

# Loss management in food retail: Compracá case study

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## **Abstract**

Losses are a problem in all industries, mainly in retail. This global problem is the basis of this study. The goal is to reduce Compracá's losses, a company that owns eight MeuSuper shops and shows high values of losses. Theft represents a high percentage of lost value, therefore it will be the focus of the literature review, with deepening of its motivations, punishments, consequences and potential solutions for its prevention and reduction. Based on the literature, and using different methodologies, it is concluded that there are different measures that can be developed to prevent and reduce theft although, in the first place, the focus must be an improvement on stock management.

**Keywords:** Compracá, Retail, Theft, Shrinkage

## **Introduction**

This study has the goal to solve Compracá's problem, that has values of losses higher than other companies competing in the same market. The relevance of this topic is related to its scope and globality, taking as an example the United States of America where losses reached a total cost of 45,2 billion dollars, in 2015 (Moraca, Hollinger & Cantrell, 2016).

The retail sector is one of the main industries of the world's economy and, according to Eurostat, in November 2019, there was an increase of 1% in the volume of retail trade in the euro area, compared to the previous month. Regarding the previous year, this increase was 2,2%. Retail trade also saw an increase on the Entire European Union.

To define the value of losses in the retail, the term shrinkage is used, with different definitions across the literature. Some of the factors that underlie this term are shoplift, employee theft, supplier fraud and administrative errors. Although most of

these sources are criminal, administrative errors do not fit in that definition.

According to Krippel, et al. (2008), of all new businesses that fail in the first year, 50% fail due employees' theft. However, the source that contributes the most to shrinkage is not unanimous to different authors, industries and countries.

## **Compracá case study**

Compracá is 51% owned by the Revitalizar Norte Fund and 49% by Magnum Destino, which manages a Meu Super proximity supermarket chain, in partnership with Sonae, through franchises.

Compracá has currently seven stores in operation: Buraca, Carregado, Coimbra, Entroncamento, Massamá, Porto de Mós and Setúbal (Camarinha), with a total of 44 employees.

Regarding the services provided, the stores in Entrocamento and Porto de Mós are the only ones with their own butchery, the rest being rented butchers (except for Buraca that does not provide this service).

Camarinha is the only store that has fishmongers rented and Buraca is the only one that sells scratch cards.

In general, the category with the highest percentage of sales is groceries with a value of 11% and the lowest are the categories of bakery and soft drinks, both with a value of 7,8€. The average purchase for customer with a Continente card is 7,1€ and without it, is 3,4€. There are 2.240 costumers who do not go to another Continente store.

Losses are divided into known or unknown. Known losses are those that can be uploaded on the system, and may consist, for example, of products that expire. As for unknown losses, most of them occur due to theft by employees or customers. Employees also constitute a source of error, if they forget to register some product that is put away because it is broken or expired.

At Compracá, the inventory is carried out twice a year, and only then the losses value is known.

### **Literature Review**

In different industries and businesses, theft and robbery can be understood in different ways which may in fact refer to the appropriation of someone else's property without consent, the manipulation of working hours through control cards, too much time spent on the phone, among others (Kennedy & Benson, 2016).

The Global Retail Theft Barometer<sup>1</sup> survey conducted by the Center for Retail Research in 2011 revealed that retail crime, associated

with financial losses, is divided into four main fractions, corresponding to the following: theft by employee (35%), theft by customer (43,2%), administrative error (16,2%) and supplier fraud (5,6%). The total value of these crimes, in the 43 countries surveyed, corresponds to 199,092 million dollars, which is equivalent to 1,45% of retail sales.

Contrary to the results of the previous survey, authors such as Mishra & Prasad (2006), Bailey (2006) and Scicchitano, et al. (2004), argue that the highest losses in relation to crime, in retail, are due to theft by the employee. This does not mean that more employees steal, but that they steal in higher values. Peters & Maniam (2016), citing Galleta (2015), add that 75% of employees have already stolen items from employers, and that this situation occurs at all levels of an organization.

Niehoff & Paul (2000) point out five motivations for theft: economic pressure (need), demographic factors, opportunity, attitude (as a result of misunderstanding or disappointment about some aspects of the company) and social norms.

Adejoh & Adejoh (2013) identify as factors that can contribute to deviant behavior the weak organizational culture, which generates a company not focused on the client, the existence or perception of inequity or injustice, working conditions, or the existence within the organization of groups with deviant behavior. Some specific restrictions at work, such as lack of information, lack of assistance or time

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<sup>1</sup> <https://www.securityexcellence.net/wp-content/uploads/2014/05/GLOBAL-RETAIL-THEFT-BAROMETER-2011.pdf>

pressure can also generate deviant behavior.

Losses, regardless of their origin, have financial consequences for companies, representing major gaps in results. Furthermore, in addition to profit losses, there are other consequences for the retailer.

Nelson & Perrone (2000) mention the loss of goodwill, resulting from the unavailability of desired products or a decrease in the quality of service due to the losses can result on unhappy costumers.

On the other hand, Peters & Maniam (2016) highlight the impact that crime can cause on the company's morale and its reputation. As a result, costs associated with marketing arise, to promote and improve the company's image.

Payne & Gainey (2004) found that the way the business responds to the theft of an employee can have a major impact on the occurrence of counterproductive behavior by other employees.

Litzky, Eddleston & Kidder (2006), in order to reduce losses, defend the inclusion of employees in discussion about the value of losses and in the definitions of the reciprocal obligations that must exist between managers and employees. Theft is less likely whenever a climate of respect and mutual trust is generated.

A leadership structure in which employees feel safe to share concerns or colleague's behavior, a confirmation of a new worker background and the protection of sensitive documentation or items are some solutions proposed by Peters & Maniam (2016).

Some of the most recurrent solutions for reducing theft are the implementation of security cameras and training of workers, as well as public awareness of their existence. However, Casteel & Pekk-Asa (2000) concluded that the decrease in theft is not due to the installation of cameras and alarms, but due to preventive theft and violence programs. The author believes that alarms and cameras give employees a false sense of security and influence neglect of other prevention procedures.

### **Methodology**

The interview is widely used in research, and open interviews were carried out with the company's CEO, the inventory manager and other food retail operators, since it allows to obtain knowledge about facts, opinions, behaviors and thoughts, among others (Rowley, 2012). There was a script for each interview, which served as a basis, but the questions were adapted throughout the conversation.

To employees and some clients were given anonymous questionnaires, the most used methodology in the literature. To workers, the survey was administered by email, to customers it was conducted face to face. It is important to be succinct and to focus on the fundamental questions, so that people answer honestly and pay attention.

In order to know the value of daily losses in a store and understand its origin, it was intended to implement during a base period, the daily stock count at the beginning or at the end of the day. By subtracting the initial value from the end, the expected sales value is obtained on that day, which will be compared with the value presented in the

system, allowing the calculation of losses. At the end of the basis period, the average stolen products and their value in euros are calculated.

Based on the database on losses in the second half of 2019 that was made available by the company, a new database was generated considering, for each product, only the amount of losses and the cost price. Causing some ambiguous classifications, the number of items in the study was reduced in relation to the total. The new database enables several analyzes, namely an ABC analysis, in order to understand which products one should pay more attention to because of their value, and in order to calculate whether the most valuable products match with those that result in the greatest losses and theft, and a quantity and value analysis.

One example of error that happens on the actual database of the company is that a product that comes in a pack, for example a Coca Cola, and is sold separately, is billed with individual code. Thus, there is a gain in the last code, which translates into a loss in the pack code. Therefore one product can have more than one reference.

## **Results**

Due to the Covid-19 outbreak, it was not possible to proceed with the counting of the items and client's inquiries. The stock count intended to know the occurrence of losses in certain class A products, or products whose losses translate into large quantities, on a regular basis. The main goal was to improve stock control, through daily counts, to detect the source of losses through more regular control. The survey was intended to clarify

the perception of store customers and theft. It's considered that the behavior of a customer who assists in theft may differ, depending on the variables present in the same, namely the individual who practices it, the stolen product and its value. Thus, the objective, when conducting the survey, is to combine the different perceptions with the possible motivations for theft customers. Ultimately, the intention was to clarify the impact of theft by customers.

The questionnaire to costumers intended, in a first instance, to know the approach and awareness of customers regarding losses. It is concluded that the main reason is forgetfulness and the second is the lack of time. Regarding the origin of losses, the choice of "theft per customer" by 78,8% of the employees is quite evident. Reduced expiration date is clearly the second largest source of breach, according to respondents, having been selected by 17 of them. Mishandling of products and excessive purchases, with six and seven responses, also appears as the greatest potential source of losses. None of the respondents considers employee theft to be the biggest source of losses. Respondents were presented with three reasons for the need to register all breaks, out-of-date products or bad looks in the system: "know if the losses are the result of thefts, excess orders or defective products"; "there is greater control over products that are thrown away" and "understand which products are being bought in excess. Only 5 employees considered all of them to be right. Most believe that the reason for registration is to know whether the losses are the result of thefts, excess orders or defective products.

Nine employees are aware of colleagues who steal or stole. Of this group, eight denounced to the superior and seven spoke to the colleague. This proactivity demonstrates that in case of theft perceived by a colleague, employees act. This means that theft by employees appears to be under control.

The questionnaire also allowed the study of four hypothesis. Hypothesis 1: "The location is a factor that favors theft", is considered not null, however, it is concluded that the question must be analyzed in more detail, including a more comprehensive study. On Hypothesis 2: "The work environment influences the number of thefts", although the relationship with the superior does not have any influence on the theft, the relationship with colleagues is fundamental for problem solving. However, there is no proven interconnection between employees and the number of thefts, considering hypothesis 2 as null. Hypothesis 3: "The existence of cameras does not influence the theft", which arose from the conversation with the company's CEO, in which it became clear that the cameras in stores do not have the intended effect, is considered null. Unlike Miguel, the CEO of the company, most employees consider that cameras are useful in reducing robberies and that installing more would be advantageous. Also, in the literature, the installation as well as the existence of cameras is advocated as a good solution. However, it would be useful to evaluate the most effective way to use them, because if they continue to exist, but aren't often seen, they won't bring any advantage. For this reason, the installation of new cameras won't be suggested without an

analysis aimed in order to improve the use of the current ones. Hypothesis 4: "The feeling of belonging increases the commitment to the company, reducing thefts" is neither corroborated nor annulled, since there is not enough information to reach a decision, therefore, being inconclusive.

Despite most employees consider that theft is not valid at any circumstance, when asked about the most valid reason for an employee to steal, some indicated theft to compensate the dedication at work.

The lack of consensus in order to choose the most valid reason for theft clarifies what is mentioned in some literature, that each person perceives theft in their own way, a little as it does in all circumstances of life. In this way, it becomes clear the need for a comprehensive enough approach to theft that allows employees to understand that, regardless of the circumstances, theft has specific results that harm the company.

Compracá's total losses in the last half of 2019 were much lower than the cost of one security guard per year, in just one store, which allows to conclude that, according to what the CEO had already stated, it is not advantageous to hire security guards.

An idea that became very clear when talking to different agents in the food retailing area, is that loss is part of the business. The objective of a company in this field is not to have zero loss, but rather to calculate the ideal break for each category, guaranteeing the level of service it intends to accomplish. Achieving zero breakage, in addition to being impossible, due to the presence of so many factors in this industry, such as the

expiration date, the conditions for preserving food, etc., is unthinkable when one aims to have satisfied customers. It is preferable to have breaks but customers arriving at the store where they can find shelves full of products, having the possibility to choose what they prefer, rather than having losses.

By analyzing the current panorama, of the food retail, and by the survey, interviews and data collections developed in the course of the dissertation, several proposals appear for Compracá to improve its inventory control and, consequently, reduce losses.

Not directly related to loss reduction with a focus on inventory control and merchandise management which, in turn, will lead to a more accurate knowledge of losses, it will be important to create codes/references for each article, avoiding ambiguity and the existence of repeated codes or articles with multiple codes. In the same line, avoiding the creation of repeated codes, it's suggested to use the weighted average cost method to define the product cost, improving the calculation of the lost value, making it more realistic than the one currently adopted.

In the event of transfers between stores, to ensure that products are registered, it is suggested that there may only be product changes on a stipulated day, which is the same for all stores. This way, employees will be awaiting to receive the goods and will know they must register them. This solution has some problems, since product transfers can happen because it is approaching expiration date and is not sold in that store, but it can be sold in another store, and the transfer should be immediate. These

exceptional cases should be analyzed when they occur.

It is suggested that a single employee counts the losses at the end of every day. When a loss is detected, the employee who detects it, should store the item in a specific place so that the responsible for upload the losses at the end of the day can check it.

Finally, the existence of knowledge losses only twice a year is an engine for its value to be so high. On the other hand, failure to report known losses is also a problem. In order to increase control and have current and reliable data as a basis of work, it is suggested to apply more frequent stock counts, not to the entire store, but to products that tend to have higher losses, and that represent high monetary value.

Regarding proposals for the reduction and prevention of losses, it is necessary a sharing of values and objectives with workers and more than that, it is essential to have continuous training, in which ideas and concerns are shared. The establishment of a climate of proximity and trust must be an objective to be achieved. However, the stores are spread across the country, and this monitoring by the management will never be the same in all. For this reason, it is suggested that there are two annual meetings with the workers of each store (after the inventories, to come up with their losses and open to suggestions, explanations and doubts). Each store manager must prepare a feedback meeting with their workers on a more regular basis, with a self and straight performance evaluation, under a relaxed atmosphere, open to sharing concerns and motivations.

Since one of the reasons that employees consider most relevant to theft is the feeling of lack of retribution for their dedication to work, the importance of employee recognition is clear. It is true that when a worker makes mistakes, they must be confronted. Also, when their work is good, it must be recognized. An employee who feels recognized will be satisfied and, a compliment is enough to let them know that they are attentive to their work.

One of the suggestions that was most pointed out by the employees was the control of their belongings when entering and leaving the shift. However, searching an employee's bag/suitcase can be misunderstood by them and can cause problems. The idea that comes up is to keep the employees' belongings at the entrance, visible to the cashier, so that when the shift is over, they don't have the chance to go through the corridors with backpacks or wallets in which they can eventually steal products.

Using the resources that the company has and not incurring large expenses, it is suggested that the monitoring screen of the surveillance cameras be placed right at the entrance of the store, or in another place visible by customers and employees, so that they have the awareness and the feeling of being watched and making it possible to control thefts when they occur.

It is considered essential to use the FIFO method in the replacement of products. This strategy consists of always placing products with longer expirations at the back, while placing products with expirations earlier in the front of the shelf. Since this process

takes some time, if it is inconceivable to perform it for all products, it is suggested its implementation in products that are more susceptible to expiration dates, such as yoghurts and other fresh products.

Since, according to the employees, the reduced validities and the excess purchases are the biggest reasons for the losses, it is necessary to create a formula or table, of excel implementation, that calculates the appropriate date and quantity to place an order, considering product rotation, average expiration date, existing quantity and stock coverage.

The design of the store is an important issue for reducing losses. So, it is suggested that all cashiers have vision to the exit. Products with the greatest breakdown due to theft must be strategically positioned so that employees can see them.

In order to minimize theft by supplies, it is necessary to have total control of all products that enter the store. To ensure that employees are available to check the quantity, weight and value of all orders, some ideas arise, the main one being the concentration of receipts on the same day/time and at a time of shift change, when there are more workers in the store, in order to not compromise customer service.

Finally, when analyzing the percentages of losses, an analysis must be made of the percentage of losses for each product, comparing it to its percentage of sales. It is possible that a product that causes 10% of losses is justified by sales of 50%, while a product that only generates 1% of losses, has sales of 0,55%. The value of losses alone is not of great significance, if its

relationship with sales and customer satisfaction is not known. As a result of this analysis, it should be possible to evaluate the most suitable product range for each store, which will allow to reduce breakages.

### **Conclusions**

The food retail in an industry with several variables, which makes zero losses impossible. There are implications directly related to the product, such as the expiration date and the preservation conditions, and others related to the customer, especially the perception of the product, preferences and satisfaction. There is still divergence in the origin of the break, which makes its analysis so much more interesting, as complex.

Consequently, a loss figure alone is not sufficient to assume that it is more or less high than it should be. It is necessary to combine the latter with the desired level of satisfaction and sales value. However, because this is such a vast industry and with such diverse and specific products, there are always losses that can be reduced and room for improvement.

For Compracá, in the first instance, it will be relevant to invest in better stock control in order to subsequently be able to manage the breach. This will allow to know the products that have losses due theft, those that suffer the greatest natural breakdown, to adapt the strategies for each product category. Thus, continuing in the same line of thought previously described, it will be necessary to conclude whether the loss value of Compracá is indeed high, or whether it is adequate considering the different existing tradeoffs.

However, theft losses can always be remedied now, as they do not contribute to greater customer satisfaction or perception, nor to a higher sales value. In an attempt to attack this type of losses, different approaches are suggested, such as the restructuring of the surveillance chambers present in stores, with the installation of the control screen in a visible place, the prohibition of eating in stores and the development of a control mechanism of employees' belongings at the entry and exit of the shift.

It is essential to reinforce that, since Compracá stores are small, proximity stores, their losses cannot be compared with large hypermarkets or supermarkets, since, due to their characteristics, not only is loss control carried out in smaller scale and less detail, as the quantity and type of sales is very different.

Finally, it is worth noting that this thesis is developed to help boost small neighborhood retail stores, since they are beneficial for the population to make convenience purchases quickly and affordably, which involve little money. These stores fell a lot with the number of large stores that appeared, however, currently, they have been increasing again, which presents an advantage for Compracá.

### **Limitations**

In the design of the database, which served to support the ABC analysis and quantity analysis, several assumptions were made. The quantity and cost price of the product were considered correct and prevailed over the value of losses calculated by the company; two products with the same name



and reference, but with different cost prices, were assumed to be the same. Then, the cost price was calculated by the average of both prices; product codes corresponding to more than one product have been eliminated since they cause ambiguity.

Despite these assumptions, due to incomplete knowledge of all products in the store and respective codes, it is believed that there are still duplicate products, with different codes, which could possibly be canceled.

When carrying out the ABC analysis, only the values of negative losses were used, since including positive losses would result in accumulated percentages greater than 100%. As the object of study was the reduction of negative losses, this decision was made. However, it is clear that it is a limitation, as part of the analysis information is excluded.

The questionnaires to employees, because they were carried out anonymously, and at a distance, caused some ambiguity in several questions, which could not be clarified. The fact that the explanation was carried out by email and there was no control over them, due to the physical distance of some stores, allowed employees to respond to the questionnaires together, inflating the responses.

Counts and customer questionnaires had to be canceled due to the Covid-19 pandemic, which made contact between people impossible. Thus, the proposals are only based on questionnaires to employees, interviews with competitors and all conversations with members of the company

as well as analysis of the database provided by them and visits to stores.

The conversations with other food retailers were carried out by cell phone, mostly due to the impossibility of personal meetings. Some were even carried out by email, since the Pandemic, and specifically the quarantine, agitated the food retail business, increasing sales and disturbing the schedules of agents in this industry.

### **Future work**

In the future, it will be essential to guarantee the improvement of the inventory control and, if it remains the same, it will be necessary to develop a methodology that makes it reliable, guaranteeing real values, without ambiguity or doubts about its authenticity.

It is considered relevant to apply some of the suggestions that resulted from this study, and further analysis of the results obtained. Compare current losses with losses after implementation.

For a better understanding of losses at Compracá, it will be essential to carry out customer questionnaires and product counts, in order to understand costumers' thoughts and calculate relationships between the different variables and market agents. It will also be interesting to personally know the various stores and their organization, to access the relationship between store organization and loss values for each product.

The approach to more security companies and knowledge about their products, in an occasion of greater knowledge of losses, that can be advantageous. When developing

this study, Strong Charon proposed the implementation of radio frequency antennas, as previously explained, which, in the current context of the company, would not bring advantage, due to the ambiguity of several elements in the analysis of losses. However, in the future, this and other safety equipment should be explored in greater detail.

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