Profit	RS 437.73	RS 437.73	RS 437.73
<b>TOTAL AMOUNT PER EMPLOYEE</b>		<b>RS 2,582.50</b>	<b>RS 2,706.68</b>	<b>RS 3,079.12</b>
<b>Percentage differences in relation to the Public Notice</b>			<b>-4.81%</b>	<b>-19.23%</b>

Source: Research data, 2020.

By reducing the profit margin by 5.29%, from 6.79% to 1.50%, the loss obtained by the company due to the value of input consumed by the customer is zeroed, with a profit of 0.15 % about the values of the notice. However, in the case of the value of inputs purchased by the company, even if it uses the entire percentage range of maneuver both for Profit and Indirect Costs, the company still has a loss of 10.93% concerning the values of the notice, as shown in Table 13.

Table 13 - Comparison between value per employee Notice x Consumed x Purchased with a change in margins

<b>SUMMARY TABLE OF COST PER EMPLOYEE</b>				
<b>Labor linked to contractual execution (value per employee)</b>		<b>Public Notice</b>	<b>Value Consumed</b>	<b>Purchased Value</b>
<b>A</b>	Module 1 - Composition of Remuneration	R\$ 760.00	R\$ 760.00	R\$ 760.00
<b>B</b>	Module 2 - Monthly and Daily Benefits	R\$ 338.74	R\$ 338.74	R\$ 338.74
<b>C</b>	Module 3 - Miscellaneous Supplies	R\$ 472.93	R\$ 597.11	R\$ 969.55
<b>D</b>	Module 4 - Social and Labor Charges	R\$ 573.10	R\$ 573.10	R\$ 573.10
<b>E</b>	Module 5 - Indirect Costs, Taxes and Profit	R\$ 437.73	R\$ 309.80	R\$ 223.39
<b>TOTAL AMOUNT PER EMPLOYEE</b>		<b>R\$ 2,582.50</b>	<b>R\$ 2,578.75</b>	<b>R\$ 2,864.78</b>
<b>Percentage differences in relation to the Public Notice</b>			<b>0.15%</b>	<b>-10.93%</b>

Source: Research data, 2020.

Corroborating with the analysis, the absorption costing method, which includes both fixed and variable costs in the composition of the cost of the service provided, shows that the value of the Costs of Services provided is equivalent to 83.05% of the price value of sales. However, variable costing, whose values allocated to the composition of costs are only variable costs, shows that only 17.82% of costs about the sale price are related to variable costs, that is, for this type of specific activity, the cost of operating the activity amounts to 65.23%, according to Table 14.

Table 14 - Absorption Cost versus Variable Cost

<b>Statement of Income for the Year</b>	<b>Absorption Costing</b>	<b>%</b>	<b>Variable Costing</b>	<b>%</b>
<b>SALES OF PRODUCTS, GOODS AND SERVICES</b>	<b>R\$ 2,582.50</b>	<b>100.00%</b>	<b>R\$2,582.50</b>	<b>100.00%</b>
Sales of Products, Goods and Services	R\$ 2,582.50	100.00%	R\$ 2,582.50	100.00%
(-) Deductions from taxes, rebates and returns	R\$ 223.39	8.65%	R\$ 223.39	8.65%
<b>(=) NET REVENUE</b>	<b>R\$ 2,359.11</b>	<b>91.35%</b>	<b>R\$2,359.11</b>	<b>91.35%</b>
<b>(-) COST OF SALES</b>	<b>R\$ 2,144.77</b>	<b>83.05%</b>	<b>R\$ 460.20</b>	<b>17.82%</b>
Cost of Products, Goods and Services	R\$ 2,144.77	83.05%	R\$ 460.20	17.82%
<b>(=) GROSS PROFIT</b>	<b>R\$ 214.34</b>	<b>8.30%</b>	<b>R\$1,898.91</b>	<b>73.53%</b>
(-) OPERATIONAL EXPENSES	R\$ 64.34	2.49%	R\$ 1,748.91	67.72%
<b>(=) Net Income</b>	<b>R\$ 150.00</b>	<b>5.81%</b>	<b>R\$ 150.00</b>	<b>5.81%</b>

Source: Research data, 2020.

In this sense, the use of the absorption costing method and mainly the variable costing method reinforces the little room for maneuver that the decision-maker has to correct the course of operations without compromising its indirect costs or profit margin, either legal obligations or the specificity of the activity, which increases the percentage of operating costs and suppresses variable costs.

### 5. Final Considerations

This paper presents a study on the cost formation process of an outsourced Federal Public Administration service provider to draw a parallel with strategic cost management using the absorption and variable costing methods.



Under the academic prism, Strategic Cost Management, as a tool in assisting managerial decision-making, can be used in the process of cost formation in companies providing outsourced service to the Federal Public Administration of Brazil, providing subsidies for managers in the process decision-making.

In this sense, outsourcing in the Public Sector, due to its nature, preserves bureaucratic processes as portrayed at work, which brings limitations to the company and its managers, as there are legal obligations, mandatory obligations arising from collective work agreements and contractual ties that must be fulfilled. Even so, with the applicability of Strategic Cost Management, it was possible to analyze the process in a detailed manner and with the leeway that is not linked to the subsequent legal and procedural issues of the public administration.

The results of the analysis show that due to the cost spreadsheet arising from IN 05/2017 (mandatory legal norm), modules 1, 2, and 4 do not have a range of values, as they are legal obligations or collective agreements that are imposed on all companies. companies in the business. However, modules 3 and 5, despite being linked to the Public Notice and consequently to a contract, have greater flexibility, allowing the manager to make compensation adjustments if necessary.

Furthermore, as analyzed in the paper, even though there is room for course correction maneuvers, the percentage is limited, either by the 16.07% of the inputs that are allocated in module 3 or by 8.30% of the Indirect Costs plus the Profit that they are in module 5. It appears, therefore, that the company and its managers have less than 25% for route adjustments due to the specificity of the activity in question.

Using the precepts of Strategic Cost Management, in parallel with the absorption and variable costing methods, it can be observed that in terms of making managerial decisions, the second (variable costing) forwards more critical information to the manager than the first (absorption costing). This is mainly because it is concerned with complying to the tax legislation while the objective is to demonstrate the value that the service provider has without considering the fixed costs that are inherent (not only) in the operational structure of this type of service.

In this vein, variable costing presented a percentage of 17.82% of costs of services provided, something close to the value of the inputs from the IN 05 table, denoting that for this specific activity, the small margin of adjustments that can be made for increasing profitability. In the case of absorption costing, the costs of services are 83.05%, which limits the profit of the said company according to the limitations arising from the Brazilian administrative bureaucracy.

The work also presents a holistic view of the process to the manager and reinforces the points to be adjusted to allow a financial survival for the company without prejudice the initial conditions established by the Notice and the contract.

In this sense, this work suggests, as future work, the analysis of data on the value chain mapping prism to support greater possibilities of adjustments for purchasing process and the use of inputs, since that is where the highest percentage exists. of maneuver in which the company holds the power of the expense, without prejudice the legal procedures.

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