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Which service factors are critical for customers? A systematic literature review  
and meta-analysis

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Dissertation

Master in Sales Management

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## **Biographical Note**

João Pedro Oliveira Catarino Leandro was born on April 14<sup>th</sup>, 1997, in the city of Coimbra, Portugal. João Pedro is the middle child of Angela Maria Oliveira Catarino and Adriano Alberto Basto Ferreira Leandro.

In 2018, João Pedro obtained a degree in Management at the Faculty of Economics of the University of Coimbra (FEUC). Afterward, in the same year, he decided to join the Master in Commercial Sales in the Faculty of Economics of the University of Porto (FEP). By frequenting this master João was capable to obtain important knowledge and qualifications in supply chain management, continuous quality management, sales management, distribution management, market analysis, negotiation, and personnel management between other subjects.

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## **Abstract**

Access and monitoring which service factors are critical in the retail industry are becoming increasingly important in recent years as it is expected that they promote better strategies for the future. The purpose of this research is to examine which service attributes are crucial for customers in the retail sector with a focus on the grocery retail industry. A systematic literature review and meta-analysis of former investigations that identify the critical service attributes in the considered industry are applied as methodological tools.

After the review of the existent literature, where according to the inclusion criteria 55 investigations are eligible for further research, the analysis was conducted. Firstly, the systematic literature review, synthesizing the information available in several studies, was performed. Then, the meta-analysis was conducted, allowing us to statistically treat the empirical data of the selected researches and to provide important conclusions.

Results from these analyses reveal that personal interaction attributes, quality and availability of merchandise, and dependable service represent the most important factors for customers. Customer satisfaction was the only outcome that was positively affected by all included service attributes. Furthermore, the results highlight that moderators, such as geographic region and time of the study, influence the relationship between service attributes and customer outcomes.

Although multiple meta-analyses tried to identify the most important service attributes for customers, to our best knowledge this research is the first one conducted in the retail industry focusing on hypermarkets, supermarkets, or grocery. Thus, this work fills a gap in the literature representing a significant contribution to both academic communities, displaying an agenda for further research on customer service factors, and retail managers by providing multiple practical implications and guidance. Accordingly, retailers must invest in employee training as well as on inventory and quality control systems.

**Key-words:** Service quality attributes; Customer outcomes; Retail industry; Systematic literature review; Meta-analysis

**JEL-Codes:** L80; L81; M10

## **Resumo**

Nos últimos anos tem sido cada vez mais importante identificar e monitorar quais os fatores críticos para qualidade do serviço na indústria do retalho dado que permitem implementar melhores estratégias para o futuro. Para tal, foi elaborada uma análise com o objetivo de identificar os principais atributos mais importantes para a qualidade do serviço ao cliente no setor do retalho alimentar, tendo por base a literatura existente.

Como metodologia, esta pesquisa combina as conclusões retiradas de uma revisão sistemática da literatura com resultados alcançados por uma meta-análise. Após detalhada investigação da literatura e inclusão de 55 publicações, primeiramente, foi realizada a revisão sistemática da literatura através de uma síntese qualitativa da informação seguindo-se da meta-análise onde foi possível tratar dados estatísticos com o objetivo de chegar a conclusões relevantes. Os resultados da análise conjunta demonstram que os atributos relacionados com a interação pessoal entre colaboradores e consumidores, a qualidade e disponibilidade do produto assim como o serviço confiável são os fatores mais significativos para o cliente. Por sua vez, a satisfação dos clientes revelou-se a condição mais positivamente afetada por todos os atributos do serviço. Por último, foi ainda possível identificar moderadores como a região geográfica e o período da observação, que influenciam a relação em estudo.

Apesar de existirem diversas meta-análises que identificam quais os fatores mais importantes para o serviço ao cliente nenhuma delas foi realizada na indústria do retalho não especializado. Desta forma, esta pesquisa preenche uma lacuna na literatura contribuindo tanto para a comunidade académica como para profissionais do retalho visto que apresenta elementos para investigação futura e oferece orientações gerais para retalhistas como o investimento tanto na formação de colaboradores como em sistemas de inventários e de controlo de qualidade.

**Palavras-chave:** Qualidade do serviço; Comportamento do consumidor; Retalho; Revisão sistemática da literatura; Meta-análise

**Códigos JEL:** L80; L81; M10

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## **1. Introduction**

In the current context, due to the existence of considerably more information, customers present a much higher purchasing power (Torlak, Uzokurt, & Özmen, 2010). To optimize the customer service level, retailers have to provide to their clients' certain options which will increase the perceived value of their shopping experiences (Kursunluoglu, 2014). A higher customer service level combined with a high-quality product, that exceeds or at least meets the expectations, will increase customer satisfaction and consequently their loyalty (Kursunluoglu, 2014). Otherwise, if that does not happen, a displeased customer will turn its attention to other competitors (Umair, Zhang, Han, & Haq, 2019).

According to Prakash, Somasundaram, and Krishnamoorthy (2018) customer service has great importance for all industries and subsequently for every company. Because retail business is a service business (Davies, 2006), its attributes differ from other types of industry (Gagliano & Hathcote, 1994). This sector has been evolving at a great pace over the past decades. Despite the changes, customers will continue to value the service qualities provided by the retailers (Deb & Lomo-David, 2014). Furthermore, Amorim and Saghezchi (2014) argue that knowing the determinants of customer service in retail is crucial to promote better strategies. Thus, access and monitoring which customer service factors are critical for this industry become important (Siu & Cheung, 2001). As a result, the retail service quality scale developed by Dabholkar, Thorpe, and Rentz (1996) has been supported, in many contexts, as a valid measure for that purpose.

Bearing this in mind, this research aims to investigate which service attributes are critical for customers in the retail grocery industry. For that purpose, our study will integrate a systematic literature review with a meta-analysis. Therefore, former investigations that identify the determinants attributes on service quality in the retail industry will be analysed. In this sense, the main aim of this dissertation is to answer the following research question: Which are the critical factors for customer service in the retail grocery industry?

Throughout the years, several meta-analyses were conducted to determine which service attributes have more importance for customers (Jung & Tanford, 2017; Kim & Cruz, 2019; Ladeira, Santini, Sampaio, Perin, & Araújo, 2016; Santini, Ladeira, Sampaio, & Perin, 2018; and Tanford & Jung, 2017). Those studies were performed in different services industries mainly in tourism (Jung & Tanford, 2017, Tanford & Jung, 2017) and banking sector (Ladeira

*et al.*, 2016; Santini *et al.*, 2018). Additionally, Blut, Teller, and Floh (2018) carried out a meta-analysis to identify the most crucial factors of the retail marketing mix.

Despite the existence of several meta-analyses studies related to customer service determinants, to our best knowledge, none of those investigations was conducted in the retail industry with focus on the grocery related establishments. On top of that, this is the sole research that complements their meta-analysis results with a systematic literature review. For this reason, this study fills a gap in the literature and represents a relevant contribution to the academic community. Furthermore, it will support companies and their managers with knowledge regarding the most important service factors in the retail industry for customers. Ultimately, this might help companies understand what the best course of action is to increase their clients' satisfaction and loyalty as well as to attract new customers and therefore, improve the overall performance of the company.

This dissertation is divided into five chapters. After the introduction, the background of the main topics is presented. It includes concepts and additional details such as models, critical factors, and measurements of customer service, and retail industry. Moreover, in this chapter, similar studies are analysed, and the research framework is displayed. In the third section, the methodology used is described. In the following topic, it is outlined the sample, the statistics performed to test hypotheses and finishes with the discussion of the main results. The last chapter is the conclusion with some suggestions for further research.

## **2. Literature Review**

This chapter is divided into four sections: customer service, retail industry, similar studies, and theoretical framework along with research hypotheses. Customer service is defined as well as its importance to companies and their consumers. Then, methods to measure, customer service critical factors, and their outcomes are presented. In the second section, the retail industry is introduced with a special focus on retail sale in non-specialised stores. After the introduction of several concepts and related information, some similar studies to this dissertation are discussed. The last segment is focused on the theoretical framework as well as the research hypotheses of this study.

### **2.1 Customer Service**

Customers progressively persist on having products not only with higher quality but also with better service that meets their needs (Bouzaabia, Bouzaabia, & Capatina, 2013; Ellinger, Daugherty, & Gustin, 1997; Renko & Ficko, 2010; Umair *et al.*, 2019). They expect suppliers to deliver products and give something more that helps them reduce costs or increase revenues (Kearney, 1994).

According to Kursunluoglu (2014), customer service encompasses all the activities that increase the value for consumers when shopping. Therefore, if companies provide good service for their customers, their expectations can be met, and consequently, customer will be more satisfied (Kursunluoglu, 2014; Oh, 1999). If a company does not offer what is anticipated, the customer will be dissatisfied and consequently, sometimes he will switch to another competitor (Umair *et al.*, 2019).

Bearing this in mind, customer service has great importance in the relationship between firms and their clients and is increasingly seen as fundamental for industries (Ellinger *et al.*, 1997; Politis, Giovanis, and Binioris, 2014). This mainly occurs as a result of globalization (Renko & Ficko, 2010) and changing of the industry environment (Ellinger *et al.*, 1997; Renko & Ficko, 2010; Zhang, Vonderembse, & Lim, 2005). As a result, firms are working harder than ever to differentiate from their competitors and satisfy their clients in order to convert them into loyal customers (Bouzaabia *et al.*, 2013). By retaining customers, it is expected that there will be an intensification in the number of sales and consequently an increase in the profitability (Umair *et al.* 2019). Donaldson (1986) summarizes and mentions that customer

service has positive effects on customer satisfaction, corporate image, and consequently on profitability.

### **2.1.1 Measuring Customer Service**

Baggs and Kleiner (1996) suggest that measuring customer service more effectively is critical for companies because allows them to improve their performance. Therefore, different authors such as Baggs and Kleiner (1996), Das, Kumar, and Saha (2010), Mauri, Minazzi, and Muccio (2013) and Siu and Cheung (2001) identified several methods to better measure customer service. Among others, they nominated the Gap Model, SERVQUAL, SERVPERF, disconfirmation models, and direct investigation.

According to Singh, Chadha, and Rishi (2010), it is possible to notice changes in customer conceptions by analysing the difference between expectations and actual delivered service. Taking this into account, when expectations exceed the perceptions of service, customers may become dissatisfied and consequently, they can turn into less loyal clients. At the same time, when service performed equals or overcome expectations, overall service quality, followed by customer satisfaction and loyalty may increase.

At this stage, companies and their managers should deliver to their customers improvements in the services and prioritise their attention to dimensions that attract more customers and maintain the existing ones (Pandza & Vignali, 2010).

Parasuraman, Zeithaml, and Berry (1985) suggested a new model for service quality measurement by evaluating the existing gaps between perceived and expected service. They proposed the existence of five gaps that demonstrate how customers assess quality considering the quality intended by customers, quality offered by companies, and quality perceived by users after the service consumption (Mauri *et al.*, 2013). Later, Luk and Layton (2002) extended this model by adding two new gaps. They believe that front-line employees are also involved and have a different understanding of customer expectations compared to their managers. In Appendix 1 the extended gap model with the seven existent gaps is displayed.

Developed by the same authors of the Gap Model, the SERVQUAL was outlined in 1988 (Mauri *et al.*, 2013). This is the most popular model (Baggs & Kleiner, 1996) and the main goal of this method is to estimate the existent gap between consumers' expectations and their perceptions regarding the store service performance (Das *et al.*, 2010).

In 1992 the SERVQUAL was extended and emerged the SERVPERF (Baggs & Kleiner, 1996). This variant established by Cronin and Taylor (1992) aims to demonstrate how service quality precedes consumer satisfaction and consequently the impact of that satisfaction in the buying intention.

In 1987, Ernest Cadotte developed a method based on disconfirmation models. It consists of a system that compares the actual service performed and the accepted standard. The discrepancy between them establishes the customer satisfaction level (Baggs & Kleiner, 1996).

Besides these approaches, Baggs and Kleiner (1996) argue that the best models to measure customer service are those that are simplified and easy to understand. The existence of mystery shoppers or asking directly to customers what they intend, their needs and complaints, and from thereon establish a direct relationship between service and quality are examples of those methods.

According to Das *et al.* (2010) and Siu and Cheung (2001), SERVQUAL and SERVPERF measure predominantly services not related to retail. Therefore, they recognize that it is critical to identify the most important factors in this field.

Different authors identified several factors that must be taken into consideration when studying customer service in the retail industry.

Through several studies, Emerson and Grimm (2003) point out that customer service components can be divided into the logistics and marketing elements. While the logistics components comprehend availability, timeliness, deliver quality, and communication, the marketing components are product quality, product support before and after sale, and pricing policy.

Availability, which is one of the most critical factors in customer service can be measured by the fill rate, minimal backorders, accuracy of orders shipped, or availability of merchandise at the time and place that customers want. Timeliness incorporates the order cycle time, its consistency and if the product always arrives when promised (Al-Ali, Bazin, & Shamsuddin, 2015; Figueiredo, Arkader, Lavallo & Hijjar, 2003). The condition of goods or accurate orders are some elements related to the quality of the delivery (Emerson & Grimm, 2003; Figueiredo *et al.*, 2003). Lastly, communication and relationship with customers are logistics elements

that are necessary to have into consideration when customer service is discussed (Al-Ali *et al.*, 2015; Chuang & Hsieh, 2015; Emerson & Grimm, 2003).

On the marketing side, product quality can be measured by the number of product defects or by customer claims (Al-Ali *et al.*, 2015; Emerson & Grimm, 2003). Important factors for good customer service are pre-sale product support with an information support system as well as post-delivery support (Emerson & Grimm, 2003; Figueiredo *et al.*, 2003). Finally, discount and sale strategies are some elements related to the pricing policy (Emerson & Grimm, 2003).

Furthermore, over the years many authors have identified different criteria that are critical for customers. Store atmosphere and its accessibility (Al-Ali *et al.*, 2015; Chuang & Hsieh, 2015), assortment variety, added services, commercialized brands (Al-Ali *et al.*, 2015), employee attitude and aesthetics, and technology used by companies (Chuang & Hsieh, 2015) are some of them.

Table 1 presents a synthesis of the critical factors for customer service.

|                   | Critical factors                 | Authors  |
|-------------------|----------------------------------|--|
| Logistics factors | Availability                     | Al-Ali <i>et al.</i> (2015); Emerson and Grimm (2003);                         |
|                   | Timeliness                       | Figueiredo <i>et al.</i> , (2003)  |
|                   | Delivery quality                 | Emerson and Grimm (2003); Figueiredo <i>et al.</i> (2003)                      |
|                   | Communication                    | Al-Ali <i>et al.</i> (2015); Chuang and Hsieh (2015); Emerson and Grimm (2003) |
| Marketing factors | Product quality                  | Al-Ali <i>et al.</i> (2015); Emerson and Grimm (2003)                          |
|                   | Product support before the sale  | Emerson and Grimm (2003); Figueiredo <i>et al.</i> (2003)                      |
|                   | Product support after-sale       | (2003)   |
|                   | Pricing Policy                   | Emerson and Grimm (2003)   |
|                   | Store atmosphere                 | Al-Ali <i>et al.</i> (2015); Chuang and Hsieh (2015)                           |
|                   | Store accessibility              |  |
|                   | Assortment variety               | Al-Ali <i>et al.</i> (2015)  |
|                   | Added services                   |  |
|                   | Commercialized brands            |  |
|                   | Employee attitude and aesthetics | Chuang and Hsieh (2015)  |
|                   | Technology                       |  |

**Table 1** – Customer Service Critical Factors (own elaboration based on different studies)

Considering that the customer service factors are distinct between retail and service industries since 1990 multiple authors developed new and more appropriated models relevant to the retail sector.

SERVQUAL and SERVPERF were the seminal models upon which other models were designed, such as the 51-item model developed by Guiry, Hutchinson, and Weitz (1992); the 24-attributes designed by Vazquez, Rodríguez, and Ruiz (1995); and the Retail Service Quality Scale (RSQS), established by Dabholkar *et al.* (1996)

The most frequent scale used in research, widely employed in several studies and contexts, was the RSQS model. This scale includes 28 attributes that were divided into five main dimensions which are: physical aspects, reliability, personal interaction, problem solving, and policy. The dimensions and subdimensions presented are used to help retailers identify their level of service quality not only in each dimension or subdimension but also the overall quality and, consequently, determine which points need earlier improvements (Das *et al.*, 2010).

### ***Physical aspects***

Physical aspect measures the appearance of the stores and its employees, the existence of equipment, installations, and visual materials. In this dimension, the convenience of the store is also evaluated. In this dimension, store layout and convenience are included (Dabholkar *et al.*, 1996). An adequate store layout will assist customers in the finding of the products and the easiness to move around. The existing literature suggests that store appearance is an important factor for customers (e.g. Jain & Aggarwal, 2018; Singh *et al.*, 2010).

### ***Reliability***

Reliability encompasses the promises that stores provide to their customers, the performance of the service in the right way, the presence of the right amount of inventory, and the existence of appropriate information (Dabholkar *et al.*, 1996). By keeping the promises with customers, retailers should expect an increase in confidence with the store that subsequently will lead the build of customer loyalty (e.g. Nguyen, Nguyen, Cao, & Phan, 2016; Sivapalan & Jebarajakirthy, 2017).

### ***Personal interaction***

Personal interaction comprises not only the inspiring confidence of the employees but also the courteous and helpfulness towards customers (Vazquez, Rodríguez-Del Bosque, Díaz, & Ruiz, 2001). Tepanon and Thatiroth (2016) suggested that consistent courtesy and prompt response with customers will lead to increases in their satisfaction. This is noticed in



several studies that also demonstrate the importance of these attributes for customers (e.g. Das *et al.*, 2010; Kitapci, Dortyol, Yaman, & Gulmez, 2013).

### ***Problem solving***

Problem solving include handling of returns and exchanges, handling complaints, and sincere interest in solving a problem (Dabholkar *et al.*, 1996). When customers' problems are resolved, they will feel satisfied and as a result, they will continue to purchase at the store (Sivapalan & Jebarajakirthy, 2017).

### ***Policy***

Policy consists of the store's decisions regarding the quality and depth of the merchandise, payment methods, operating hours, parking facilities, and price (Dabholkar *et al.*, 1996). With an effective retailing policy, customers will persist purchase from the store (Sivapalan & Jebarajakirthy, 2017).

Throughout the years several authors, such as Amorim and Saghezchi (2014), Bandyopadhyay (2016), and Jain and Aggarwal (2018), adapted and modified the RSQS (Dabholkar *et al.*, 1996) in their studies. Table 2 presents a summary of all the items used by those authors.

In Table 2 it is possible to notice that the four studies combine 49 different items divided into five dimensions. Among them, modernity of the store equipment and fixtures, availability of merchandise, confidence that employees instill when advising customers, and courteous treatment from employees to customers are the points that are employed by all four studies. Moreover, 11 of the 49 items are referred by three of the four studies analysed. It includes visual attractiveness of the material associated with store services, such as shopping bags or catalogues, cleanliness of the store, process of returns and exchanges, quality of merchandise, provision of convenient parking, convenience of operating hours, and acceptance of most major credit cards. Additionally, items related to knowledge, readiness, reliance, and provision of prompt service by employees are also items applied in three out of the four studies.

| Dimens ions          | Subdim ensions  | Items  | Authors/ Sources   |     |     |     |   |
|----------------------|---|--|--|-----|-----|-----|---|
|                      |   |  | (1)  | (2) | (3) | (4) |   |
| Physical aspects     | Appearance  | Modernity of store equipment and fixtures (e.g. shelves, signboards)   | ✓  | ✓   | ✓   | ✓   |   |
|                      |   | Visual attractiveness of store and its physical facilities   | ✓  |     |     | ✓   |   |
|                      |   | Visual attractiveness of materials associated with the store service (e.g. shopping bags, cards, and catalogues) | ✓  | ✓   |     | ✓   |   |
|                      |   | Cleanliness of the store and convenient public areas (e.g. restrooms, cafeteria)                                 | ✓  | ✓   |     | ✓   |   |
|                      |   | Proper lighting  |  |     | ✓   | ✓   |   |
|                      |   | Cleanliness of the shopping environment outside the store  |  |     | ✓   |     |   |
|                      |   | Employees have a neat and clean appearance   |  |     | ✓   |     |   |
|                      | Convenience   | Store layout makes it easy for customers to find what they need  | ✓  | ✓   | ✓   | ✓   |   |
|                      |   | Store layout makes it easier for customers to move around  | ✓  |     |     | ✓   |   |
|                      |   | Convenient location which is easy to reach   |  |     | ✓   |     |   |
|                      |   | Provisions for special requests (e.g. making a special item available on request)                                |  |     | ✓   |     |   |
|                      |   | Shopping carts are spacious and handy  |  |     | ✓   |     |   |
|                      | Reliability   | Promises   | Comply when promises to do something (eg. repairs alterations) by a certain time | ✓   |     |     | ✓ |
|                      |   |  | Provision of services at the time it promises to do so                           | ✓   |     |     |   |
| Doing it right       |   | Performance of the service right the first time  | ✓  |     | ✓   |     |   |
|                      |   | Insistence on error-free sales transactions and records  | ✓  |     |     | ✓   |   |
|                      |   | Merchandise availability when customers want it  | ✓  | ✓   | ✓   | ✓   |   |
| Others               |   | Clear indication of product prices   |  | ✓   |     |     |   |
|                      |   | Appropriate and punctual information about sales promotions and discounts  |  | ✓   |     |     |   |
|                      |   | Short waiting time at cash registers   |  | ✓   |     |     |   |
|                      |   | Easy location of products on promotion or discount   |  | ✓   |     |     |   |
|                      |   |  |  |     | ✓   |     |   |
| Personal interaction | Inspiring confidence  | Employees instill confidence when assisting or advise customers  | ✓  | ✓   | ✓   | ✓   |   |
|                      |   | Employees have the knowledge to answer customers' questions  | ✓  | ✓   |     | ✓   |   |
|                      |   | Customers feel safe in their transactions  | ✓  |     |     | ✓   |   |
|                      | Courteousness/helpfulness   | Employees give prompt service to its customers   | ✓  |     | ✓   | ✓   |   |
|                      |   | Employees tell customers exactly when the services will be performed   | ✓  |     | ✓   | ✓   |   |
|                      |   | Employees are never too busy to respond to customers' requests   | ✓  | ✓   |     | ✓   |   |
|                      |   | Customers have individual attention  | ✓  |     |     | ✓   |   |
|                      |   | Employees treat customers courteously  | ✓  | ✓   | ✓   | ✓   |   |
|                      |   | Employees treat customers courteously on the telephone   | ✓  |     |     |     |   |
|                      | Others  | Employees show great interest in resolving any difficulties or customer problems                                 |  | ✓   |     |     |   |
|                      |   | Employees have a good attitude at checkout and provide bagging services  |  |     | ✓   |     |   |
|                      |   | Adequate number of salespersons to aid customers   |  |     | ✓   |     |   |
|                      |   |  |  |     | ✓   |     |   |
| Problem Solvin       | Sincere interest in solving a problem when a customer has one                       | ✓  |  |     | ✓   |     |   |
|                      | Employees can handle customer complaints directly and immediately                   | ✓  |  |     | ✓   |     |   |
|                      | Returns and exchanges are willingly handled   | ✓  | ✓  |     | ✓   |     |   |
| Policy               | Offer of high-quality merchandise   | ✓  | ✓  |     | ✓   |     |   |
|                      | Provision of plenty and convenient parking for customers                            | ✓  | ✓  |     | ✓   |     |   |
|                      | Convenience of operating hours  | ✓  |  | ✓   | ✓   |     |   |
|                      | Acceptance of most major credit cards   | ✓  |  | ✓   | ✓   |     |   |
|                      | Existence own credit card   | ✓  |  |     |     |     |   |
|                      | Offer of a reasonable choice of brands  |  | ✓  | ✓   |     |     |   |
|                      | Offer of a wide variety of goods  |  |  | ✓   |     |     |   |
|                      | Offer of interesting sales promotions and discounts                                 |  | ✓  |     |     |     |   |
|                      | Offer of free choice of alternatives for payment (e.g., cash, store or credit card) |  | ✓  |     |     |     |   |
|                      | Offer of products from well-known and leading brands in the market                  |  | ✓  |     |     |     |   |
|                      | Freshness and quality of products in the fresh sections (e.g., fish, fruit, etc.)   |  | ✓  |     |     |     |   |
|                      | Offer of product prices which are lower than in similar establishments              |  | ✓  |     |     |     |   |
|                      | Offer of products from the retailers' own brand with high quality                   |  | ✓  | ✓   |     |     |   |

(1) Dabhlokar *et al.* (1996); (2) Amorim and Saghezchi (2014); (3) Jain and Aggarwal (2018); (4) Bandyopadhyay (2016)

**Table 2** – Dimensions and Subdimensions of RSQS (own elaboration based on several studies)

### 2.1.2 Customer Outcomes

In order to verify which service attributes are more important for customers, it is necessary to understand what sort of consequences exist and are influenced by the performance of those service factors.

In this regard, Bhuian, Balushi, and Butt (2018) and Kumar (2017) named the consequences of service quality factors. Kumar (2017) identified store image, customer satisfaction, word-of-mouth communication, intention to switch, and loyalty intentions as the main consequences of the retail service attributes. In their turn, Bhuian *et al.* (2018) emphasises that while customer loyalty is a consequence of service factors, patronage intention with repeat purchase and intention to recommend are results from that loyalty. Additionally, many authors (Elmelegy, Ponnaiyan, & Alnajem, 2017; Espinoza, 1999; Huang, 2009; Jain & Aggarwal, 2018; Nadiri & Tümer, 2009; Siu & Cheung, 2001) determined the overall perceived service quality as a variable that is influenced by service attributes.

In Table 3 it is briefly presented the five customer outcome measures.

| <b>Customer outcomes</b>       |   |
|--------------------------------|---|
| <i>Overall service quality</i> | Overall service quality, perceived service quality, retail service quality, service quality, value perceptions, critical failure, overall image           |
| <i>Customer satisfaction</i>   | Customer satisfaction; overall satisfaction, satisfaction with the store  |
| <i>Customer loyalty</i>        | <i>Loyalty</i><br>Customer loyalty, customer preference, emotional loyalty, loyalty intention, trust, perceived quality of store brands, retention        |
|                                | <i>Patronage intention</i><br>Repurchase intention, retention, future consume behaviour, intend to buy, intend to shop, intend to switch, intend to reuse |
|                                | <i>Intention to recommend</i><br>Intend to recommend, word of mouth communication   |

**Table 3** – Synthesis of Customer Outcome Measures (own elaboration based on the existent literature)

#### ***Overall service quality***

Several attributes influence on customers’ perceptions. Those are service attributes that are viewed differently by customers and according to the model developed by Parasuraman et al. (1985) if those perceptions do not meet expectations’ then will lead to a service quality

gap. Thus, overall perceived service quality is considered as a customer outcome of the service attributes.

### ***Customer satisfaction***

As previously stated, if companies service meets or exceeds customers' expectations, customers will be more satisfied. Moreover, according to Anderson, Fornell, and Lehman (1994), it is possible for a customer to feel satisfied when there is a positive response from a general valuation of several buying and consumption experiences. Thereby, satisfaction is a consequence of not only the services attributes quality but also of the overall service quality and represents an important customer outcome measure.

### ***Customer loyalty***

According to Najjar (2019) companies that provide any type of service are always attempting to improve their customers' loyalty. In this circumstance, it is possible to verify on customers when there is a behaviour of repeat purchase intention associated with a psychological bond (Kumar, 2017). As such, consumers who are loyal to a company are not only less likely to change their consumption to other firms but also generally spend more compared with less loyal customers. Besides patronage intention, Kumar (2017) displays that the customers' loyalty towards a company results in positive word-of-mouth communication. Hence, customer loyalty as well as patronage intention and intention to recommend to others are considered customer outcomes.

### ***Patronage intention***

For Pan and Zinkhan (2006) the retail patronage intention concept involves two distinct ideas: store choice and frequency of the visit. Store choice is related to the consumers' decision to frequent a specific store bearing in mind previous experiences. In turn, the frequency of the visit is related to the number of times that each shopper patronizes that store. Several authors include distinct patronage intention measures. This includes the intention to re-use the service (Amorim & Saghezchi, 2014), intention to shop (Das *et al.*, 2010), intention to buy (Nadiri & Tümer, 2009), customer retention (Julian, Ahmed, Wel, & Bojei, 2015), future consumption behavior (Siu & Chow, 2004), intention to switch (Kumar, 2017) and customer repurchase intention (Noyan & Şimşek, 2012).

### ***Intention to recommend***

According to Zeithaml, Berry, and Parasuraman (1996) recommend intention can be defined as the tendency and probability that the customer will suggest and give a positive review about a company to others. This idea, also known as word-of-mouth communication, is considered by several authors (Sirohi, McLaughlin, & Wittink, 1998; Siu & Cheung, 2001; and Das *et al.*, 2010) as one behavioural intention measure that results from the perceived loyalty of each customer. Therefore, the intention to recommend is another customer outcome that is influenced by the performed service.

## **2.2 Retail Industry: Focus on Grocery Store**

The retail industry is the sale of goods to end consumers. Therefore, represents the trade of products for consumption rather than for resale. There are several types of retail establishments. It includes department, discount, specialty, grocery, and convenience stores as well as, category killers and e-tailers (Moore, 2005). There are some factors that retailers use and allow customers to satisfy their needs and influence their purchase. These factors are called retail mix and include merchandising, services offered, pricing, advertising and promotions, store design, and location (Moore, 2005).

There is a consensus among practitioners and academics that the retail industry is growing in its competitive intensity in both domestic and international markets (Moore, 2005). This industry is constantly evolving, and since the first retail store until today where e-commerce has become more important, some responsibilities are always performed by the retailer. They are the accessibility, customer convenience, convenience of size, associated services, supply chain, value chain, research and information, economic development, and employment.

Retail sale in non-specialised stores with food, beverages, or tobacco predominating is one of the economic activities that is classified by the European Community in the retail industry. This is classified by NACE<sup>1</sup> with the code G47.1.1, and it includes retail sales of a large variety of goods with food, beverages, or tobacco products being predominant. Therefore, this category includes hypermarkets, supermarkets, grocery and convenience stores, and other general establishments.

Retail market in Portugal has largely changed in the last fifty years. With the admission in the European Union in the mid-eighties, the country lived a period of substantial improvement

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<sup>1</sup> NACE- Nomenclature of Economic Activities

in living conditions and consequently lead to the inauguration of different stores (Farhangmehr, Marques & Silva, 2000). During that period hypermarkets and supermarkets began to appear to the detriment of small traditional stores or grocery stores (Pestana Barros & Alves, 2003). Strategic location, low prices, wide product variety, equality between all customers, improvement of transportation and accessibility are some points that lead to the development of this new style of retail (Farhangmehr *et al.*, 2000). In the last decade of the twentieth century, the hypermarkets and supermarkets continued their fast-paced growth (Farhangmehr *et al.*, 2000). In the beginning of the twenty-first century new methods in retail begun to emerge, such as online retail stores, which are still evolving until today (Picoto & Henriques, 2018).

According to INE<sup>2</sup>, in Portugal, this subsector continues to dominate the retail industry having exceeded, in 2017, 40% of the total retail sales volume. Moreover, its sales volume continues to grow in the years of 2017 and 2016. In 2017, the sales volume of this subsector transcended 19,7 billion Euros, 3,9% greater than in 2016. In 2016, the increase regarding the previous year was 4,3%.

### **2.3 Similar Studies**

In this section, the main results of significant similar studies are displayed. Six meta-analysis that recognised the most important attributes for several outcome measures, such as customer satisfaction, customer loyalty, or patronage intention were identified. A synthesis of the included studies is presented in Table 4.

The study conducted by Blut *et al.* (2018) was the only one performed in the retail industry. In turn, while Jung and Tanford (2017) and Tanford and Jung (2017) implemented their researches in the tourism sector, Ladeira *et al.* (2016), and Santini *et al.* (2018) used bank related articles as their sample. Finally, the investigation held by Kim and Cruz (2019) was focused on the sports industry, particularly in the golf business.

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<sup>2</sup> INE- National Statistical Institute of Portugal

| Author                        | Theme   | Sector / Activity | Search method   | Nr of reviewed studies | Main findings/ conclusions  |
|-------------------------------|---|-------------------|---|------------------------|---|
| <b>Jung and Tanford, 2017</b> | What contributes to convention attendee satisfaction and loyalty? A meta-analysis   | Tourism sector    | Databases including Hospitality & Tourism Complete, ProQuest, Science Direct, Scopus, and Emerald Library   | 21                     | Both analyses revealed which attributes are the most important determinants of satisfaction and loyalty.  |
| <b>Tanford and Jung, 2017</b> | Festival attributes and perceptions: A meta-analysis of relationships with satisfaction and loyalty                         |                   | Databases including Event Management and Journal of Convention, and Event Tourism   | 66                     |   |
| <b>Ladeira et al., 2016</b>   | A meta-analysis of satisfaction in the banking sector   | Banking sector    | Databases including Jstor, CrossRef, Worldcat, Emerald, DOAJ, PsycINFO, Taylor & Francis, Elsevier Science Direct, Scopus, ProQuest, SciELO, Google Scholar and EBSCO             | 210                    | Was found which dimensions directly influence satisfaction in the banking sector. Including the dimensions and determinants of service quality. |
| <b>Santini et al., 2018</b>   | Online banking services: a meta-analytic review and assessment of the impact of antecedents and consequents on satisfaction |                   | Databases such as Jstor, Emerald, PsycINFO, Taylor & Francis, Elsevier Science Direct, Scopus, ProQuest, SciELO, Google Scholar and EBSCO   | 39                     |   |
| <b>Kim and Cruz, 2019</b>     | How selection attributes affect golfers' satisfaction: a meta-analysis  | Sports sector     | Databases such as the Official Korean Citation Index, Nationals Assembly Library of the Republic of Korea, Nationals Assembly Library of the Republic of Korea and Google Scholar | 19                     | The results show what kind of attributes most affect the choice of a golf course.   |
| <b>Blut et al., 2018</b>      | Testing Retail Marketing-Mix Effects on Patronage: A Meta-Analysis  | Retail sector     | Databases such as ABI/INFORM, EBSCO, Science Direct, and ProQuest   | 350                    | The attributes that most influence different outcome variables are identified.  |

**Table 4** – Relevant Similar Studies (own elaboration based on existent literature)

Contrarily to this dissertation, which purposes to identify the critical service quality factors for specific stores, such as supermarkets, hypermarkets, or other general establishments, Blut *et al.* (2018) aimed to test the effects of the retail marketing-mix on the patronage intention. In order to do that, the authors used 350 investigations, from several retail environments, such as different types of retail stores and online retailing. The results of this meta-analysis

show that while product and brand management instruments show a greater impact on the majority of the studied outcome variables, price, communication, service, and incentive management instruments only have an impact on a portion of those outcome measures.

Jung and Tanford (2017) and Tanford and Jung (2017) performed a meta-analysis intending to determine which attributes are critical for customer satisfaction and customer loyalty for convention attendees and festival participants, respectively. On the other hand, both Ladeira *et al.* (2016) and Santini *et al.* (2018) studies were held in the banking industry, but while Ladeira *et al.* (2016) detected which dimensions have the most influence on customer satisfaction, Santini *et al.* (2018) assessed the positive antecedents of customer satisfaction in the online banking service. Lastly, Kim and Cruz (2019) purposed to find which attributes have more impact on golfers' satisfaction leading to the choice of their golf course.

Regarding the search methods, all studies utilized different databases. The databases used were not only international but also national and while some are generalists, others are related to a specific field. The most employed databases were SCOPUS (Jung & Tanford, 2017; Ladeira *et al.*, 2016; Santini *et al.*, 2018), Google Scholar (Kim & Cruz, 2019; Ladeira *et al.*, 2016; Santini *et al.*, 2018), ScienceDirect and ProQuest (Blut *et al.*, 2018; Jung & Tanford, 2017; Ladeira *et al.*, 2016; Santini *et al.*, 2018). Alternatively, the studies operated other generalist repositories such as Emerald, EBSCO, or Taylor & Francis. They also used relevant data banks for their field of studies, such as Hospitality & Tourism Complete, Event Management, and Journal of Convention, and others that are applicable on a national level, for example, Nationals Assembly Library of the Republic of Korea or Library of the Republic of Korea.

Finally, it is possible to notice that only the meta-analysis conducted by Blut *et al.* (2018) and Ladeira *et al.* (2016) covered more than 200 investigations in their sample. By contrast, the remaining similar studies only included between 19 and 66 reviewed researches.

## **2.4 Theoretical Framework and Research Hypotheses**

As aforementioned, the main purpose of this research is to identify the most important factors for customer service in the retail grocery industry. After detecting and understanding which attributes have a more significant impact on service quality, this study also intends to analyse the influence of moderators in the relationship between service factors and customer outcomes.



In the literature, several researches studied and analyse the effect of the service attributes on customers. However, authors regularly use a distinct approach to define criteria. Therefore, to provide advantageous and more comprehensible results it is important to define rules to agglomerate all the data.

The dependent variable, customer outcomes, was analysed based on the most significant consequences that occur in the literature. With the purpose of identifying the most important service attributes for customers, the existing consequences can be divided into service quality, customer satisfaction, customer loyalty, patronage intention, and intention to recommend.

With the choice of the determinants for customer service, it was compulsory to construct a conceptual model to confine the extensive number of attributes that influence customers' decisions. In this manner, the independent variables were agglomerated into 22 major factors. As for independent variables, we will consider the most frequent elements used for measuring service quality in the retail industry. To cover the maximum of factors the following dimensions were included: visual attractiveness, cleanliness of the store, store atmosphere and equipment, employee appearance, convenient layout, convenient location, dependable service, customers safety, availability of merchandise, clear and detailed product information, employees knowledge and interest, employees availability, employees attitude, interest in problem-solving, complaints handling, returns and exchanges handling, quality of merchandise, convenient parking, convenient operating hours, convenient payment methods, product variety, and competitive price. Appendix 2 describes the criteria that was used to aggregate the existent factors.

The presence of moderators is also examined in this research. Therefore, the impact of different factors such as geographic focus, time of the study, and type of store on the relationship between service factors and customer outcomes will be analysed.

Figure 1 presents the research framework.

By the existence of several investigations and models, it is possible to recognize that, in general, service attributes affect costumers. Hence the first hypothesis to be tested is:

***H1: Hypothesis 1*** – Service quality attributes are positively correlated with customer outcomes.

Since the main goal of the research is to verify which service factors are critical for customers, it is necessary to determine which dimensions more positively affect customer outcomes.

Therefore, to investigate the influence of each service attribute on customer outcomes, the second hypothesis is developed:

**H2: Hypothesis 2** – Service quality attribute<sub>i</sub> is positively correlated with customer outcome<sub>j</sub>. (i= Visual attractiveness, cleanliness of the store, store atmosphere and equipment, employee appearance, convenient layout, convenient location, dependable service, customers safety, availability of merchandise, clear and detailed product information, employees knowledge and interest, employees availability, employees attitude, interest in problem-solving, complaints handling, returns and exchanges handling, quality of merchandise, convenient parking, convenient operating hours, convenient payment methods, product variety, and competitive price; j= Overall service quality, customer satisfaction, customer loyalty, patronage intention, and intention to recommend).

Finally, the results of the effect of service attributes on customers may vary among distinct contexts such as region, time of the study, and type of store. According to Ahmad, Ihtiyar, and Omar (2014), it is crucial to compare service quality between countries because it gives retailers knowledge about the critical service attributes in different environments. This is demonstrated in various studies (Ahmad *et al.*, 2014; Espinoza, 1999; Martínez-Ruiz, Jiménez-Zarco, & Cascio, 2011) where results show that distinct cultural groups give different importance to service quality dimensions. Concerning the time of the study, in the research developed by Martínez-Ruiz, Blazquez-Resino, Pino, and Capestro (2017) was found that in distinct years the significance of the factors changed. Anselmsson and Johansson (2014) examined the service quality differences between two formats of stores.

Therefore, to examine if there is an influence of any possible factor, the third hypothesis to be tested is:

**H3: Hypothesis 3** – The relationship between service attributes and customer outcomes is affected by moderators.

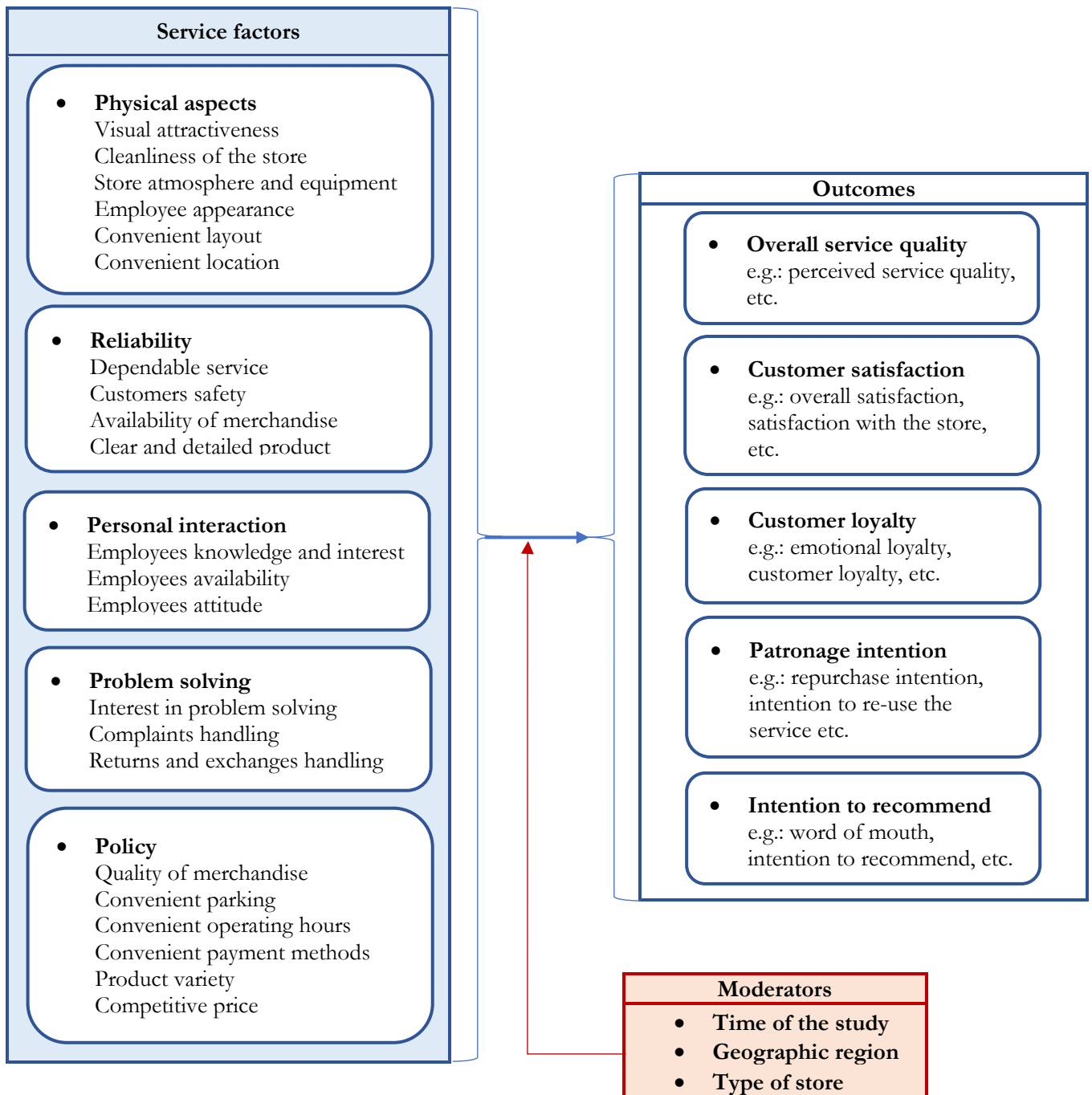


Figure 1 – Research Framework (own elaboration)

### **3. Methodology**

This chapter describes the methodology used in this research. Two distinct methodologies are incorporated: the systematic literature review that is complemented by the meta-analysis. Firstly, in this section, the concepts of both methodologies are considered and presented. Then, the process developed by Field and Gillett (2010) with the description of the required steps is outlined. Although this is a meta-analysis process, some of the steps can be combined with the systematic literature review method.

#### **3.1 Systematic Literature Review and Meta-analysis**

The systematic literature review intends to aggregate all the existing information on an established topic. This methodology focuses on specific research questions that, by conducting a review on a relatively small number of investigations, will lead to distinct contributions (Barn, Barat, and Clark, 2017). According to Barn *et al.* (2017), this type of methodology can be divided into three segments, including: planning, execution, and synthesis.

As reported by Rosenthal and DiMatteo (2001), the existence of meta-analysis is particularly important because it promotes clarification and leads to a decrease of the ambiguity on the research results. This process combines findings from several investigations with the purpose of better responding to a specific research question. It is for this reason that Glass (1976) refers to the meta-analysis as “the analysis of analysis”.

Rosenthal and DiMatteo (2001) define meta-analysis as the investigation that combines numerical results from several studies to integrate the findings. By reaching a new accurate estimate of descriptive statistics some conclusions can be obtained leading to more precise and reliable results than any primary research. Additionally, this method allows researchers to discover any existent moderator or mediator. For Hall and Rosenthal (1995), although there is not a unique way to conduct a meta-analysis, this examination should be always accurate, simple, and clearly addressed.

Field and Gillett (2010) proposed a new framework of the process and organised the meta-analysis into six stages. Table 5 summarizes the suggested steps of this model.

| <b>Meta-analysis steps</b> |  |
|----------------------------|--|
| <b>Step 1</b>              | Literature search  |
| <b>Step 2</b>              | Identification and application of the inclusion criteria |
| <b>Step 3</b>              | Calculate effect sizes for each study to be included     |
| <b>Step 4</b>              | Carry-out a basic meta-analysis                          |
| <b>Step 5</b>              | Considering advance with the analysis                    |
| <b>Step 6</b>              | Write the conclusion                                     |

**Table 5** – Steps of a Meta-analysis (based on Field & Gillett, 2010)

### **3.3 Methodology Steps**

Some steps presented in the meta-analysis process are also employed when a systematic literature review is conducted. Therefore, in order to complete this analysis in this segment, each step of the methodology is explained in detail.

In the first phase, the more adequate methods of search and the characteristics of data collection for this dissertation are described. At this stage, utilizing electronic databases, the purpose is to collect, from the existent literature, studies with identical research questions. Then, it will be necessary to define the eligibility criteria and that will result in a reduction of investigations. At this stage, only researches that meet completely with the existing criteria will be included in the sample. The presentation of methodological aspects will occur in the following step. At this point, after planning and executing the literature search, the two methods diverge. While for the systematic literature review the synthesis is performed, for the meta-analysis the description of the effect sizes measures and the remaining methods will be introduced.

For the meta-analysis, determine a standardized measurement allows us to directly compare several studies that employ different variables or scale measures. Before a more advanced analysis, it is important to perform the basic meta-analysis. This assessment enables researchers to determine which method is the most adequate to choose and how to conceptualize the existent data (Field & Gillett, 2010).

The fifth step is progressing with the analysis. This stage leads to the validation of the obtained results as well as the implementation of moderator analysis and the estimation of existing publication bias. In the final stage, considering the analysis characteristics it is prepared a conclusion report (Field & Gillett, 2010).

### 3.3.1. First Step – Literature Search

After establishing the research questions and goals, the literature search pretends to identify relevant articles to this specific dissertation. The review of the literature started using Scopus and Web of Science.

As a result of an initial review of several researches, the following terms emerged: “Customer service”, “Service quality”, “Retail service quality”, “RSQS”, “RSQ”, “Retail”, “Grocery”, “Hypermarkets”, “Supermarkets”, “Convenience store”, “Factors”, “Determinants”, “Antecedents”, “Dimensions” and “Prioritization”.

The selected databases were examined using the developed search phrases presented in Table 6. In this Table, the number of publications found per string and per database are summarized.

| Search terms  | Databases  |                |
|---|------------|----------------|
|   | Scopus     | Web of Science |
| “Customer service” or “Service quality”   |            |                |
| <i>and</i> Retail <i>or</i> Hypermarkets <i>or</i> Supermarkets <i>or</i> Grocery <i>or</i> “Convenience store”         | 661        | 526            |
| <i>and</i> “Determinants” <i>or</i> “Factors” <i>or</i> “Antecedents” <i>or</i> “Prioritisation” <i>or</i> “Dimensions” |            |                |
| “RSQS” <i>or</i> “RSQ” <i>or</i> “Retail service quality” <i>or</i> “Service quality”                                   |            |                |
| <i>and</i> Grocery <i>or</i> Hypermarkets <i>or</i> Supermarkets <i>or</i> “Convenience store”                          | 164        | 119            |
| <b>Total</b>  | <b>786</b> | <b>643</b>     |

**Table 6** – Keyword Search in Scopus and Web of Science

### 3.3.2. Second Step – Identification of Inclusion Criteria

After the identification of the researches provided by the databases that comply with the search strings, studies were selected or rejected according to the inclusion and exclusion criteria. This process will select the most adequate investigations which fulfill the objective of this dissertation.

The following inclusion criteria were applied to select studies that measured service quality in the retail industry:

Firstly, studies that identify the service factors in the grocery retail industry were incorporated. For that, two distinct examinations were carried out. Thus, were not only

included studies that analyse the relation between service attributes and the selected customer outcomes but also investigations that recognise the customer service critical factors.

In that regard, when information about service attributes and customer outcomes were available, researches should have at least one specific independent and one dependent variable that are relevant to our research question. They also must incorporate a minimum amount of essential statistical information for the chosen method of the meta-analysis.

On the other hand, investigations that identify the critical factors for customer service in the retail industry were included. According to Vazquez *et al.* (2001), recognise the clients' expectations of each service attribute is important since it provides retailers with information concerning the most relevant dimensions from the customer perspective. For this reason, were incorporated investigations that explicitly state which factors are the most important for an excellent service quality, researches that prioritize those dimensions, and studies that rank or examine customers' expectations.

Secondly, only original research publications, such as questionnaires, interviews, or focus groups that identify the customer service determinants must be used as a source of data collection.

Finally, the research is limited to articles published in English or Portuguese language, between the years of 1990 and 2020, and with full-text availability.

Therefore, were excluded all articles that do not comply with the primary research objective, or fail to provide with necessary original data, for instance, review articles, brief reports, and finally duplicated studies.

Table 7 synthesises the criteria that lead to the inclusion or exclusion of each identified research.

| Inclusion criteria  |
|---|
| 1 <sup>st</sup> <i>a) The study includes:</i> studies that analyse the relation between service factors and customer outcomes   |
| 1 <sup>st</sup> <i>b) The study includes:</i> researches that identify the critical factors for customer service in the retail industry   |
| 2 <sup>nd</sup> <i>Minimum number of analysed relations:</i> researches must include at least one service attribute and one customer outcome  |
| 2 <sup>nd</sup> <i>Statistical data:</i> if the study analyses the relation between service attributes and customer outcome, that investigation must incorporate the right amount of statistical data for the meta-analysis method chosen |
| 3 <sup>rd</sup> <i>Data type:</i> Original research papers  |
| 4 <sup>th</sup> <i>Language of the article:</i> English or Portuguese   |
| 5 <sup>th</sup> <i>Published years:</i> between 1990 and 2020   |
| 6 <sup>th</sup> <i>Availability:</i> Full-text availability   |

**Table 7 – Inclusion Criteria**

### 3.3.3. Third Step – Codification Process and Effect Sizes

After the collection of researches and exclusion of a few of them that do not comply with inclusion criteria, the organization of data was conducted. In order to accomplish that and systematize all information, the Microsoft Office Excel tool was employed. Hence, several data of each publication were recorded. The data was divided into three sections: basic data on the paper; methodological essential information; and information extracted from the results.

The first segment includes methodological aspects from each study related with research title, author, journal, year, geographic region, type of store, number of associated companies, method of collecting data, sample size, response rate, and instrument employed.

The type of store represents which establishments within the food retail sector are represented in the sample. If included studies do not specify the format of the retail establishments in their samples or compare between distinct shopping categories, then the type of store is coded as several retail stores. The number of associated companies indicates industry coverage. This comprehends the amount of corporations that were considered in



the sample of each study. To be an investigation with primary data, researchers had to collect data from multiple sources. That can be done with the use of distinct methods such as questionnaires, interviews, or observation. After an indication of the sample size that determines the number of people that were surveyed or interviewed the response rate is presented. Finally, the instrument that each study employs to identify the service factors is displayed.

Table 8 presents the methodological aspects in detail.

| <b>Methodological aspects coded</b>   |
|---|
| <b>1<sup>st</sup> Year of the study:</b> 1990s, 2000-2009, 2010-2014, 2015-2020   |
| <b>2<sup>nd</sup> Geographic region:</b> Asia, Africa, Europe, North America, South America, Several                                    |
| <b>3<sup>rd</sup> Type of store:</b> Several Retail stores, Supermarkets, Hypermarkets, Minimarkets, Grocery, Convenience stores        |
| <b>4<sup>th</sup> Number of associated companies:</b> 1 to 3, 4 to 6, 7 to 9, 10 or more companies, N.A.                                |
| <b>5<sup>th</sup> Type method of selecting data:</b> Survey, Interviews   |
| <b>6<sup>th</sup> Sample size:</b> Below 100, 100 to 300, 300 to 500, 500 to 750, 750 to 1000, Above 1000                               |
| <b>7<sup>th</sup> Response Rate:</b> Below 40%, 40 to 80%, Above 80%, N.A.  |
| <b>8<sup>th</sup> Instrument employed:</b> RSQS, SERVQUAL, PSQ scale, ECSI, N.A.  |
| <b>9<sup>th</sup> Number of service attributes:</b> 1 to 5 attributes, 6 to 10 attributes, 11 to 15 attributes, more than 16 attributes |
| <b>10<sup>th</sup> Number of customer outcomes:</b> 1 outcome, 2 outcomes, 3 outcomes, 4 outcomes                                       |

**Table 8 – Methodological Aspects Codification**

In the second subdivision, service attributes in the retail industry and customer outcomes that are affected by those factors were included. The service determinants are the independent variables and to better perform the analysis they were compacted into 22 factors based on the RSQS model developed by Dabholkar *et al.* (1996). The factors were coded into visual attractiveness, cleanliness of the store, store atmosphere and equipment, employee appearance, convenient layout, convenient location, dependable service, customers safety, availability of merchandise, clear and detailed product information, employees knowledge and interest, employees availability, employees attitude, interest in problem-solving, complaints handling, returns and exchanges handling, quality of merchandise, convenient parking, convenient operating hours, convenient payment methods, product variety, and competitive price. In turn, the dependent variables which are the customer outcomes were coded into overall service quality, customer satisfaction, customer loyalty, patronage

intention, and intention to recommend. Since each study classified or interpreted constructs differently, in both types of variables, was conducted a detailed examination to prevent any arbitrary codification.

In the third and final section of data collection, the aggregation of specific meta-analysis details was specified. In that way, when quantitative information was available, that information was examined and collected. After significant consideration of the reviewed researches was noted that in most of the cases was used regressions that included the standardized beta coefficients ( $\beta$ ) which represent the effect of each dimension on the several customer outcomes. Other studies presented different or additional information (e.g., *t-test*, *correlation r*, *p-values*). Regardless of the disparities between methodologies analysis, it is necessary to convert each coefficient value into the same effect size metric (Goh, Hall, & Rosenthal, 2016).

According to Goh *et al.* (2016) for studies comparing two means, *Cohen's d*, *Hedges' g*, or *Pearson's r* can be used as effect size. Therefore, considering that this dissertation aims to evaluate the impact of each service factor on customer outcomes and this is measured by the correlation and regression between variables, the *Pearson's r* was adopted as a metric variable to measure the effects. This decision is supported since *p-values* and standardized beta coefficients were widely employed in the included researches. Thus, as detailed in Section 2.4. it was hypothesized that service attributes are positively correlated with customer perceptions on customer outcomes.

After the complete collection of data is where the distinct analysis diverges. In this regard, while investigations that included quantitative information, such as correlation or regression coefficients, continue with the procedure developed by Field and Gillet (2010), the investigations without those statistics were integrated into the systematic literature review section. Ultimately, in those researches and in investigations that were included in both analyses was performed the final qualitative synthesis. For this analysis was also considered the classification that the included publications conducted on the service quality attributes.

#### **3.2.4. Fourth Step – The Basic Meta-analysis**

According to the process developed by Field and Gillet (2010), after gathering relevant information and effect sizes from the reviewed researches, the fourth step is characterized

by the performance of the meta-analysis itself. By aggregating the effect sizes from the variety of investigations it will be possible to estimate the effects in the population.

In this section, two main questions must be answered. The first major subject is related to the method that should be used, while the second issue is how to conceptualize the data.

Field and Gillet (2010) synthesized and indicated that there are two paths to conceptualize the meta-analysis. Thereby, there are models with fixed-effects and random-effects. The fixed-effect model states that the average effect size from the population of the included studies is fixed or it is easily predicted. In contrast, when the average effect size varies distinctly from research to research are considered models with random effects. Considering this, while in the first case sample effect sizes should be homogeneous, for random-effects models they should be heterogeneous (Field & Gillet, 2010).

The second issue that any researcher has when doing the actual meta-analysis is to decide how to conceptualize the data.

At this point, the process conducted by Goh *et al.* (2016), started to be the study of reference. In this way, as previously reported to complete the data analysis the existing correlation coefficients  $r$  were examined. Since most of the studies did not report the correlation  $r$ , we collect different elements such as  $\beta$  values which later were converted into a correlation coefficient.

With the purpose of converting the  $\beta$  values to  $r$  correlation coefficients the procedure recommended by Peterson and Brown (2005) was employed:

$$r_{y1} = \beta_1 + r_{12}(r_{12} - \beta_1 r_{12})$$

When  $r_{12}$  equals zero, this means that there is no correlation between the two variables, and therefore,  $r_{y1}$  equals  $\beta_1$ . In turn, if  $r_{12}$  equals 1,  $r_{y1}$  equals  $r_{y2}$  and if  $r_{12}$  equals -1,  $r_{y1}$  equals  $-r_{y2}$ . However, in general, the relationship between  $\beta_1$  and  $r_{y1}$  is a function of the magnitudes and signs of correlations involving the remaining predictor variable(s).

After the conversion of all measures into the same effect size, was necessary to calculate the weighted mean effect size. This practice is important since provides larger studies with greater weights. In that purpose, first was applied the *Fisher's*  $z$  transformation for normalization by employing the Excel function “=fisher(x)”. Then, represented as  $\bar{r}_z$  the effect sizes were combined meta-analytically using the formula:

$$\text{Weighted } \bar{r}_z = \frac{\sum([N - 3]r_z)}{\sum(N - 3)}$$

In this procedure, N represents the number of respondents to a certain effect size.

The fixed effects approach was attained. Although many studies only evaluate fixed-effects, in this dissertation were random-effects models that were examined. This decision is taken given that random-effects models assume differences between studies since they have distinct participants or treatments. Knoll and Matthes (2017) argue that this approach should be applied since is much more realistic on the basis that respondents and studies contexts differ across investigations.

Therefore, for the basic meta-analysis, the *Stouffer's Z* test, the Random Effects approach, and the Heterogeneity test were applied. For a summary of the general *p-value* of all included studies, the Stouffer test was considered. According to Goh *et al.* (2016), it is necessary to collect all *Z*'s that can correspond to a specific *p-value* or can be calculated with the next formula, where N is the number of respondents associated with a particular *r*:

$$Z = r\sqrt{N}$$

Then, the combined *Z* can be estimated, and subsequently, it is converted to its *p-value*. For this was considered the number of independent *Z*'s which are combined, represented by the symbol k. To attain this value the following formula was applied:

$$Z_{combined} = \frac{\sum Z}{\sqrt{k}}$$

Subsequently to examine the random effects approach it was necessary to average the effect sizes for each combination of service factor and customer outcome. These values will be classified according to Cohen (1988) were the magnitude is considered small if the coefficient is near 0,10, medium if is close to 0,30 and large in case the coefficient is around 0,50. In addition the considered distinct data points were analysed using the estimated *p-values* for each aggregation of dependent with independent variables.

Although it is considered optional for Goh *et al.* (2016) the Heterogeneity Test was implemented. To do this the Chi-squared test is applied using the formula:

$$\chi^2_{k-1} = \sum(N - 3)(r_z - \text{weighted } \bar{r}_z)^2$$

### **3.3.5. Fifth Step –Advanced Analysis**

Following the first analysis, normally, researchers investigate if it is possible to do an advanced analysis. That can consist of examining the effect of moderator variables or to proceed to a publication bias analysis. In this case, an available R software package was used to compare the effect sizes with each other according to moderator variables. Hence, this methodological tool enables us to test the effect of multiple possible moderators, including geographic region, time of study, and type of store.

### **3.3.6. Sixth Step – Write a Conclusion**

The last phase of the process developed by Field and Gillet (2010) is where researchers should outline all procedures and exhibit results that were generated from the meta-analysis. The details that are usually provided at this stage are presented throughout this dissertation.

## **4. Main Results**

This chapter aims to present the main results of this research. In the first section, the selection process of the investigation is explained. Then, a descriptive analysis of the included investigations is performed. In this segment, the profile of the incorporated publications in the sample is displayed. Finally, in the third section, through the application of the systematic literature review and meta-analysis, the results are presented and analysed.

### **4.1. Researches Selection Process**

The process started with the literature investigation of the two main search strings through the chosen online databases in the period of 1990-2020.

Initially, from the search strings, 1429 investigations were detected on the two applied databases: Scopus (n=786) and Web of Science (n=643). Additionally, during the search were identified in the Scopus database another 4 studies that already had been selected, obtaining a total of 1433 researches. A large portion of the publications were duplicated (n=316) one or more times. From those, the majority were repeated because the same articles were found through different search strings or in the two databases. After this process, the number of studies reached was 1082.

In the following stage, 543 publications were rejected because they are related to other industries that do not represent the selected sector or are related to other non-personal selling methods. Mainly were identified researches connected with the retail banking (n=181) and apparel industry (n=40). Apart from those, studies connected with retail industries with no focus on food and beverages distribution (n=54) and other service businesses (n=62) as well as studies focused on electronic retailing (n=206) were discarded. As a result, the number of total studies decreased to 539. A wide amount of investigations (n=484) were not included in the final sample. While 412 researches do not meet the main research goal, 30 do not include primary data, 7 had the publication date before 1990, and 35 were unavailable. The inaccessibility of the researches was not only because of the impossibility of having full-text access (n=32) but also due to the existence of complete versions in languages other than English or Portuguese (n=3).

Therefore, 55 studies were included. After consideration of the information presented in the analysis, it was found that from those investigations only 35 investigations incorporate adequate statistical information to perform the meta-analysis. Four of those researches

presented also important information for the systematic literature review. The remaining 20 were only reviewed with a synthesis of the information. The source of the articles is presented in Appendix 3. The process of article selection is summarized below in Figure 2.

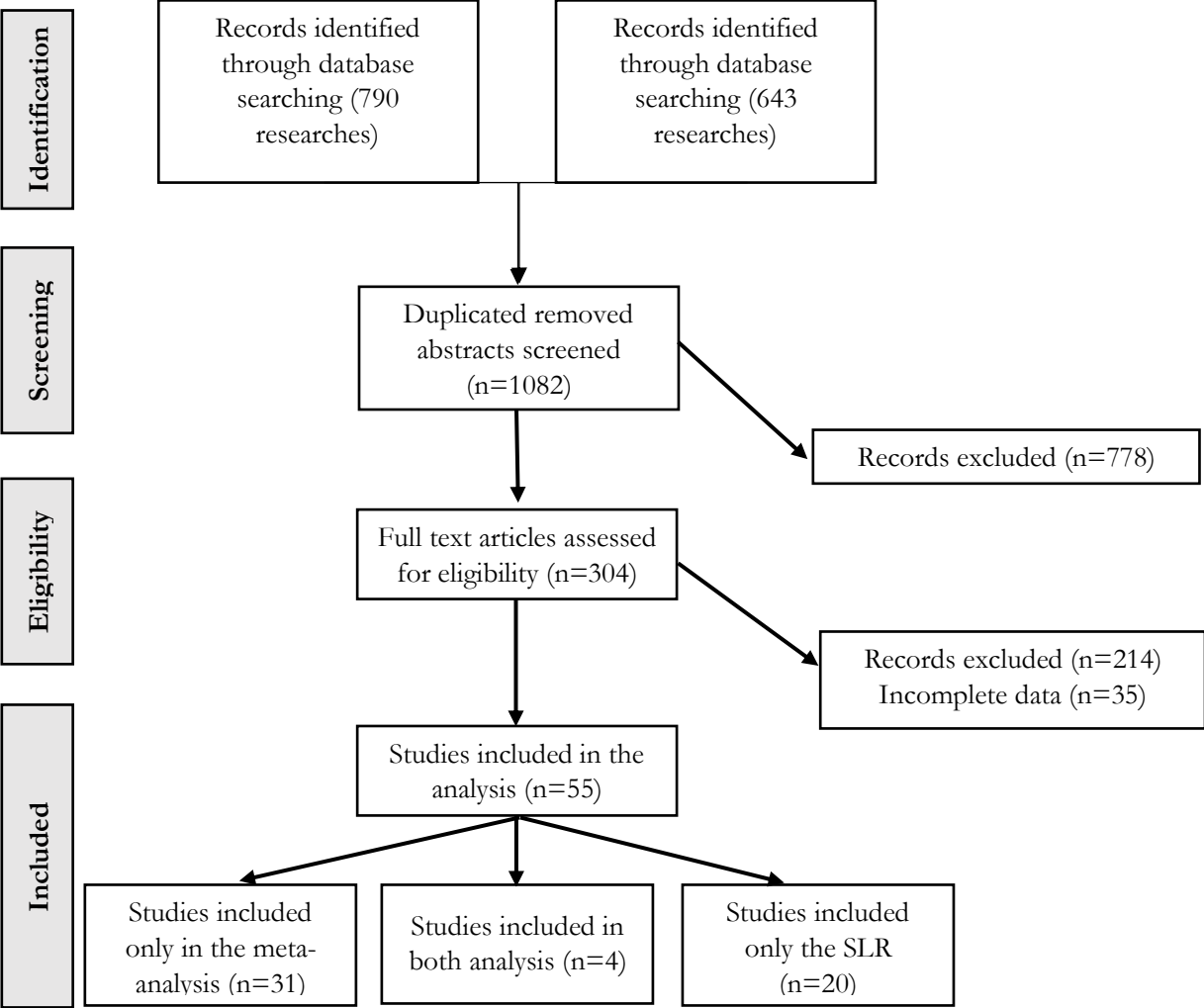


Figure 2 – Process of Articles Selection

4.2. Descriptive Analysis

Fifty-five investigations were included in this research. The existent data were not homogeneous and covered distinct statistical analysis.

Table 9 comprises five dimensions (i. Retail industry coverage – number of companies that are included in each research; ii. Store format; iii. Sample size; iv. Number of services’ attributes and v. outcomes measures included in the study) and enables us to identify the key methodological aspects such as time of the study and geographic focus.

The five dimensions that are comprised in the study are the retail industry coverage with the number of companies that are included in each research, store format, sample size, and the number of service attributes and outcomes measures presented in the study.

In terms of the time frame in this analysis, it was established that only studies published after 1990 are considered. Under these criteria, it was found that most of the included articles were published in the final period of the analysis, between 2015 and 2020 (n=25). The interval between 2010 and 2014 was the second most frequent (n=21). Finally, in the period between 2000 and 2009 seven studies were detected and between 1990 and 1990 only two investigations were included.

Regarding the geographic region of study, the sample includes investigations in several countries and Continents. The Asian Continent stands out from the remaining with a total of 35 included investigations, followed by Europe (n=11) and North America (n=4). Africa and South America have the same number of articles (n=1). Finally, 3 researches were performed in more than one country on distinct continents. Looking in more detail, the most common country included is India (19%) followed by USA and Turkey (8%). The sample is completed with investigations from Asia in countries such as China, Hong Kong, Indonesia, Kazakhstan, Malaysia, Pakistan, Sri Lanka, Taiwan, Thailand, United Arab Emirates, and Vietnam, from Europe in Bosnia and Herzegovina, Cyprus, Netherlands, Portugal, Serbia, Spain, and Sweden, from North America in Canada, and México, from South America and Africa the studies, were accomplished in Brazil and South Africa, respectively.

Relatively to the number of companies that are examined in each investigation, it is possible to conclude that from the 55 included studies only 27 specify how many companies were included in their samples. From those, the majority (n=16) included 1 to 3 distinct retailers. The same number of researches analysed in their studies 4 to 6 companies and 7 to 9 firms (n=4).

In terms of the type of store, it is possible to notice that supermarkets (n=16), and groceries (n=12) are the major categories presented in the sample. Eight investigations had focused on Hypermarkets, 1 study in Convenience store, and another in Minimarkets.



| Study characteristics                      | Total | Time of the study |           |           |           | Geographic focus |        |        |               |               |         |
|--|-------|-------------------|-----------|-----------|-----------|------------------|--------|--------|---------------|---------------|---------|
|  |       | 1990-1999         | 2000-2010 | 2010-2014 | 2015-2020 | Asia             | Africa | Europe | North America | South America | Several |
| Nr of studies                              | n=55  | n=2               | n=7       | n=21      | n=25      | n=35             | n=1    | n=11   | n=4           | n=1           | n=3     |
| <b><i>Nr of associated companies</i></b>   |       |                   |           |           |           |                  |        |        |               |               |         |
| 1-3 companies                              | 16    | 0                 | 4         | 6         | 6         | 12               | 0      | 4      | 0             | 0             | 0       |
| 4-6 companies                              | 4     | 0                 | 0         | 3         | 1         | 4                | 0      | 0      | 0             | 0             | 0       |
| 7-9 companies                              | 4     | 0                 | 0         | 1         | 3         | 2                | 0      | 1      | 1             | 0             | 0       |
| 10 or more companies                       | 3     | 0                 | 1         | 1         | 1         | 1                | 0      | 0      | 2             | 0             | 0       |
| N.A.                                       | 28    | 2                 | 2         | 10        | 14        | 16               | 1      | 6      | 1             | 1             | 3       |
|  | 55    |                   |           |           |           |                  |        |        |               |               |         |
| <b><i>Store type</i></b>                   |       |                   |           |           |           |                  |        |        |               |               |         |
| Minimarkets                                | 1     | 0                 | 0         | 0         | 1         | 1                | 0      | 0      | 0             | 0             | 0       |
| Supermarkets                               | 16    | 1                 | 1         | 8         | 6         | 10               | 0      | 2      | 2             | 1             | 1       |
| Hypermarkets                               | 8     | 0                 | 1         | 3         | 4         | 6                | 1      | 1      | 0             | 0             | 0       |
| Grocery                                    | 12    | 0                 | 2         | 6         | 4         | 4                | 0      | 5      | 2             | 0             | 1       |
| Convenience store                          | 1     | 0                 | 0         | 0         | 1         | 1                | 0      | 0      | 0             | 0             | 0       |
| Several                                    | 17    | 1                 | 3         | 4         | 9         | 13               | 0      | 3      | 0             | 0             | 1       |
|  | 55    |                   |           |           |           |                  |        |        |               |               |         |
| <b><i>Sample Size</i></b>                  |       |                   |           |           |           |                  |        |        |               |               |         |
| Below 100                                  | 4     | 0                 | 1         | 0         | 3         | 2                | 0      | 1      | 0             | 1             | 0       |
| 100-300                                    | 17    | 0                 | 3         | 7         | 7         | 12               | 1      | 2      | 2             | 0             | 0       |
| 300-500                                    | 13    | 1                 | 2         | 2         | 8         | 8                | 0      | 3      | 1             | 0             | 1       |
| 500-750                                    | 10    | 0                 | 1         | 6         | 3         | 6                | 0      | 4      | 0             | 0             | 0       |
| 750-1000                                   | 4     | 1                 | 0         | 2         | 1         | 2                | 0      | 0      | 0             | 0             | 2       |
| Above 1000                                 | 7     | 0                 | 0         | 4         | 3         | 5                | 0      | 1      | 1             | 0             | 0       |
|  | 55    |                   |           |           |           |                  |        |        |               |               |         |
| <b><i>Number of service attributes</i></b> |       |                   |           |           |           |                  |        |        |               |               |         |
| 1-5 attributes                             | 1     | 0                 | 0         | 1         | 0         | 0                | 0      | 0      | 1             | 0             | 0       |
| 6-10 attributes                            | 26    | 2                 | 2         | 12        | 10        | 13               | 0      | 7      | 3             | 0             | 3       |
| 11-15 attributes                           | 12    | 0                 | 2         | 3         | 7         | 9                | 0      | 2      | 0             | 1             | 0       |
| more than 16 attributes                    | 16    | 0                 | 3         | 5         | 8         | 13               | 1      | 2      | 0             | 0             | 0       |
|  | 55    |                   |           |           |           |                  |        |        |               |               |         |
| <b><i>Number of outcomes</i></b>           |       |                   |           |           |           |                  |        |        |               |               |         |
| 1 outcome                                  | 45    | 2                 | 3         | 17        | 23        | 27               | 1      | 9      | 4             | 1             | 3       |
| 2 outcomes                                 | 4     | 0                 | 1         | 2         | 1         | 4                | 0      | 0      | 0             | 0             | 0       |
| 3 outcomes                                 | 4     | 0                 | 3         | 1         | 0         | 2                | 0      | 2      | 0             | 0             | 0       |
| 4 outcomes                                 | 2     | 0                 | 0         | 1         | 1         | 2                | 0      | 0      | 0             | 0             | 0       |
|  | 55    |                   |           |           |           |                  |        |        |               |               |         |

**Table 9 – Profile of Service Attributes Impact on Customers Research**

Considering the sample size, investigations that presented sample sizes between 100 and 299 were the most common (n=17) followed by studies with samples between 300 and 499 (n=13) and within the range of 500 and 749 (n=11).

In terms of the number of the independent variables, it is possible to notice that the interval with more frequency is the one that covers 6 to 10 attributes (n=26). This is followed by the ranges of 16 or more factors (n=16) and 11 to 15 attributes (n=12).

From the included studies, 45 out of the 55 investigations considered only 1 dependent variable. From the remaining, we found 4 researches with 2 or 3 distinct variables each and only 2 employ 4 dependent variables.

Finally, it was also collected information related to the method of selecting data, the response rate, and the instrument or tool applied to recognize the customer service attributes. On what regards the method of selecting data, 95% of the studies only employed surveys to identify the critical service factors (n=52). The remaining articles combine interviews with the questionnaire survey (n=1) or simply carry out their researches with interviews (n=2). Based on those convenient samples, 51% of the cases exhibit the response rate above 80% (n=28). Then it is noticed that 35% omitted the response rate or do not specify the number of surveys that were distributed (n=19). Lastly, while only 9% of the studies have a response rate in the interval of 40 to 80% (n=5), 6% are characterized to have less than 40% (n=3). Concerning the applied tool, the most common instrument was the RSQS model developed by Dabholkar *et al.* (1996) (n=24). This was followed by the SERVQUAL (n=8), then the ECSI model and PSQ scale were employed only once.

### **4.3. Findings and Analysis**

In this section, the results are examined and discussed. Firstly, findings from the systematic literature review are presented and afterward, the meta-analysis results are reported.

#### **4.3.1. Systematic Literature Review Findings**

Regarding researches that identify or prioritize the critical factors for customer service in the retail industry, 24 publications were detected.

From those 24 investigations, a great majority were conducted between the years of 2010-2014 (45,8%) or between 2015-2020 (41,7%). Above 50% of the studies included in the systematic literature review were accomplished in Asia, only applied a survey in their researches, and did not report the industry coverage. It was also identified that supermarket

was the most frequent store type and both SERVQUAL and RSQS were widely exploited as basis instruments.

All the critical factors for customer service in the retail industry along with their frequency and percentage of occurrence in the 24 selected studies are presented in Table 10. Table 11 displays the number of times that each service factor is considered between the three most critical factors.

| Service factors                  | Percentage % | Frequency (n=24) | Service factors                        | Percentage % | Frequency (n=24) |
|----------------------------------|--------------|------------------|--|--------------|------------------|
| Dependable service               | 91,7%        | 22               | Cleanliness of the store               | 45,8%        | 11               |
| Employees attitude               | 87,5%        | 21               | Convenient parking                     | 45,8%        | 11               |
| Quality of merchandise           | 66,7%        | 16               | Customers safety                       | 45,8%        | 11               |
| Availability of merchandise      | 62,5%        | 15               | Convenient payment methods             | 41,7%        | 10               |
| Employees knowledge and interest | 62,5%        | 15               | Product variety                        | 37,5%        | 9                |
| Competitive price                | 62,5%        | 15               | Complaints handling                    | 37,5%        | 9                |
| Visual attractiveness            | 58,3%        | 14               | Convenient operating hours             | 37,5%        | 9                |
| Store atmosphere and equipment   | 54,2%        | 13               | Returns and exchanges handling         | 33,3%        | 8                |
| Convenient layout                | 54,2%        | 13               | Convenient location                    | 29,2%        | 7                |
| Employees availability           | 54,2%        | 13               | Clear and detailed product information | 29,2%        | 7                |
| Interest in problem solving      | 50,0%        | 12               | Employees appearance                   | 12,5%        | 3                |

**Table 10 – List and Frequency of the Service Factors**

| Service factors                  | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | Service factors                        | 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> |
|----------------------------------|-----------------|-----------------|-----------------|--|-----------------|-----------------|-----------------|
| Dependable service               | 6               | 3               | 5               | Cleanliness of the store               | 2               | 3               | 1               |
| Employees attitude               | 3               | 3               | 3               | Convenient parking                     | 0               | 1               | 3               |
| Quality of merchandise           | 7               | 2               | 1               | Customers safety                       | 2               | 4               | 2               |
| Availability of merchandise      | 5               | 2               | 3               | Convenient payment methods             | 1               | 0               | 0               |
| Employees knowledge and interest | 0               | 3               | 4               | Product variety                        | 1               | 0               | 3               |
| Competitive price                | 2               | 4               | 4               | Complaints handling                    | 0               | 1               | 1               |
| Visual attractiveness            | 2               | 1               | 2               | Convenient operating hours             | 2               | 0               | 0               |
| Store atmosphere and equipment   | 1               | 0               | 0               | Returns and exchanges handling         | 0               | 1               | 0               |
| Convenient layout                | 2               | 3               | 0               | Convenient location                    | 2               | 2               | 0               |
| Employees availability           | 3               | 1               | 1               | Clear and detailed product information | 1               | 2               | 0               |
| Interest in problem solving      | 1               | 1               | 0               | Employees appearance                   | 1               | 0               | 0               |

**Table 11 – Number of Times that Each Service Factor is Considered the First, Second and Third Most Important**

Table 10 shows that despite the existence of 22 factors only 11 were considered critical for customers in the retail industry. This occurs because, similarly to other researchers (Khan & Khan, 2013), we have considered the factors with a frequency above 50% as the most important elements.

Therefore, the considered key service factors for customers includes items from all five service dimensions: physical aspects (visual attractiveness, store atmosphere and equipment, and convenient layout); reliability (dependable service, and availability of merchandise); personal interaction (employees' knowledge and interest, employee availability, and employee attitude); problem solving (interest in the resolution of problems); and policy (quality of merchandise and competitive prices).

The most cited service factor was dependable service (91,7%). Within the selected literature, according to Table 11, this attribute was the second that was recognised between the most significant by the largest amount of times (n=6). This occurred in several studies from distinct geographic regions (e.g. Suresh, Mahadevan, & Abhishek, 2019; Tešić, 2020).

Employees' attitude was the following most common service factor (87,5%) and for several studies was considered the most important dimension (e.g. Lin, 2010; Ulkhaq *et al.*, 2019). For other researches despite the existence of more significant attributes, the employees' attitude is also very high ranked regarding the service provision for customers (e.g. Ahmad *et al.*, 2014; Naik, Gantasala, & Prabhakar, 2010; Souza, Ferreira Filho, Santos, Martins, & Ramos, 2016).

The quality of the merchandise was detected in 16 out of the 24 selected studies (66,7%) and prior to dependable service, this was the factor which was considered as the most important more times (n=7) (e.g. Amorim & Saghezchi, 2014; Nilsson, Gärling, Marell, & Nordvall, 2015; Wang, Zhao, & Qiao, 2011).

Then, with 62,5% of frequency emerges availability of merchandise, employees' knowledge and interest, and competitive price. Despite the three attributes were found with the same frequency, differences in their importance were observed. Employee knowledge and interest was often identified as the second or third most important attribute (e.g. Haming, Murdifin, Syaiful, & Putra, 2019; Souza *et al.*, 2016) but was never recognised as the main service item by any investigation. Differently, availability of merchandise was considered the most important factor for five studies (e.g. Adam, Tengeh, & Cupido, 2018; Chuang, 2010; Lin, 2010), and competitive price was only for one (Lin, 2010).

Thereafter, with a frequency of 58,3% appears visual attractiveness. This factor was considered the most critical factor for two distinct studies both conducted in Asia between the years of 2010 and 2014 (Ahmad *et al.*, 2014; Singh *et al.*, 2010).

Finally, store atmosphere and equipment, convenient layout, and employees' availability with 54,2% each and interest in problem solving with 50% of incidence were considered the last most common factors in the selected literature. Was found that while for Singh *et al.* (2010) store atmosphere and equipment and convenient layout were the most important factors for Lin (2010) were convenient layout and employees' availability. Then employees' availability was the most significant element also for Feinberg (1995) and interest in problem solving was for Haming *et al.* (2019).

In this way, when considering the publications included in the systematic literature review, dependable service, employees' attitude, quality of merchandise, availability of merchandise, employees' knowledge and interest, and competitive price were the most important service attributes for customers.

Appendix 4 displays the frequency of occurrence and the number of times that each service factor is considered the crucial factor considering the geographic region and time of study.

### ***Differences between geographic regions***

As already stated, distinct studies evidenced the existence of differences between geographic regions. It is noted that for Asia, dependable service (n=5) followed by the availability of merchandise (n=3), employees' attitude (n=3), and quality of merchandise (n=3) were the attributes which were considered the most significant more times. Regarding the European and North American continents, quality of merchandise was considered the critical element more times. In the African sample, availability of merchandise followed by quality of merchandise and visual attractiveness were considered the most significant service factors. This differs from the South American study since cleanliness of the store and convenient operating hours were considered the key service factors. These findings are in line with those reported by Espinoza (1999) who found that factors related with physical aspects of the store are very important for South American customers and by Freinberg (1995) which stated that while Asian customers are focused on the treatment and service delivered by the employees, North American clients are much more merchandise and price oriented.

### ***Differences between time of the studies***

Regarding the time of the study, only one article was included between the years 1990 and 1999. In this study availability of merchandise, employees' availability, and employees' knowledge and interest were considered as the most important factors. In the following

period of 2000 to 2009 were conducted two distinct researches and both considered customers safety and quality of merchandise as the critical service factors for customers. For the years between 2010 and 2014, dependable service was the attribute which was considered more times between the three most significant factors, followed by quality of merchandise and availability of merchandise. Finally, from 2015 until 2020, dependable service and availability of merchandise were the factors that were distinguished more times (n=7, and n=4, respectively). It can be concluded that dependable service was found very important throughout the distinct periods. This is in accordance with the results found by Martínez-Ruiz *et al.* (2017) which state that to satisfy customers, generally, managers should firstly focus on the service delivered. This differs only in periods of economic decline, where price policies must be emphasized.

### **4.3.2. Meta-analysis Findings**

For the meta-analysis 35 investigations were included. By applying the Fisher's method, it was obtained the  $\bar{r}_z$  which allowed to conduct distinct degrees of analysis. Firstly, the impact of service factors on the outcomes' measures (overall service quality, customer satisfaction, customer loyalty, patronage intention, and intention to recommend) was analysed. Then it was verified the influence of service attributes on customer outcomes due to the existence of distinct moderators. Table 12 shows the results regarding the effect of service attributes on consumer outcomes. In total 103 effects were found from the collection of data. In Appendix 5 the findings of the potential moderators are presented.

Similarly, to the systematic literature review, Asia was the geographic region with a greater number of studies, survey was the preferential method of collecting data, and most of the publications did not state the industry coverage. Differently, in this case, more studies were conducted between the years of 2015 and 2020, more researches carried out their investigations in several types of stores (37,1%) and it was the RSQS instrument the most frequently employed (45,7%).

By applying Fisher's method and considering the sample size it was possible to calculate the weighted mean of the effect sizes. With this value, it was possible to learn about the significance of each pair of variables by analysing the existing *p-values*. With the weighted mean analysis, the random effects for each pair of variables were estimated.

The first hypotheses to be tested is the assumed positive link between service factors and customer outcomes. Consequently, the null hypotheses  $H_1$  is: service quality attributes are not positively correlated with customer outcomes in the retail industry.

With the purpose of analysing the relationships between service quality attributes and customer outcomes, only two pairs of relationships could be considered each time. Appendix 6 displays the counting of correlations between service attributes and customer consequences. For each pair of variables under analysis, it was calculated the weighted  $\bar{r}_z$ . Subsequently, it was possible to estimate random effects. Table 12 presents the coefficients and their significance regarding the random approach. Estimates were based only on random-effects models since fixed-effects models considered that all researches included in the analysis are similar and have the same true effect size (Knoll & Matthes, 2017). Then, Stouffer's  $Z$  test was applied. The results show that service quality attributes are significantly positively correlated with customer outcomes since with the obtained  $Z$  combined the corresponding  $p$ -value was  $<,00001$ . Therefore, the null hypothesis can be rejected.

The second goal of this research is to identify whether individual service quality attributes are positively correlated with customer outcomes. Accordingly, the corresponding null hypothesis  $H_2$  is: service quality attribute <sub>$i$</sub>  is not positively correlated with customer outcome <sub>$j$</sub> ; being  $i$ = Visual attractiveness, cleanliness of the store, store atmosphere and equipment, employee appearance, convenient layout, convenient location, dependable service, customers safety, availability of merchandise, clear and detailed product information, employees knowledge and interest, employees availability, employees attitude, interest in problem-solving, complaints handling, returns and exchanges handling, quality of merchandise, convenient parking, convenient operating hours, convenient payment methods, product variety, and competitive price;  $j$ = Overall service quality, customer satisfaction, customer loyalty, patronage intention, and intention to recommend.

Table 12 shows that the vast majority of the 22 service attributes are positively correlated with all five established dependent variables. However, distinct levels of significance for each pair of variables were detected.

|                             | Service factors                        | Customer outcomes       |        |       |                       |       |       |                  |        |       |                     |       |       |                        |       |       |
|-----------------------------|--|-------------------------|--------|-------|-----------------------|-------|-------|------------------|--------|-------|---------------------|-------|-------|------------------------|-------|-------|
|                             |  | Overall Service quality |        |       | Customer Satisfaction |       |       | Customer Loyalty |        |       | Patronage intention |       |       | Intention to recommend |       |       |
|                             |  | Effect                  | LB     | UB    | Effect                | LB    | UB    | Effect           | LB     | UB    | Effect              | LB    | UB    | Effect                 | LB    | UB    |
| <b>Physical aspects</b>     | Visual attractiveness                  | 0,317                   | 0,196  | 0,429 | 0,340                 | 0,222 | 0,448 | 0,226            | 0,035  | 0,402 | 0,249               | 0,167 | 0,327 | 0,301                  | 0,192 | 0,403 |
|                             | Cleanliness of the store               | 0,347                   | 0,258  | 0,431 | 0,372                 | 0,192 | 0,527 | 0,294            | 0,129  | 0,442 | 0,238               | 0,130 | 0,341 | 0,239                  | 0,095 | 0,374 |
|                             | Store atmosphere and equipment         | 0,299                   | 0,178  | 0,411 | 0,412                 | 0,272 | 0,534 | 0,259            | 0,109  | 0,398 | 0,253               | 0,155 | 0,346 | 0,301                  | 0,192 | 0,403 |
|                             | Employee appearance                    | 0,325                   | 0,180  | 0,457 | 0,303                 | 0,162 | 0,431 | 0,373            | 0,262  | 0,474 | 0,420               | 0,378 | 0,461 |                        |       |       |
|                             | Convenient layout                      | 0,244                   | 0,103  | 0,376 | 0,366                 | 0,180 | 0,528 | 0,259            | 0,109  | 0,398 | 0,239               | 0,120 | 0,351 | 0,268                  | 0,157 | 0,373 |
|                             | Convenient location                    | 0,437                   | 0,329  | 0,534 | 0,384                 | 0,204 | 0,539 | 0,310            | 0,216  | 0,399 |                     |       |       |                        |       |       |
| <b>Reliability</b>          | Dependable service                     | 0,352                   | 0,220  | 0,472 | 0,339                 | 0,246 | 0,427 | 0,220            | 0,052  | 0,377 | 0,265               | 0,126 | 0,395 | 0,237                  | 0,173 | 0,299 |
|                             | Customers safety                       | 0,407                   | 0,340  | 0,470 | 0,342                 | 0,225 | 0,449 | 0,358            | 0,046  | 0,606 | 0,336               | 0,241 | 0,426 | 0,256                  | 0,187 | 0,322 |
|                             | Availability of merchandise            | 0,371                   | 0,285  | 0,450 | 0,337                 | 0,249 | 0,419 | 0,353            | 0,137  | 0,537 | 0,306               | 0,124 | 0,468 | 0,242                  | 0,181 | 0,301 |
|                             | Clear and detailed product information |                         |        |       | 0,352                 | 0,218 | 0,473 | 0,242            | 0,043  | 0,423 |                     |       |       | 0,419                  | 0,322 | 0,506 |
| <b>Personal interaction</b> | Employees knowledge and interest       | 0,398                   | 0,311  | 0,479 | 0,371                 | 0,259 | 0,474 | 0,342            | 0,207  | 0,464 | 0,372               | 0,236 | 0,494 | 0,235                  | 0,163 | 0,305 |
|                             | Employees availability                 | 0,361                   | 0,277  | 0,440 | 0,358                 | 0,254 | 0,454 | 0,352            | 0,197  | 0,491 | 0,370               | 0,190 | 0,525 | 0,241                  | 0,149 | 0,329 |
|                             | Employees attitude                     | 0,411                   | 0,328  | 0,488 | 0,373                 | 0,281 | 0,458 | 0,353            | 0,201  | 0,489 | 0,383               | 0,214 | 0,530 | 0,239                  | 0,165 | 0,311 |
| <b>Problem solving</b>      | Interest in problem solving            | 0,322                   | 0,189  | 0,443 | 0,259                 | 0,125 | 0,383 | 0,147            | 0,026  | 0,263 | 0,330               | 0,165 | 0,478 | 0,233                  | 0,084 | 0,372 |
|                             | Complaints handling                    | 0,332                   | 0,150  | 0,492 | 0,414                 | 0,140 | 0,629 | 0,176            | -0,097 | 0,424 | 0,254               | 0,132 | 0,369 | 0,188                  | 0,015 | 0,351 |
|                             | Returns and exchanges handling         | 0,334                   | 0,202  | 0,454 | 0,355                 | 0,207 | 0,488 | 0,151            | -0,019 | 0,313 | 0,336               | 0,157 | 0,494 | 0,308                  | 0,180 | 0,425 |
| <b>Policy</b>               | Quality of merchandise                 | 0,403                   | 0,325  | 0,475 | 0,435                 | 0,343 | 0,518 | 0,330            | 0,217  | 0,433 | 0,235               | 0,151 | 0,315 | 0,272                  | 0,175 | 0,364 |
|                             | Convenient parking                     |                         |        |       | 0,264                 | 0,113 | 0,403 | 0,269            | 0,019  | 0,487 | 0,178               | 0,054 | 0,297 | 0,212                  | 0,102 | 0,317 |
|                             | Convenient operating hours             | 0,312                   | 0,197  | 0,418 | 0,427                 | 0,262 | 0,568 | 0,228            | 0,071  | 0,373 | 0,342               | 0,026 | 0,596 | 0,236                  | 0,122 | 0,344 |
|                             | Convenient payment methods             | 0,258                   | 0,182  | 0,331 | 0,356                 | 0,275 | 0,432 | 0,228            | 0,071  | 0,373 | 0,205               | 0,121 | 0,287 | 0,250                  | 0,156 | 0,340 |
|                             | Product variety                        | 0,380                   | 0,276  | 0,474 | 0,396                 | 0,244 | 0,529 | 0,386            | 0,319  | 0,449 |                     |       |       | 0,313                  | 0,196 | 0,421 |
|                             | Competitive price                      | 0,182                   | -0,127 | 0,458 | 0,302                 | 0,189 | 0,406 | 0,095            | -0,086 | 0,271 | 0,368               | 0,272 | 0,456 | 0,313                  | 0,196 | 0,421 |

**Table 12** – Determinants of Customer Outcomes (correlation effect, LB – Lower bound, UB – Upper bound)





 Respectively significant at 0,001; 0,01; and 0,05; and Non Significant



Regarding physical aspects, the results suggest that all six included attributes are key determinants of overall service quality, customer satisfaction, and customer loyalty. According to Cohen (1988) classification, most of the relationships were considered medium since all the effect sizes for these three outcomes are near 0,3. The findings show that while convenient location is the top driver of overall service quality (0,437), store atmosphere and equipment is for customer satisfaction (0,412) and employee appearance is the most important for customer loyalty (0,373) and patronage intention (0,420). Due to a lack of data, it was not possible to analyse the relationships between employee appearance and intention to recommend and between convenient location and both patronage intention and intention to recommend. For the remaining pair of variables, it was found a medium effect of the attributes on patronage intention and intention to recommend.

For reliability dimension, it was identified that all attributes are key determinants of satisfaction and intention to recommend ( $p$ -values <0,001). In this dimension, dependable service and availability of merchandise were the only factors that demonstrated significance with all five customer outcomes. The results show that while customer safety is the factor with the most effect on overall service quality (0,407) and patronage intention (0,336), clear and detailed information is on customer satisfaction (0,352) and intention to recommend (0,419). Regarding customer loyalty, the results show that while for customer safety was not detected any significance, availability of merchandise was the attribute with more effect on this outcome.

Personal interaction factors were found positively correlated with all customer outcomes ( $p$ -values <0,001). The results show a medium-large effect on the relationship between the three attributes and customer outcomes. The exception is regarding the intention to recommend since the impact of the service attributes is estimated to be medium-small. Employees' attitude was the key driver for all customer outcomes excepting intention to recommend. Regarding this outcome, employees' availability was the factor with greater effect (0,241).

Considering problem solving dimension, was found a non-significant effect of both complaints handling and returns and exchanges handling on customer loyalty. Thus, interest in problem solving is the only item that impacts customer loyalty (0,147). The findings revealed a medium impact of the three included on the four remaining customer consequences. It is also noticed that while returns and exchanges handling is the critical

factor for overall service quality (0,334), patronage intention (0,336), and intention to recommend (0,308), complaints handling is for customer satisfaction (0,414).

Finally, for the policy dimension, the results suggest that quality of merchandise, convenient operating hours, and convenient payment methods represent key patronage factors since are positively related to all five outcomes. Due to the lack of information that relates convenient parking with overall service quality and product variety with customer loyalty and patronage intention was not possible to analyse these relationships. Considering those two independent variables was found a positive significance for all the remaining correlations. Competitive price is a key determinant of customer satisfaction, patronage intention, and intention to recommend ( $p\text{-value} < 0,001$ ). However, it was not detected an effect of this attribute on customer loyalty and overall service quality. Quality of merchandise is the most important factor and has a medium-large effect on overall service quality (0,403) and customer satisfaction (0,435). This differs from the remaining outcomes since while competitive price is the key driver for patronage intention (0,368) and intention to recommend (0,313), product variety is for customer loyalty (0,386).

Therefore, considering the results of the meta-analysis, all five dimensions include factors that were significant for all five customer outcomes: for physical aspects (visual attractiveness, cleanliness of the store, store atmosphere and equipment, and convenient layout); for reliability (dependable service, and availability of merchandise); for personal interaction (employees knowledge and interest, employees availability, and employees attitude); for problem solving (interest in problem solving); and for policy (quality of merchandise, convenient operating hours, and convenient payment methods).

These results are in accordance with what was found by Blut *et al.* (2018). Although the study comprises the entire retail industry, including e-tailing and specialized stores, it was detected that service quality attributes directly affect customer outcomes. In line with the conclusions reached by Blut *et al.* (2018) was found that all attributes affect customer satisfaction. Furthermore, for Blut *et al.* (2018) quality of merchandise was the only attribute that has greater significance for all the examined outcomes. This differs from our research given that, despite product quality is positively correlated with all outcomes, other attributes were also considered to have a strong positive impact on the five established customer outcomes. This is explained because while Blut *et al.* (2018) comprises all establishments and electronic retail, our investigation is focused on food related retail stores.

Taking into consideration the obtained results it is possible to conclude that Hypothesis 2 is supported.

The third hypothesis to be tested is the influence of moderators on the relationship between service quality attributes and customer outcomes. The moderators considered were time, region, and type of store. The corresponding null hypothesis  $H_3$  is: the relationship between service attributes and customer outcomes is not affected by moderators (time, geographic region, type of store)

Before analysing the final *p-values* of the relationships between service quality attributes and customer outcomes moderated by other variables it was noticed that this analysis was only conducted in 56 out of the 103 pairs of variables (detailed information may be found in Appendix 5). Due to the lack of information, it was impossible to perform this analysis for the outcome 'intention to recommend'.

In testing the moderating effect of geographic region, it is possible to observe that it was in the relationships between attributes and the overall service quality where it was detected more positive significance. The correlation between service attributes and both customer satisfaction and patronage intention was also affected by the location. For the three customer outcomes, Asia followed by Europe were considered significant by the largest amount of times. Store atmosphere and equipment, convenient layout, and dependable service represent the attributes that in relation to overall service quality are most affected by the geographic region of Europe. Differently, there are the relations between availability of merchandise, employees' attitude, and convenient operating hours with patronage intentions that are greatly influenced by the studies conducted in Asia. In addition, the pair of variables customer satisfaction and convenient operating hours is also affected by the location.

By examining the results, it is noticed that the South America cases are not considered as significant for customer service attributes as the other geographic regions. One possible argument for this situation is the underdevelopment of the countries pertaining to this geographic region. Only in the correlation between visual attractiveness and overall service quality was detected a great effect of the South America region (*p-value* <0,001). This goes in line with what has been found by Espinoza (1999) since physical aspects was the most important dimension for customers from Peru.

In this analysis, it was detected that time of study had a significant negative effect on several correlations. The patronage intention followed by overall service quality and customer

satisfaction were the outcomes that related to service attributes were more affected by the investigations' periods. As possible moderator is estimated that compared to geographic region, time of the study has less significance. Availability of merchandise and convenient operating hours were the attributes that were significantly affected more frequently by the period.

Although less likely than geographic regions, the time of the study can also have an impact on customers. For Martínez-Ruiz *et al.* (2017) clients' satisfaction may change over time by the existence of market progress and economic trends. In this study was found that prior to an economic decline the quality of merchandise was the main service attribute. This changed with the years and after the depression, since convenient location, personal interaction, and shopping pleasing environment started to be considered more significant. Bearing in mind that between the years of 2008 and 2013 an economic crisis emerged, is possible to support the previous findings with this analysis. For instance, this is demonstrated in the negative effect found in the relation store atmosphere and equipment and convenient layout with overall service quality for the years of 2000-2010, or in the positive impact of those factors on customer loyalty for the time frame of 2015-2020.

Hardly any correlation was significantly impacted by the store format. The only case is the negative effect of both grocery and hypermarkets on the link convenient operating hours and customer satisfaction.

It is possible to affirm that several of the *p-values* are significant at 5%, which leads us to reject the null hypothesis of the presence of moderators, such as geographic region and time of the study in the relationship between service attributes with customer outcomes. Hence, it is possible to conclude that Hypothesis 3 is supported.

The findings of this research have several practical implications for retail managers. Mainly, it provides guidance on the determinants of service attributes for food related retail establishments.

It is possible to highlight the attributes dependable service, quality and availability of merchandise, and employees' attitude, knowledge and interest, as the ones that have higher impact on the customer outcomes, such as overall service quality, customer satisfaction, or customer loyalty. Thereby, managers may invest in:

- employees' training practices for personal and social skills development;

- inventory systems that favour the availability of the merchandise, such as lean management or periodic review systems;
- suppliers selection processes for assuring a higher quality level of the merchandise and;
- quality control systems at the source and/or when the merchandise arrives to the company.

This study contributes with better understanding regarding the effect of the service factors on customer outcomes and offers guidance for further research. Several paths for research are:

- to perform an analysis comparing the electronic retail with store traditional retail since e-channels are fast replacing the traditional ones, being an important revenue source for retailers and therefore must be identified which service factors have great importance for both or just one channel;
- to assess the sociodemographic of the investigations' respondents (e.g. family household, age of the respondent, gender) in the interest of detecting any deviations between customers characteristics;
- to study the impact of other moderators like economic conditions or pandemic situations such as COVID-19, in order to identify the effect of service quality attributes on customers in distinct contexts.

Finally, a key takeaway concerning research work, is that researchers using regression-based methods should always report their full correlation matrix among all dependent and independent variables. This type of transparency will enhance the rigor of event research and make data accessible to other researchers.

## 5. Conclusion

The purpose of this research was to examine which service attributes are crucial for customers in the retail sector with focus on the grocery retail industry. In order to do that, information from former investigations that identify the critical service attributes in the retail industry was collected. Then, it was performed a combination of a systematic literature review with a meta-analysis.

After performing the systematic review and the meta-analysis, it was possible to show a significantly positive relationship between service quality attributes and customer outcomes in the retail grocery industry. Hence, managers should take into consideration the service attributes in their decision-making process.

Regarding the findings from the systematic literature review, it is possible to notice that dependable service, followed by employees' attitude, quality and availability of merchandise, employees' knowledge and interest and competitive price were the attributes with more frequency in the included literature. Moreover, quality of merchandise along with dependable service are the factors considered as the number one priority in most researches.

From the meta-analysis, was found that most of the service factors positively affected the various outcome variables. However, was found major significance ( $p\text{-value} < 0,001$ ) for all outcomes in certain factors. This includes the personal interaction attributes, customer safety, convenient operating hours, convenient payment methods, and quality of merchandise. Furthermore, still with significance for overall service quality, customer satisfaction, customer loyalty, patronage intention, and intention to recommend, it emerges visual attractiveness, cleanliness of the store, dependable service, availability of merchandise, interest in problem solving, convenient operating hours and convenient payment methods.

As a result, posterior to the performance of both analyses and regardless of the importance of all service variables, it can be concluded that the relation between customers and employees, as well as the dependable service and constant availability of merchandise with quality, are widely seen as important factors for clients. Therefore, it is recommended that retail managers take actions with the interest of promoting those factors.

Thereby, this study presents some guidelines for managers by providing important information about which service quality attributes they should act and improve.

This investigation fills a gap in the literature because it is the only research that combines both analyses (meta-analysis and the systematic literature review) and presents the most important service factors for customers in the retail industry with focus in non specialized stores. Therefore, this dissertation represents a substantive contribution to the academic community.

Notwithstanding the undertaken effort to cover as many findings as possible, this dissertation has some limitations. First, this analysis has a limited number of studies. This occurs because in the literature there is not a great amount of information about the relationship between service attributes and customer outcomes in generalist stores. Therefore, this could be a working field and further research can be done in order to managers and academics have more information about the most important service for customers. The second limitation is regarding the conversion of the statistical coefficients for Pearson's  $r$ . Although employed in a significant number of researches, including in several of the similar studies in this meta-analysis, the conversion of  $\beta$  coefficient for  $r$ , recommended by Peterson and Brown (2005) is limited. Despite the estimation procedure has proven to be quite accurate, it is not the exact conversion (Peterson and Brown, 2005). Since the great majority of the studies presented only regression coefficients as statistical information it was crucial to include those investigations. The benefits of including these analyses outweigh the effects of excluding them, as doing so would reduce the sample size. The key takeaway is that researchers using regression-based methods should always report their full correlation matrix among all dependent and independent variables. This type of transparency will enhance the rigor of event research and make data accessible to other researchers. Finally, it might be interesting to study the impact of other moderators like economic conditions or pandemic situations such as COVID-19, in order to identify the effect of service quality attributes on customers in distinct contexts.

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## **Appendixes**

### **Appendix 1 – Service Quality Gaps**

Gap 1: Referred to as Knowledge gap, this represents the deviation between customer expectations and managers' perceptions on customer expectations. The existence of this gap means that companies' managers fail to correctly identify customers' expectations.

Gap 2: Appears when management perceptions of customers' expectations differ from service specifications. It is referred to as the Design gap because occurs when service providers fail to design the right service standards.

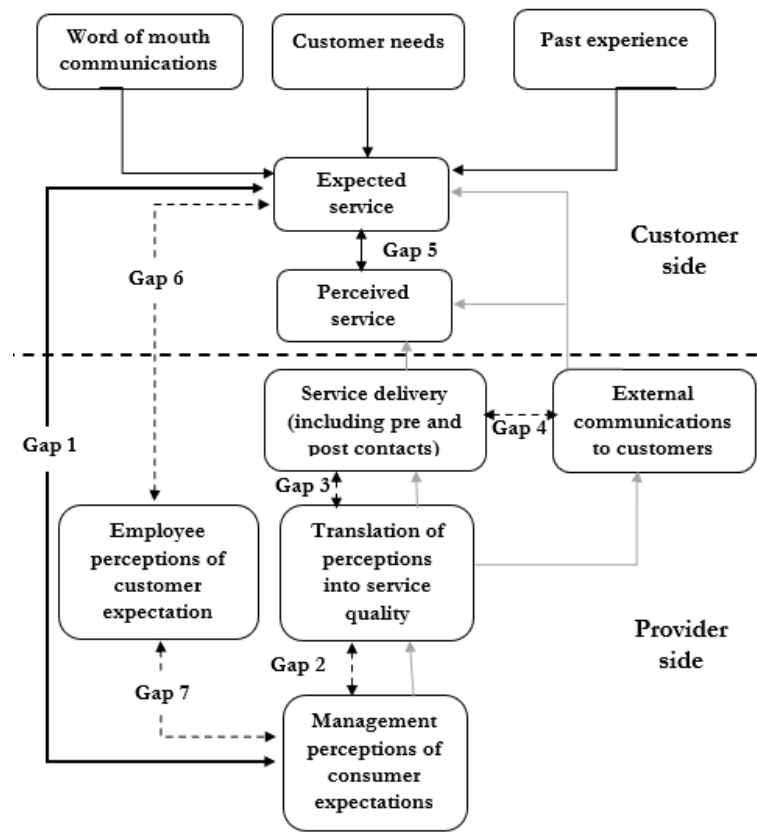
Gap 3: Titled as Performance gap, occurs when there exists a discrepancy between service quality specifications and service provided.

Gap 4: Presents the difference between service delivered and what is communicated/ advertised to customers. Thus, it is referred to as the Communication gap.

Gap 5: Referred to as Service quality gap, it is the summation of the previous gaps (Gap 1, Gap 2, Gap 3, Gap 4). Represents the discrepancy between customers' expectations and their perceptions of the service performed.

Gap 6: Titled as internal Knowledge gap, occurs when there exist differences between customer expectations and front-line service providers' perceptions.

Gap 7: Presents the difference between front-line employees and management perception. Thus, it is referred to as the Internal Performance gap.



The extended gap model (Developed by Luk & Layton, 2002)

## Appendix 2 – Service Factors Description

|                      | Service factors                        | Description  |
|----------------------|--|--|
| Physical aspects     | Visual attractiveness                  | Considers the appearance not only of the physical facilities but also all materials, such as publicity or signs, related to the store  |
|                      | Cleanliness of the store               | Represents the cleanliness of the infrastructures, inside and outside of the store   |
|                      | Store atmosphere and equipment         | It includes the modernity and adequacy of the store equipment and fixtures as well as the appropriateness of all atmosphere factors  |
|                      | Employee appearance                    | Shows the look and appearance of the store employees   |
|                      | Convenient layout                      | Constitutes all attributes that are influenced by the store layout. Can be the easiness of finding products, the practicability to move around the store or just the comfortableness of the store  |
|                      | Convenient location                    | Refers to where the store is located. If is close to home or work, if is a place where generally customers pass or if is easy to reach because the existence of convenient transport   |
| Reliability          | Dependable service                     | Considers the way that the store complies with promises and if it performs the service promptly and at the right time. Therefore, represents the promptness of the service, the fulfillment of the promises and the general image of the service |
|                      | Customer safety                        | Includes the assurance of error-free transactions and records in the store, the confidence that all the employees inspire on customers and the existence of security personnel   |
|                      | Availability of merchandise            | Comprises the availability of the products that customers want when they want  |
|                      | Clear and detailed product information | Represents the information about the merchandise and their prices  |
| Personal interaction | Employees knowledge and interest       | Displays the employees' knowledge and interest to assist or advise customers. Comprises the willingness to help customers, the understanding of clients' needs and the adequateness of expertise   |
|                      | Employees availability                 | Comprehends the employees' fast response and the adequate number of salespersons   |
| Problem solving      | Employees attitude                     | Consists on employees' courtesy, friendliness, politeness, and affable service   |
|                      | Interest in problem solving            | Refers to the interest and timeliness in resolve customer difficulties and problems  |
|                      | Complaints handling                    | Ability to record and timely handle complaints   |
|                      | Returns and exchanges handling         | Capacity to present a convenient return system and good refund policies  |
| Policy               | Quality of merchandise                 | Considers the quality that retailers want to deliver. Can be merchandise and fresh products with higher or lower quality   |
|                      | Convenient parking                     | This attribute refers to the quality and convenience of the parking lot. Therefore, comprehends the availability, cleanliness and easy access to the existing parking  |
|                      | Convenient operating hours             | Characterises the length of store operating time   |
|                      | Convenient payment methods             | Is related to the acceptance of most of the credit cards, the existence of the own loyalty card, offer of different alternatives for payment, and the payment process  |
|                      | Product variety                        | Represents the existence of appropriate depth and width of the assortment  |
|                      | Competitive price                      | This refers to the price that is offered by the stores. Can be reasonable prices and prices which are lower than similar stores  |

### Appendix 3 – List of Studies Included in the Analysis

| Authors  | Journal   |
|--|---|
| <b>Studies included in both analysis</b>                         |   |
| Amorim and Saghezchi (2014)                                      | International Journal of Quality and Service Sciences   |
| Biswal <i>et al.</i> (2016)                                      | International Journal of Business Excellence  |
| Naik <i>et al.</i> (2010)  | European journal of social sciences   |
| Pham (2019)  | International Journal of Civil Engineering and Technology   |
| <b>Studies included only in the Systematic Literature Review</b> |   |
| Adam <i>et al.</i> (2018)  | Journal of Business and Retail Management Research  |
| Ahmad <i>et al.</i> (2014)                                       | Procedia-Social and Behavioral Sciences   |
| Bandyopadhyay (2018)   | Journal of Business Excellence  |
| Chuang (2010)  | Industrial Management & Data Systems  |
| Cuevas <i>et al.</i> (2014)                                      | Proceedings of the American Society for Engineering Management 2014 International Annual Conference S. Long, E-H. Ng, and C. Downing eds. |
| Deb and Lomo-David (2014)  | Journal of Retail & Distribution Management   |
| Feinberg (1995)  | Total Quality Management  |
| Haming <i>et al.</i> (2019)                                      | Journal of Distribution Science   |
| Lin (2010)   | Expert Systems with Applications  |
| Min (2006)   | The Service Industries Journal  |
| Min (2010)   | Journal of Services Marketing   |
| Nilsson <i>et al.</i> (2015)                                     | Journal of Retail & Distribution Management   |
| Singh <i>et al.</i> (2010)                                       | Int. J. Services and Standards  |
| Souza <i>et al.</i> (2016)                                       | Revista Espacios  |
| Suresh <i>et al.</i> (2019)                                      | International Journal of System Assurance Engineering and Management  |
| Tešić (2020)   | Strategic Management  |
| Torlak <i>et al.</i> (2010)                                      | Management Research Review  |
| Ulkhaq <i>et al.</i> (2019)                                      | 2019 International Conference on Engineering, Science, and Industrial Applications (ICESI)  |
| Wang <i>et al.</i> (2011)  | International Conference on Information Management  |
| Zhou and Zhang (2009)  | Sixth International Conference on Fuzzy Systems and Knowledge Discovery   |
| <b>Studies included only in the Meta-analysis</b>                |   |
| Allaway <i>et al.</i> (2011)                                     | Journal of Product & Brand Management   |
| Anselmsson and Johansson (2014)                                  | International Journal of Quality and Service Sciences   |
| Biscaia <i>et al.</i> (2017)                                     | International Journal of Quality & Reliability Management   |
| Das <i>et al.</i> (2010)   | International Journal of Quality & Reliability Management.  |
| Elmelegy <i>et al.</i> (2017)                                    | Quality Management Journal  |
| Espinoza (1999)  | International Journal of Service Industry Management  |
| Huang (2009)   | Total Quality Management  |
| Irfan <i>et al.</i> (2019)                                       | International Journal of Retail & Distribution Management   |
| Jain and Aggarwal (2018)   | Management Decision   |
| Julian <i>et al.</i> (2015)                                      | Journal of Transnational Management   |
| Kitapci <i>et al.</i> (2013)                                     | Management research review  |
| Kumar (2017)   | Pacific Business Review International   |
| Martínez-Ruiz <i>et al.</i> (2011)                               | International Journal of Retail & Distribution Management   |
| Martínez-Ruiz <i>et al.</i> (2017)                               | Springer Proceedings in Business and Economics  |

|                                     |  |
|-------------------------------------|--|
| Nadiri and Tümer (2009)             | E + M EKONOMIE A MANAGEMENT  |
| Nguyen <i>et al.</i> (2016)         | Asian Social Science   |
| Noyan and Şimşek (2012)             | World Conference On Business, Economics And Management                           |
| Noyan and Şimşek (2014)             | World Conference On Business, Economics And Management                           |
| Rajic and Dado (2013)               | Total Quality Management & Business Excellence                                   |
| Rajic <i>et al.</i> (2013)          | Business Administration and Management   |
| Rangarajan and Krishna (2018)       | Indian Journal of Public Health Research & Development,                          |
| Ruiz-Molina <i>et al.</i> (2018)    | Journal of Services Marketing  |
| Sharma (2015)                       | Int. J. Business and Globalisation   |
| Siebers <i>et al.</i> (2013)        | Journal of Strategic Marketing   |
| Siu and Cheung (2001)               | Marketing Intelligence & Planning  |
| Siu and Chow (2004)                 | Journal of International Consumer Marketing                                      |
| Sivapalan and Jebarajakirthy (2017) | Marketing Intelligence & Planning  |
| Tepanon and Thatiroth (2016)        | 13th International Conference on Service Systems and Service Management (ICSSSM) |
| Thu Ha <i>et al.</i> (2015)         | Asian Social Science   |
| Ting and Chen (2002)                | Total Quality Management   |
| Upadhyaya <i>et al.</i> (2018)      | Journal of Business and Retail Management Research                               |

**Appendix 4 – Frequency of Occurrence and Importance of Factors  
Considering Geographic Region and Time of Study**

| Number of times that each factor is included | Geographic region |        |        |         |         | Time of study |           |           |           |
|--|-------------------|--------|--------|---------|---------|---------------|-----------|-----------|-----------|
|  | North             |        |        | South   |         | 1990-1999     | 2000-2009 | 2010-2014 | 2015-2020 |
|  | Asia              | Africa | Europe | America | America |               |           |           |           |
| Visual attractiveness                        | 11                | 1      | 2      | 1       | 0       | 0             | 1         | 8         | 6         |
| Cleanliness of the store                     | 8                 | 0      | 2      | 2       | 1       | 0             | 1         | 9         | 3         |
| Store atmosphere and equipment               | 11                | 0      | 3      | 1       | 0       | 2             | 0         | 6         | 7         |
| Employees appearance                         | 1                 | 0      | 1      | 0       | 1       | 0             | 0         | 1         | 2         |
| Convenient layout                            | 10                | 1      | 2      | 0       | 1       | 0             | 0         | 7         | 7         |
| Convenient location                          | 3                 | 0      | 1      | 4       | 0       | 1             | 1         | 5         | 1         |
| Dependable service                           | 18                | 0      | 4      | 2       | 1       | 2             | 2         | 12        | 9         |
| Customers safety                             | 9                 | 0      | 3      | 1       | 1       | 3             | 1         | 6         | 4         |
| Availability of merchandise                  | 13                | 1      | 2      | 1       | 0       | 1             | 1         | 9         | 6         |
| Clear and detailed product information       | 4                 | 0      | 1      | 2       | 0       | 0             | 2         | 4         | 1         |
| Employees knowledge and interest             | 12                | 1      | 3      | 1       | 1       | 3             | 1         | 7         | 7         |
| Employees availability                       | 11                | 0      | 2      | 0       | 1       | 1             | 1         | 7         | 5         |
| Employees attitude                           | 16                | 1      | 3      | 4       | 1       | 3             | 2         | 13        | 7         |
| Interest in problem solving                  | 10                | 1      | 2      | 0       | 0       | 0             | 1         | 7         | 5         |
| Complaints handling                          | 9                 | 0      | 1      | 0       | 0       | 1             | 1         | 6         | 2         |
| Returns and exchanges handling               | 8                 | 0      | 1      | 0       | 0       | 0             | 1         | 6         | 2         |
| Quality of merchandise                       | 11                | 1      | 3      | 3       | 0       | 2             | 2         | 9         | 5         |
| Convenient parking                           | 10                | 0      | 2      | 0       | 1       | 0             | 0         | 8         | 5         |
| Convenient operating hours                   | 6                 | 0      | 1      | 2       | 1       | 0             | 1         | 6         | 3         |
| Convenient payment methods                   | 8                 | 0      | 1      | 2       | 1       | 0             | 1         | 8         | 3         |
| Product variety                              | 6                 | 0      | 1      | 3       | 0       | 0             | 1         | 7         | 2         |
| Competitive price                            | 9                 | 1      | 2      | 4       | 0       | 1             | 2         | 7         | 6         |

| Number of times that each factor is considered the most important | Geographic region |        |        |         |         | Time of study |           |           |           |
|---|-------------------|--------|--------|---------|---------|---------------|-----------|-----------|-----------|
|   | North             |        |        | South   |         | 1990-1999     | 2000-2009 | 2010-2014 | 2015-2020 |
|   | Asia              | Africa | Europe | America | America |               |           |           |           |
| Visual attractiveness   | 2                 | 0      | 0      | 0       | 0       | 0             | 0         | 2         | 0         |
| Cleanliness of the store  | 1                 | 0      | 0      | 0       | 1       | 0             | 0         | 1         | 1         |
| Store atmosphere and equipment                                    | 1                 | 0      | 0      | 0       | 0       | 0             | 0         | 1         | 0         |
| Employees appearance  | 1                 | 0      | 0      | 0       | 0       | 0             | 0         | 1         | 0         |
| Convenient layout   | 2                 | 0      | 0      | 0       | 0       | 0             | 0         | 2         | 0         |
| Convenient location   | 1                 | 0      | 0      | 1       | 0       | 0             | 0         | 2         | 0         |
| Dependable service  | 5                 | 0      | 1      | 0       | 0       | 0             | 0         | 3         | 3         |
| Customers safety  | 2                 | 0      | 0      | 0       | 0       | 0             | 1         | 1         | 0         |
| Availability of merchandise                                       | 3                 | 1      | 0      | 1       | 0       | 1             | 0         | 2         | 2         |
| Clear and detailed product information                            | 1                 | 0      | 0      | 0       | 0       | 0             | 0         | 1         | 0         |
| Employees knowledge and interest                                  | 0                 | 0      | 0      | 0       | 0       | 0             | 0         | 0         | 0         |
| Employees availability  | 2                 | 0      | 1      | 0       | 0       | 1             | 0         | 2         | 0         |
| Employees attitude  | 3                 | 0      | 0      | 0       | 0       | 1             | 0         | 1         | 1         |
| Interest in problem solving                                       | 1                 | 0      | 0      | 0       | 0       | 0             | 0         | 0         | 1         |
| Complaints handling   | 0                 | 0      | 0      | 0       | 0       | 0             | 0         | 0         | 0         |
| Returns and exchanges handling                                    | 0                 | 0      | 0      | 0       | 0       | 0             | 0         | 0         | 0         |
| Quality of merchandise  | 3                 | 0      | 2      | 2       | 0       | 0             | 1         | 4         | 2         |
| Convenient parking  | 0                 | 0      | 0      | 0       | 0       | 0             | 0         | 0         | 0         |
| Convenient operating hours  | 1                 | 0      | 0      | 0       | 1       | 0             | 0         | 1         | 1         |
| Convenient payment methods  | 1                 | 0      | 0      | 0       | 0       | 0             | 0         | 1         | 0         |
| Product variety   | 1                 | 0      | 0      | 0       | 0       | 0             | 0         | 1         | 0         |
| Competitive price   | 2                 | 0      | 0      | 0       | 0       | 0             | 0         | 1         | 1         |

### Appendix 5 – Moderator Analysis- Estimation Mixed Effects (significance levels)

| Attributes           |  | Overall service quality |        |          |          |                   |           |           |               |      |      |
|----------------------|--|-------------------------|--------|----------|----------|-------------------|-----------|-----------|---------------|------|------|
|                      |  | Geographic region       |        |          |          | Time of the study |           |           | Type of store |      |      |
|                      |  | Asia                    | Euro.  | N. Amer. | S. Amer. | 2009-2010         | 2011-2014 | 2015-2020 | Grocery       | Hyp. | Sup. |
| Physical aspects     | Visual attractiveness                  | 0,041                   | -0,006 | 0,365    | 0,436    | 0,417             |           |           |               |      |      |
|                      | Cleanliness of the store               | 0,469                   | 0,596  |          |          | -0,185            | -0,142    |           |               |      |      |
|                      | Store atmosphere and equipment         | 0,469                   | 1,064  | 0,365    | 0,436    | -0,117            |           |           |               |      |      |
|                      | Employee appearance                    | 0,041                   |        | 0,365    | 0,436    |                   | 0,331     |           | 0,428         |      |      |
|                      | Convenient layout                      | 0,469                   | 1,264  |          |          | -0,230            | -0,458    |           |               |      |      |
|                      | Convenient location                    |                         |        |          |          |                   |           |           |               |      |      |
| Reliability          | Dependable service                     | 0,343                   | 0,958  | 0,424    | 0,354    | 0,000             | 0,213     |           |               |      |      |
|                      | Customers safety                       | 0,471                   | 0,594  | 0,412    | 0,343    | -0,122            | -0,034    |           |               |      |      |
|                      | Availability of merchandise            | 0,527                   | 0,507  |          |          | -0,118            | -0,325    |           |               |      |      |
|                      | Clear and detailed product information |                         |        |          |          |                   |           |           |               |      |      |
| Personal interaction | Employees knowledge and interest       | 0,502                   | 0,252  |          |          | -0,050            | 0,350     |           |               |      |      |
|                      | Employees availability                 | 0,343                   | 0,262  | 0,563    |          | 0,080             | -0,131    |           |               |      |      |
|                      | Employees attitude                     | 0,516                   | 0,491  | 0,412    | 0,343    | -0,124            | 0,028     |           |               |      |      |
| Problem solving      | Interest in problem solving            | 0,469                   | 0,513  |          |          | -0,180            |           |           |               |      |      |
|                      | Complaints handling                    | 0,352                   | 0,333  |          |          |                   |           |           |               |      |      |
|                      | Returns and exchanges handling         | 0,353                   | 0,333  |          |          |                   |           |           |               |      |      |
| Policy               | Quality of merchandise                 | 0,614                   | 0,454  |          |          | -0,248            |           |           |               |      |      |
|                      | Convenient parking                     |                         |        |          |          |                   |           |           |               |      |      |
|                      | Convenient operating hours             |                         |        |          |          |                   |           |           |               |      |      |
|                      | Convenient payment methods             | 0,265                   | 0,177  |          |          | 0,028             |           |           |               |      |      |
|                      | Product variety                        | 0,265                   | 0,454  |          |          |                   |           |           |               |      |      |
|                      | Competitive price                      |                         |        |          |          |                   | 0,323     | 0,379     |               |      |      |

Respectively significant at 0,001; 0,01; and 0,05; and Non Significant

|                      |  | Customer satisfaction |        |          |          |                   |           |           |               |        |        |
|----------------------|--|-----------------------|--------|----------|----------|-------------------|-----------|-----------|---------------|--------|--------|
|                      |  | Geographic region     |        |          |          | Time of the study |           |           | Type of store |        |        |
| Attributes           |  | Asia                  | Euro.  | N. Amer. | S. Amer. | 2009-2010         | 2011-2014 | 2015-2020 | Grocery       | Hyp.   | Sup.   |
| Physical aspects     | Visual attractiveness                  |                       |        |          |          |                   |           |           |               |        |        |
|                      | Cleanliness of the store               |                       |        |          |          |                   |           |           |               |        |        |
|                      | Store atmosphere and equipment         | 0,489                 | -0,145 | 0,048    |          | 0,216             | 0,361     |           | -0,205        | -0,473 |        |
|                      | Employee appearance                    | 0,400                 | 0,295  |          |          |                   |           |           |               | -0,153 |        |
|                      | Convenient layout                      | 0,547                 | 0,542  |          |          | 0,582             | -0,170    |           |               |        |        |
|                      | Convenient location                    | -0,324                | 0,309  | -0,350   |          | 0,580             | 0,689     |           |               |        |        |
| Reliability          | Dependable service                     | 0,295                 | 0,160  | 0,602    |          | 0,180             | 0,219     |           |               |        |        |
|                      | Customers safety                       | 0,401                 | 0,340  |          |          | -0,082            | 0,019     |           |               |        |        |
|                      | Availability of merchandise            | 0,382                 | 0,355  |          |          | 0,084             | -0,027    |           |               |        |        |
|                      | Clear and detailed product information | 0,600                 | 0,355  |          |          | 0,249             | 0,083     |           |               |        |        |
| Personal interaction | Employees knowledge and interest       | 0,131                 | -0,012 | 0,181    |          | 0,315             | 0,361     |           | -0,126        | -0,365 | -0,210 |
|                      | Employees availability                 | 0,377                 | 0,280  |          |          | 0,058             | 0,023     |           | 0,040         | -0,164 |        |
|                      | Employees attitude                     | 0,399                 | 0,186  |          |          | 0,174             | 0,130     |           |               |        |        |
| Problem solving      | Interest in problem solving            |                       |        |          |          |                   |           |           |               |        |        |
|                      | Complaints handling                    |                       |        |          |          |                   |           |           |               |        |        |
|                      | Returns and exchanges handling         | 0,530                 | 0,766  |          |          | 0,062             | -0,450    |           |               |        |        |
| Policy               | Quality of merchandise                 | 0,607                 | 0,355  |          |          | -0,014            | 0,159     |           |               |        |        |
|                      | Convenient parking                     |                       |        |          |          |                   |           |           |               |        |        |
|                      | Convenient operating hours             | 0,908                 | 1,739  | 1,080    |          | 1,003             | 0,802     |           | -1,543        | -1,238 |        |
|                      | Convenient payment methods             |                       |        |          |          |                   |           |           |               |        |        |
|                      | Product variety                        | 0,121                 | 0,068  | -0,249   |          | 0,272             | 0,447     |           |               |        |        |
|                      | Competitive price                      | 0,415                 | 0,232  | 0,106    |          | 0,493             | 0,265     |           |               |        |        |



|                      |  | Customer loyalty  |       |          |          |                   |           |           |               |      |      |
|----------------------|--|-------------------|-------|----------|----------|-------------------|-----------|-----------|---------------|------|------|
|                      |  | Geographic region |       |          |          | Time of the study |           |           | Type of store |      |      |
|                      | Attributes                             | Asia              | Euro. | N. Amer. | S. Amer. | 2009-2010         | 2011-2014 | 2015-2020 | Grocery       | Hyp. | Sup. |
| Physical aspects     | Visual attractiveness                  | 0,472             | 0,086 |          |          |                   |           |           |               |      |      |
|                      | Cleanliness of the store               |                   |       |          |          |                   |           |           |               |      |      |
|                      | Store atmosphere and equipment         |                   |       |          |          |                   | 0,100     |           | 0,472         |      |      |
|                      | Employee appearance                    |                   |       |          |          |                   |           |           |               |      |      |
|                      | Convenient layout                      |                   |       |          |          |                   | 0,100     |           | 0,472         |      |      |
|                      | Convenient location                    |                   |       |          |          |                   |           |           |               |      |      |
| Reliability          | Dependable service                     |                   |       |          |          |                   |           |           |               |      |      |
|                      | Customers safety                       |                   |       |          |          |                   |           |           |               |      |      |
|                      | Availability of merchandise            |                   |       |          |          |                   |           |           |               |      |      |
|                      | Clear and detailed product information |                   |       |          |          |                   |           |           |               |      |      |
| Personal interaction | Employees knowledge and interest       |                   |       |          |          |                   |           |           |               |      |      |
|                      | Employees availability                 |                   |       |          |          |                   |           |           |               |      |      |
|                      | Employees attitude                     |                   |       |          |          |                   |           |           |               |      |      |
| Problem solving      | Interest in problem solving            |                   |       |          |          |                   | 0,100     |           | 0,040         |      |      |
|                      | Complaints handling                    |                   |       |          |          |                   |           |           |               |      |      |
|                      | Returns and exchanges handling         |                   |       |          |          |                   |           |           |               |      |      |
| Policy               | Quality of merchandise                 |                   |       |          |          |                   |           |           |               |      |      |
|                      | Convenient parking                     |                   |       |          |          |                   |           |           |               |      |      |
|                      | Convenient operating hours             |                   |       |          |          |                   | 0,090     |           | 0,523         |      |      |
|                      | Convenient payment methods             |                   |       |          |          |                   | 0,090     |           | 0,523         |      |      |
|                      | Product variety                        |                   |       |          |          |                   |           |           |               |      |      |
|                      | Competitive price                      |                   |       |          |          |                   |           |           |               |      |      |

|                      |  | Patronage intention |        |          |          |                   |           |           |               |      | Intention to recommend |  |               |  |
|----------------------|--|---------------------|--------|----------|----------|-------------------|-----------|-----------|---------------|------|------------------------|--|---------------|--|
|                      |  | Geographic region   |        |          |          | Time of the study |           |           | Type of store |      | Geographic region      | Time of the study  | Type of store |  |
| Attributes           |  | Asia                | Euro.  | N. Amer. | S. Amer. | 2009-2010         | 2011-2014 | 2015-2020 | Grocery       | Hyp. | Sup.                   |  |               |  |
| Physical aspects     | Visual attractiveness                  | 0,224               | -0,058 |          |          | 0,021             | 0,137     |           |               |      |                        | a) Due to the lack of information it was not possible to perform the moderator analysis for intention to recommend outcome |               |  |
|                      | Cleanliness of the store               | 0,361               | 0,079  |          |          | -0,156            |           |           |               |      |                        |  |               |  |
|                      | Store atmosphere and equipment         | 0,361               | 0,079  |          |          | -0,116            |           |           |               |      |                        |  |               |  |
|                      | Employee appearance                    |                     |        |          |          |                   |           |           |               |      |                        |  |               |  |
|                      | Convenient layout                      |                     |        |          |          |                   |           |           |               |      |                        |  |               |  |
| Convenient location  |  |                     |        |          |          |                   |           |           |               |      |                        |  |               |  |
| Reliability          | Dependable service                     | 0,563               | 0,440  |          |          | -0,291            | -0,317    |           |               |      |                        |  |               |  |
|                      | Customers safety                       | 0,485               | 0,443  |          |          | -0,208            |           |           |               |      |                        |  |               |  |
|                      | Availability of merchandise            | 0,971               | 0,910  |          |          | -0,737            | -0,624    |           |               |      |                        |  |               |  |
|                      | Clear and detailed product information |                     |        |          |          |                   |           |           |               |      |                        |  |               |  |
| Personal interaction | Employees knowledge and interest       | 0,777               | 0,580  |          |          | -0,526            | -0,329    |           |               |      |                        |  |               |  |
|                      | Employees availability                 | 0,777               | 0,494  |          |          | -0,440            | -0,329    |           |               |      |                        |  |               |  |
|                      | Employees attitude                     | 0,968               | 0,686  |          |          | -0,631            | -0,521    |           |               |      |                        |  |               |  |
| Problem solving      | Interest in problem solving            | 0,460               | 0,416  |          |          | -0,176            | -0,293    |           |               |      |                        |  |               |  |
|                      | Complaints handling                    | 0,167               | 0,179  |          |          | 0,117             |           |           |               |      |                        |  |               |  |
|                      | Returns and exchanges handling         | 0,777               | 0,733  |          |          | -0,413            | -0,611    |           |               |      |                        |  |               |  |
| Policy               | Quality of merchandise                 | 0,136               | 0,314  |          |          | 0,126             |           |           |               |      |                        |  |               |  |
|                      | Convenient parking                     |                     |        |          |          |                   |           |           |               |      |                        |  |               |  |
|                      | Convenient operating hours             | 1,020               | 0,865  |          |          | -0,758            |           |           |               |      |                        |  |               |  |
|                      | Convenient payment methods             | 0,136               | 0,314  |          |          | 0,126             |           |           |               |      |                        |  |               |  |
|                      | Product variety                        |                     |        |          |          |                   |           |           |               |      |                        |  |               |  |
|                      | Competitive price                      |                     |        |          |          |                   |           |           |               |      |                        |  |               |  |

## Appendix 6 – Number of Studies Included for Each Pair of Variables

| Dimensions           | Attributes                             | Customer outcomes       |                       |                  |                     |                        |
|----------------------|--|-------------------------|-----------------------|------------------|---------------------|------------------------|
|                      |  | Overall service quality | Customer satisfaction | Customer Loyalty | Patronage intention | Intention to recommend |
| Physical aspects     | Visual attractiveness                  | 7                       | 7                     | 5                | 6                   | 4                      |
|                      | Cleanliness of the store               | 7                       | 8                     | 4                | 5                   | 4                      |
|                      | Store atmosphere and equipment         | 10                      | 13                    | 5                | 5                   | 4                      |
|                      | Employee appearance                    | 6                       | 5                     | 2                | 1                   | 0                      |
|                      | Convenient layout                      | 8                       | 8                     | 5                | 4                   | 4                      |
|                      | Convenient location                    | 1                       | 7                     | 1                | 0                   | 0                      |
| Reliability          | Dependable service                     | 11                      | 15                    | 5                | 6                   | 5                      |
|                      | Customers safety                       | 12                      | 10                    | 4                | 6                   | 5                      |
|                      | Availability of merchandise            | 10                      | 12                    | 4                | 8                   | 5                      |
|                      | Clear and detailed product information | 2                       | 8                     | 2                | 1                   | 2                      |
| Personal interaction | Employees knowledge and interest       | 10                      | 17                    | 7                | 8                   | 5                      |
|                      | Employees availability                 | 10                      | 9                     | 6                | 6                   | 4                      |
|                      | Employees attitude                     | 11                      | 14                    | 6                | 8                   | 5                      |
| Problem solving      | Interest in problem solving            | 5                       | 5                     | 4                | 7                   | 4                      |
|                      | Complaints handling                    | 3                       | 3                     | 2                | 4                   | 3                      |
|                      | Returns and exchanges handling         | 4                       | 7                     | 3                | 6                   | 4                      |
| Policy               | Quality of merchandise                 | 8                       | 11                    | 7                | 6                   | 5                      |
|                      | Convenient parking                     | 1                       | 5                     | 3                | 3                   | 3                      |
|                      | Convenient operating hours             | 6                       | 10                    | 5                | 5                   | 4                      |
|                      | Convenient payment methods             | 5                       | 6                     | 5                | 5                   | 5                      |
|                      | Product variety                        | 3                       | 10                    | 1                | 1                   | 1                      |
|                      | Competitive price                      | 4                       | 13                    | 3                | 2                   | 1                      |