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of Business and Management**

Course of International Operations and Supply Chain

**Present and Future of Service Quality, an Empirical
Research.**

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ABSTRACT

The purpose of this paper is to provide an overview of the subject of Service Quality. This is done through a Literature Review that includes the study of the most important contributions to the subject.

Four topics are covered, which are the SERVQUAL model, what it is, how it was created, and how it can be used; the investments made in Service Quality; the technologies that will enable an improvement in Service Quality; and finally the outputs that can be found as a result of implementing Service Quality strategies.

The analysis is carried out through structured interviews submitted to a sample of managers from companies belonging to different economic sectors.

Quantitative data will then be extrapolated to allow for a more precise examination, along with the words of the interviewees.

1. INTRODUCTION

The concept of quality has its roots far back in history due to the fact that it is volatile, not precisely definable, adaptive and above all subjective.

The search for a universal definition has not yielded any kind of reliable result (Reeves and Bednar, 1994), so the very idea of quality can take on different facets depending on the context in which it is used.

Such a concept might be useless in the world of business, which instead thrives on precise metrics and definitions, but instead over time it has become increasingly important, even to the present day, where it is among the underlying principles of modern management (Reeves and Bednar, 1994).

Quality was described as "the single most important force leading to the economic growth of companies in international markets" (Feigenbaum, 1982), reflecting the fact that since the 1980s the two worlds of quality and the market have collided to become a necessity, a postulate to which all companies must adhere for the purpose of survival.

This paper will review several definitions of quality, without preferring one in particular, but simply using those that are most useful for the sake of our analysis.

Such a concept is of fundamental importance from a twofold perspective, both from a corporate and a customer standpoint.

First, if we consider quality as excellence, from a corporate point of view it "means investment of the best skill and effort possible to produce the finest and most admirable results possible" (Tuchman, 1980), thus being the prerogative of companies that wish to aspire to exemplary performance.

The pursuit of quality, however, as we shall see in the paper, is not for its own sake, but rather enables the achievement of remarkable economic results when compared with those who do not pursue quality in the same way.

The paper will review the literature regarding these economic outputs, then going on to research the frequency with which these outputs occur through data collection.

By changing the point of view and putting ourselves in the perspective of a customer, quality takes on further importance, such that further definitions of this articulate concept arise.

If we define quality as "the extent to which a product or service meets and/or exceeds a customer's expectation" (Buzzell & Gale, 1987; Gronroos, 1990; Zeithaml et al., 1990), a higher level of it benefits the customer as it satisfies him or her and provides more value. As per the definition just mentioned, quality is applied not only to products but also to services, which are the focus of this paper.

Differentiating from products by three characteristics, which are intangibility, heterogeneity, and inseparability (Parasuraman et al., 1985; Dotchin and Oakland, 1994; Ghobadian et al., 1994), from services comes another strand related to quality, which results with the SERVQUAL model (Parasuraman et al., 1985, 1988, 1991, 1994).

This model is a tool that allows companies offering services to monitor the perceived quality of those services through a questionnaire, with questions belonging to five different dimensions that form the concept of quality of a service: Tangibles, Reliability, Responsiveness, Assurance, and Empathy.

Among these five dimensions there is a hierarchy of importance, described by the authors of the model, which outlines customers' preferences with respect to the characteristics of a service.

With the present paper, the intent is to understand whether there is also a hierarchy of these dimensions from a corporate perspective, that is, to understand which dimensions companies focus on the most.

Next, we will investigate regarding the investments made by societies regarding service quality improvement.

In addition to investments, the purpose of this paper is to investigate regarding the use of technologies in order to elevate the quality of service provided. The literature has analyzed different types of relationships between technology and service quality, but what is certain is that the use of technology has led to the improvement of the conditions under which a service is offered, enabling the increase of service delivery points (Allen, 1997; Baily and Gordon, 1988; Cline, 1997; Milligan, 1997; Reed, 1998), as well as the collection of data needed to better meet customer needs (Cline, 1997; Furey, 1991), in addition to many other innovations,

The four topics outlined, namely SERVQUAL dimensions, investments, technologies, and outputs, will be addressed by starting with the literature and then performing an analysis of the data collected for the purpose of an understanding of companies' views on the subject.

The research was conducted on a sample of 34 managers from companies belonging to different industries and of different sizes through structured interviews.

The paper is structured as follows: first we find the literature review leading to the research questions; then there is the section on the methods for data collection; next we find the discussion of the data collected, through the processing of it; Then, the conclusions section can be found at the end of the paper, before the references.

2. LITERATURE REVIEW

2.1 QUALITY DEFINITIONS

To get the analysis off to a good start, it is necessary to investigate a few basic concepts that will define the work that follows. First, it is good to understand how the scientific literature has over time defined the concept of quality in relation to the subject of Quality Management. Like all terms that refer to both the objective and subjective spheres, the concept of quality has over time been the subject of debate and difficult definition.

Garvin (1984) was the first to define five different approaches including transcendent approach, manufacturing-based approach, value-based approach, user-based approach, and product-based approach to explain the different facets of such a complex concept.

2.1.1 Transcendent approach

The first, the most subjective and volatile, originated with Platonic philosophy and was then explored by various philosophers, artists and scholars over the centuries. According to this definition, quality is an innate, absolute and universally recognizable characteristic (Garvin, 1984), as well as "independent of and prior intellectual abstractions" (Pirsig, 1992).

2.1.2 Manufacturing-based approach

A different approach, the most objective of the five, focuses instead more on the product and in particular its manufacture. Based on the writings of Crosby (1979), this approach leads to an assessment of whether or not a product conforms to certain standards; this degree of conformity to the aforementioned standards thus determines whether or not the product can be considered quality or not and is a purely engineering and production process-related assessment, as well as being the basis of the statistical quality control method. (Stuart et al. , 1996, Chandra, 2001)

Due to its inherent characteristics, this type of approach is difficult to apply to the evaluation of services and is mainly suited to assessing the quality of physical products.

2.1.3 Value-based approach

A different definition, called 'value-based', is based on the idea of classical economic theory according to which a product or service is always evaluated in relation to its price: quality therefore depends on the performance offered in relation to price. The authorship of this insight belongs to Feigenbaum (1951), who defined quality in his Total Quality Control as conformity to "certain customer conditions ... the conditions being the actual use and selling price of the product".

2.1.4 User-based approach

An even different concept is expressed by the so-called 'user-based' approach. Born with the advent of marketing literature, this approach to quality identifies it as the degree to which the perceived value of a product or service coincides with or exceeds consumer expectations. Juran (1951) himself theorised, with the term 'quality of design', that the essence of quality lay in the design of products that satisfied consumer needs. Grönroos (1984) was one of the first scholars to realise that for a company wishing to "develop the quality" in order to "compete successfully in the future", it would be essential to "(1) define how ... quality is perceived by the consumers; and (2) determine in what way ... quality is influenced", understanding that quality resided in the mismatch between expected outcome and perceived outcome. Subsequently, models were developed taking into consideration the whole set of variables defined as "expectations" that confirmed the existence of a "relationship between a pre-conscious level (value) and an attitude level expressing satisfaction" (Mattsson, 1992). The very concept of perceived value, at the basis of this approach, has in fact been studied since the 1990s and is considered a factor that is very difficult to define, whose composition derives from several variables that are difficult to measure. A review on the subject was carried out by Sánchez-Fernández et al. (2007), which includes contributions from various scholars on the subject.

2.1.5 Product-based approach

Finally, let us address the 'product-based' approach: this is one of the most objective definitions of quality, as it is linked to the presence or absence of certain measurable characteristics within the product. Famous is the contribution of Garvin himself (1984), who provided a framework to define the quality of a product based on eight different

dimensions; the dimensions taken into consideration are: *Performance, Features, Reliability, Conformance, Durability, Serviceability, Aesthetics, Perceived Quality*. In subsequent years, several studies have considered these eight dimensions to be insufficient, considering them to be only a basis for a broader analysis involving a greater number of dimensions: among these, we can include some related to technology such as *Connectivity, Compatibility, Upgrading, Security, Innovation*; others related instead to sustainability such as *Traceability, Standardisation, Carbon Footprinting* (Gouda et al., 2018); and still others related to characteristics that can change the consumer's state of mind during use such as *Trustworthiness, Confidence, Desirability, Exclusivity*.

2.2. SERVQUAL

What has been described above regarding quality is in most cases a prerogative of the evaluation of products rather than services. The latter in fact differ in three fundamental characteristics: *intangibility, heterogeneity, and inseparability* (Parasuraman et al., 1985; Dotchin and Oakland, 1994; Ghobadian et al., 1994). From the 1980s onwards, there have been various studies concerning service quality (Grönroos, 1982; Lehtinen et al., 1982; Parasuraman et al., 1985; Reeves et al., 1994), of which only those useful for analysis are considered in the following paper, which have shown common points to be taken into consideration:

- 1) *Certain inherent characteristics of the service sector increase the complexity of 'quality control' and 'improvement efforts'.* For example, it is possible to distinguish the different outputs of a company through two dimensions: degree of tangibility and customisation. As the first dimension increases, it is more complex to measure and evaluate the quality of an output by both the company and the customer. As the second dimension increases, the quality conferred on an output is more likely to differ from one customer to another. (Reeves et al., 1994)
- 2) *The quality that the customer perceives lies in the gap between the expected outcome and the perceived outcome.* The better the reality is than the expectations, the more the customer will perceive the service as being of quality.
- 3) *Dimensions describing product qualities are not adequate to describe the quality of a service.*
- 4) *Increasing the quality of a company's output leads to various economic benefits for the company.* Some of these benefits may be: increased profit, market share, ROI growth, cost reduction, but also other secondary benefits.

The SERVQUAL concept stems from the elaboration of these commonalities, as well as from the merging of two different quality concepts outlined above, namely the *User-based approach* and the *Product-based approach*.

The *user-based approach* and its related studies served as a basis for investigating in which phase of the transaction between company and customer the gap between expected outcome and perceived outcome resided.

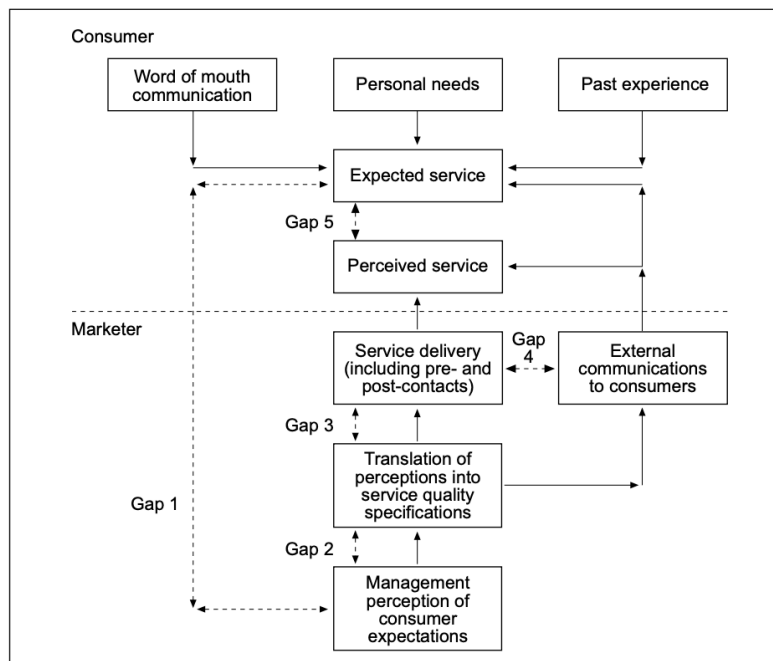
The *product-based approach*, with its quality dimensions set out by Garvin, was instead the basis for the search for dimensions that could describe the quality of a service. Several attempts were made to identify common dimensions for the evaluation of services: *materials, facilities and personnell* (Sasser et al., 1978); *technical quality* and *functional*

quality (Grönroos, 1982); *physical quality*, *corporate quality* and *interactive quality* (Lehtinen et al., 1982).

Parasuraman et al. (1985), in their article 'A Conceptual Model of Service Quality and Its Implications for Future Research' published in the Journal of Marketing, conducted research that explored both of these questions in depth and channeled the work their predecessors had done on the subject into a clear framework.

The most significant discovery was the existence of five different gaps (see Figure 1.) between the quality that the company perceived it was providing to the customer and the actual output of the different tasks that make up service delivery. Studying these gaps can enable company managers to identify their causes and plan strategies to reduce them. (Engelland et al. , 2000)

Figure (1) Quality Gap Analysis Model (Parasuraman et al., 1985)



The five gaps that are indicated in Figure (1) include Consumer expectation - Management perception gap, Management perception - Service quality specification gap, Service quality specifications - Service delivery gap, Service delivery - External communications gap, and Function of the other gaps which are explained in Table (1).

Table (1) Quality gap description

Gap	Description
Gap1) Consumer expectation - Management perception gap	Management usually takes into account most of the aspects of the service that the customer considers fundamental, but it is often the case that determinants that the customer considers important in order to consider the service quality are not considered.

Gap 2) Management perception - Service quality specification gap	It may be the case that management is fully aware of the existence of a factor that the customer needs in order to provide a quality service, but the company is unable to implement this factor, due to the impossibility of setting clear specifications that allow this factor to be continuously offered.
Gap 3) Service quality specifications - Service delivery gap	Despite the existence of clear guidelines guiding employee performance, it is very often the case that quality is not always delivered in the same way. This is because it is very complex for management to control the performance of employees on each and every occasion, which is why the variability with which the company delivers quality may also depend on the quality of the employee's work and how he or she delivers the service at a given time.
Gap 4) Service delivery - External communications gap	This gap is parallel to the others described above, in fact it lies in the nature of the average communication between company and customer. If in fact the company communicates correctly with the customer, expectations will then be confirmed by the actual use of the service; if, on the other hand, the communication were to be inaccurate, expectations would be distorted with respect to the real perception of the service, and this is where this gap lies.
Gap 5) Function of the other gaps	The model predicts that service quality depends on this last gap, which in turn is a function of the extent of the other gaps described above. It is important to understand how the gaps described above can be both positive and negative, i.e. they can be either favorable or unfavorable to the company: if, for example, the management's perception of quality exceeds the customers' expectations, there will be a gap favorable to the company because, other things being equal, the final service will be of higher quality.

The same research points out, in the same way as Garvin did with products, ten dimensions considered to be the factors by which quality is assessed by end customers, thus underlying the gaps described above:

- 1) *RELIABILITY involves consistency of performance and dependability.*
- 2) *RESPONSIVENESS concerns the willingness or readiness of employees to provide service.*
- 3) *COMPETENCE means possession of the required skills and knowledge to perform the service.*
- 4) *ACCESS involves approachability and ease of contact.*
- 5) *COURTESY involves politeness, respect, consideration, and friendliness of contact personnel.*
- 6) *COMMUNICATION means keeping customers informed in language they can understand and listening to them.*
- 7) *CREDIBILITY involves trustworthiness, believability, honesty. It involves having the customer's best interests at heart.*
- 8) *SECURITY is the freedom from danger, risk, or doubt.*
- 9) *UNDERSTANDING/KNOWING THE CUSTOMER involves making the effort to understand the customer's needs.*
- 10) *TANGIBLES include the physical evidence of the service.*

Subsequently, the same authors (Parasuraman, Zeithaml, Berry) carried out two different studies (1988, 1991) in order to develop a model that would be useful for assessing the quality of services independently from the sector of activity of the company.

Approximately 10 items were assigned to each of the 10 dimensions just described, for a total of 97 items, divided into two statements, one to describe the expectations regarding the service of an ideal excellent enterprise in a given sector, the other to describe the actual perceptions regarding the service offered by the enterprise under analysis. Each statement corresponded to a scale from 1 (Strongly disagree) to 7 (Strongly agree).

The gap (G) was calculated by subtracting the value of expectations (E) from the value of perceptions (P), thus $G=P-E$; the higher the value of G , the higher the level of quality perceived by the customer.

In order to make the instrument as effective and pliable as possible, it was deemed necessary to reduce the items and thus the size, so as not to have overlapping dimensions. The scale was purified in two steps using the alpha coefficient (Cronbach, 1951), as suggested by Churchill's (1979) model for the creation of effective marketing measures. Next, the item-to-total correlation value was used to assess which items to eliminate. Finally, a factor analysis was performed to assess the independence between the items. The end result was a scale of 22 items divided into 5 dimensions called 'SERVQUAL'. The dimensions that are part of it are:

- 1) *Tangibles (four items): Physical facilities, equipment, and appearance of personnel*
- 2) *Reliability (five items): Ability to perform the promised service dependably and accurately*
- 3) *Responsiveness (four items): Willingness to help customers and provide prompt service*
- 4) *Assurance (four items): Knowledge and courtesy of employees and their ability to inspire trust and confidence*
- 5) *Empathy (five items): Caring, individualised attention the firm provides its customers*

The refinement of the scale, carried out by the original authors in 1991, served to transform negatively worded items into equivalent but positively worded items, as well as to replace items deemed less effective with others deemed better and to make minor wording adjustments.

The scale was then checked again for reliability, factor structure and validity. The result was a scale of 22 items and 5 dimensions, which differs from the first version only in terms of changes to the items.

SERVQUAL has been used for several studies over the years, and its effectiveness has been tested several times. Table (2) shows some of the most relevant studies by sector.

Table (2) Most relevant studies where SERVQUAL was applied

Hospitality	Badri et al., 1999; Ingram and Daskalakis, 1999; Dean and White, 1999; Gabbie and O'Neill, 1996; Barsky, 1992; Saleh and Ryan, 1991
Education	Oldfield and Baron, 2000; Kwan and Ng, 1999; Ekinci and Riley, 1999
Banking	Lassar et al., 2000a, b; Newman, 2001; Zhu et al., 2002; Angur et al., 1999; Avkiran, 1999
Telecommunication	Van der Wal et al., 2002

Healthcare	Wong, 2002; Curry and Sinclair, 2002; Andaleeb, 1998; Lim and Tang, 2000; Hasin et al., 2001; Babakus and Mangold, 1992; Reidenbach and Sandifer- Smallwood, 1990
Public services	Wisniewski, 2001; Brysland and Curry, 2001; Carman, 1990; Orwig et al., 1997
Professional services	Hoxley, 2000; Philip and Hazlett, 2001; Bojanic, 1991
Retailing	Mehta et al., 2000; Finn and Lamb, 1991
Catering	Johns and Tyas, 1996
Transportation and shipping	Frost and Kumar, 2001; Sultan and Merlin, 2000; Durvasula et al., 1999
Auto repair	Bouman and Van der Wiele, 1992

2.2.1 Critics of the servqual model

Several criticisms have been levelled at the SERVQUAL model over the years.

Some scholars, for example, have regarded Cronbach's alpha as not effective in demonstrating the reliability of SERVQUAL (Finn and Kayande, 1997; Diamantopoulos, 1999, 2005; Rossiter, 2002).

Others have criticised the convergent validity of the model (Carman, 1990; Parasuraman et al., 1991; Headley and Miller, 1993; Mels et al., 1997; Engelland et al., 2000), the discriminant validity (Carman, 1990; Cook et al, 2000; Pitt et al., 1995; Durvasula et al., 1999; Baldwin et al., 2003; Arasli et al., 2005; Kilbourne et al., 2004; Gounaris et al., 2003; Finn et al., 1991; Babakus et al., 1992; Spreng et al, 1993; Taylor et al., 1993; Kettinger et al., 1994; Engelland et al., 2000; Badri et al., 2005), the predictive power of the instrument (Brown et al., 1993; Durvasula et al., 1999; Brady et al., 2002; Zhou et al., 2002) and also the over-emphasis on the service delivery process rather than the evaluation of the final output (Richard et al., 1993; Rust et al., 1994; Brady et al., 2001). However, the most interesting criticism for the purposes of the research I am conducting is the one concerning the existence of a hierarchical structure of quality constructs.

This statement implies that in certain areas, some dimensions are so important that they need to be separated into sub-dimensions, so that they can be more effectively evaluated by the customer.

The most important studies in this regard were carried out by Carman (1990) and Gounaris (2005).

2.2.2. Hierarchy of servqual dimensions

In the light of the above, it is evident that for certain sectors there are dimensions more relevant than others for a positive assessment of service quality.

All of this is, of course, related to the gap between perceptions and expectations that the customer expresses after receiving a service.

The SERVQUAL model we have considered is in fact a totally client-based model, i.e. useful for companies to understand their positioning in the minds of their customers, but totally based on what is expressed by the customers themselves.

The authors of the SERVQUAL model themselves (Parasuraman et al., 1994), made several attempts in later years to understand whether a hierarchy of dimensions existed and what it was for customers regardless of the service they were using.

The result of this analysis was that there is an order of importance of the dimensions of the model, as follows:

- Reliability: 32%.
- Responsiveness: 22%.
- Assurance: 19%.
- Empathy: 16%.
- Tangibles: 11%.

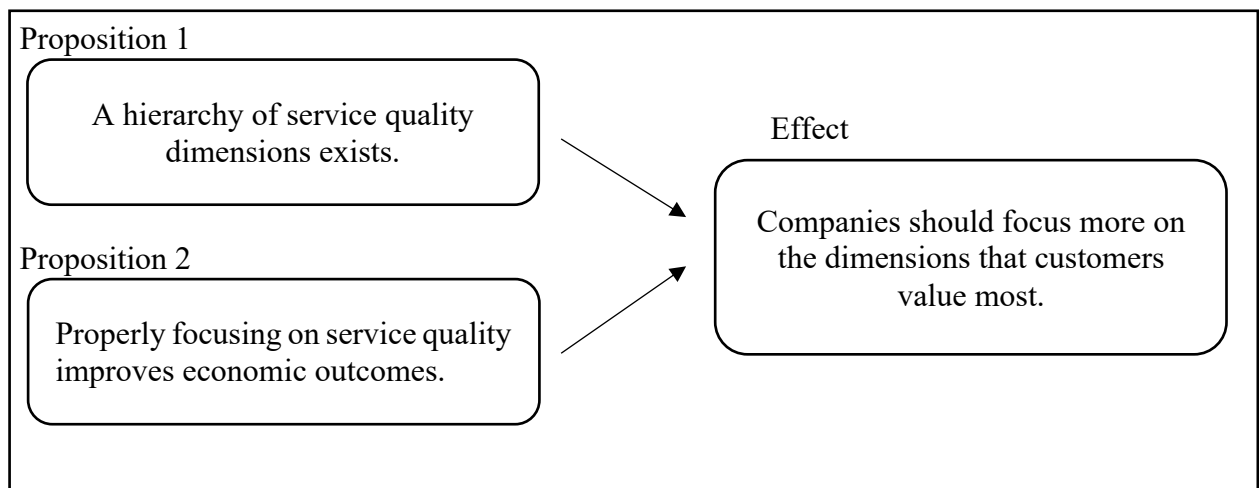
These results were obtained by letting more than 1,900 customers to whom the SERVQUAL questionnaire was submitted score a total of 100 points each, distributing them among the various dimensions.

There are also numerous studies that have shown a connection between investments in service quality and improved business results, analysing different aspects such as the direct relationship, offensive effects of service quality, defensive effects, effects on behavioural intentions, impact on selecting profitable customers and the key drivers of service quality, customer retention and profits¹.

In the light of the above, the SERVQUAL model's hierarchy of dimensions becomes even more important: the existence of such a hierarchy from the customer's point of view would presuppose that service-providing enterprises concentrate more on the business tasks related to service reliability, reserving less investment for the other dimensions in order of scale.

From this analysis, Concept Model No. 1 was born.

Figure (2) Conceptual model 1



There is a lack of studies in the scientific literature that take into account the companies' approach to the SERVQUAL concept itself.

The aim is therefore to understand, through a qualitative study, which dimensions of the SERVQUAL model companies belonging to different sectors invest in the most.

It is from this doubt that the first research question of this paper arises:

¹ This relationship between SQ and potential positive effects for the company will be analysed more in detail below.

- *Research question 1 (RQ1): Do companies respect the hierarchy of the SERVQUAL model by focusing on the dimensions to which customers attach most importance?*

2.2.3. Investments in service quality

Up to this point, we have discussed dimensions of the SERVQUAL model and how companies that adopt an approach focused on improving the quality of their services focus on one or more of the dimensions described above.

However, it is clear that companies, ideally dedicating themselves to the dimensions mentioned above, concentrate their resources on concrete investments, tangible and intangible, which in their view improve the quality of the services they offer.

It must be kept in mind that Quality is defined by the customer, not the provider. In fact, it often happens that companies invest in service improvements that are not necessary and, above all, not requested by the customer, which is why the final service is not improved, and may even worsen. One of the most common mistakes in improving service quality is that of spending resources in ways that do not improve it at all (Berry et al., 1994).

While, as expressed above, the relationship between a general improvement in service and positive economic effects for the company has been analyzed from various aspects and points of view, it remains to be understood which drivers companies invest in to generate this improvement.

The inventors of the SERVQUAL model themselves wondered on numerous occasions what elements contribute most to the idea of service quality, in particular asking themselves what the *"key drivers in each service encounter"* were (Zeithaml, 2000).

For the purposes of this research, however, it is more interesting to analyse the research gap concerning the concrete investments that companies make in order to improve the quality of their services. This gap is also witnessed by Zeithaml in his *"Service Quality, Profitability, and the Economic Worth of Customers: What We Know and What We Need to Learn"* (2000), since in the concluding stages, in the section dedicated to *"what we do not know"*, he poses the following question: *"Where should investments in service quality be made to have the greatest impact on service quality, purchase, customer retention, and financial outcomes?"*, then specifying *"Of all the company strategies, processes, approaches, and tactics that can be altered, where should companies invest money?"*.

This question gives us a chance to focus on the companies' point of view and find out what their efforts have been to improve QS.

It is therefore clear that quality is first and foremost an investment (Rust et al., 1995), an investment that can take different forms depending on a variety of factors, starting with the size of the company making it, its corporate culture, the sector it belongs to, management commitment and many other contingencies.

A necessary note is about the form of these investments: it must be acknowledged that very often they do not result in a tangible form, but rather most often take the form of business practices and processes, which nonetheless imply the use of resources.

In view of the above, it is deemed necessary to identify through this study what investments are made by companies in order to improve the quality of their services. Hence, the second research question of this paper stems from this analysis:

- *Research question 2 (RQ2): What kind of investments are made by companies offering services in order to improve their quality?*

2.2.4. IT technologies and quality of services

Since the end of the 1980s, following the so-called 'race for quality', in which various companies spent resources and time in order to improve the quality of their products or services as much as possible, sometimes with poor results (Rust et al., 1995; Zeithaml, 2000), they began to focus on the IT sector in order to understand how they could compete more effectively in the service offering.

Manufacturing companies were the first to undertake massive investments in IT in order to improve productivity, with companies belonging to the service sector sticking to more traditional investments.

Subsequently, the scientific literature tried to reverse this trend, suggesting models that positively link investments in IT to an improvement in the quality of services, and thus to positive economic effects for companies.

One of the first works concerning the connection between technology and service quality is dated 1991 and is "Technology, Design and Service Quality" written by Jane Kingman-Brundage. In this study, an initial analysis is made regarding the relationship between technology in its simplest sense, i.e. the process by which information as input is transformed into output (Perrow, 1967; Thompson, 1967), and service quality, obviously stating that the former, together with the concept of design, lies at the basis of the latter (Davis, 1989; Gummeson, 1990).

Subsequently, Berkeley and Gupta wrote 'Improving service quality with information technology' in 1994, a theoretical model based on seven dimensions of quality, similar to but different from the SERVQUAL model, namely: Reliability, Responsiveness, Competence, Access, Communication, Security and Knowing the customer. For each dimension, investments in IT were identified to be made to improve performance in the dimension in question.

These investments include the use of Point of Sales, the automation of service-related processes, the use of satellite location technologies, voice recognition systems, the use of corporate databases, electronic data interchange (EDI) systems, the exploitation of centralized information systems and servers, as well as many other technologies that we now consider usual.

Obviously, over time, the interaction between IT and customer satisfaction has attracted increasing interest (Bonfield, 1996; Dabholkar et al., 1996; Galbreath, 1998; Pease, 1998; Philip and Hazlett, 2001), focusing above all on the concept of convenience, i.e. making more service delivery points available to the customer that were previously more complex to offer (Allen, 1997; Baily and Gordon, 1988; Cline, 1997; Milligan, 1997; Reed, 1998). Other studies, however, have shown that the real determinant for the improvement of service quality through the use of technology was the possibility to collect data in order to better understand customer preferences and habits (Cline, 1997; Furey, 1991; Randle, 1995). What is certain is that technology has to be implemented in the service of customer needs, which is why it only adds value when it is used to offer better service quality (Zhu

et al., 2002; Anthes, 1998; Dabholkar et al., 1996; Berkley et al. , 1994), and can sometimes even produce negative effects (Johnson, 1998).

Investments in IT to improve the quality of services obviously range over very different areas; they may concern internal processes for employees, service delivery methods, infrastructure to support work, as well as other even more advanced areas of application. In the light of the above-mentioned literature review, it is clear that the relationship between technology and perceived service quality has been extensively reviewed in several of its facets, starting with the different sectors of the companies and ending with the type of service delivery offered.

As established at the outset, however, this paper seeks to focus on the point of view of companies, rather than that of customers, which is why we ask, in light of the lack of research on the subject, which technologies managers, and thus companies, consider to be of greatest importance for the future improvement of service quality.

This examination gave rise to the third research question of this paper:

- *Research question 3 (RQ3): In which technologies do companies feel they should invest in the future in order to improve the quality of their services?*

2.2.5. Benefits of service quality improvement

The advent of the first service quality studies led to the emergence of metrics that could measure this phenomenon, such as the SERVQUAL tool discussed at length above.

The first years of study on the subject, however, did not explicitly explore the relationship between such SQ metrics and changes in profit for the company (Aaker and Jacobson, 1994) as the research results were unreliable.

This relationship was later explored, with a strand of studies analysing positive or negative effects on corporate profitability as a result of changes in SQ.

Indeed, entrepreneurs pay more attention to the effects of SQ strategies on economic profit and other purely financial metrics (Greising 1994; Rust et al., 1995).

The relationship between profit and SQ, however, is flexible and depends on several variables (Zeithaml, 2000): like other business strategies, SQ improvement is intended to bring results in the medium to long term, rather than in the short term, so its effects are difficult to measure with traditional metrics; profit is also often influenced by other parameters distinct from the SQ strategy (advertising, competition, price and distribution), which is why it is again complex to establish a direct relationship between SQ and profit.

For these reasons, and many others, we understand why the above-mentioned relationship is neither straightforward nor simple (Greising 1994; Zahorik and Rust 1992), for no scholar has succeeded in the task of analysing it in a comprehensive manner, focusing rather on the various facets that this relationship can take on.

Several studies find the presence of negative economic effects following investments in SQ by companies (Easton, 1993; Bounds et al., 1994; Reger et al., 1994; Ittner and

Larcker, 1996; Sterman et al., 1997); however, it should be pointed out that most of these studies broaden the scope of interest by considering all investments made in TQM².

Regarding the positive effects of SQ investments on profitability, numerous studies have been conducted, of which it is worth summarising the most significant:

- Rust et al., 1992: The study demonstrates a positive financial impact of complaint recovery systems.
- Nelson et al., 1992: Research establishes a relationship between patient satisfaction and hospital profitability.
- Anderson, Fornell, and Lehmann, 1994: Research established a relationship between customer satisfaction and accounting ROA by analysing several companies operating in Sweden.
- Ittner and Larcker, 1996: in two different studies they relate share price to SQ-related metrics such as customer satisfaction, repurchase intention, perceived value and loyalty.
- Easton and Jarrell, 1998: showed the relationship between quality improvement and an overall corporate performance improvement.

In addition to profitability, several studies found other positive outcomes for companies that improved their SQ.

In particular, the relationship between high service quality and an above-average market share has been demonstrated (Buzzell and Gale, 1987), as well as the one with the possibility to ask for a premium price (Phillips, Chang, and Buzzell, 1983).

Jacobson and Aaker (1987) also came to the same conclusions.

A further study then expanded on the subject, arguing that the increased market share resulting from an improvement in quality essentially stems from a positive word of mouth (Kordupleski, Rust, and Zahorik, 1993).

In the same path are two other studies (Parasuraman, Berry and Zeithaml 1991b, 1994; Parasuraman, Zeithaml, and Berry 1988) that demonstrate the relationship between SQ perception by customers and willingness to recommend the service to acquaintances.

After having seen the so-called offensive effects, we must necessarily mention the defensive effects.

Indeed, corporate profitability also depends on retaining customers in the long run (Anderson and Sullivan 1993; Fornell and Wernerfelt 1987, 1988; Reicheld and Sasser 1990).

The relationship between SQ and customer retention has therefore also been demonstrated in this perspective (Ennew and Binks 1996; Rust and Zahorik 1993).

In the light of what we have seen in this part of the paper, I consider it necessary to explore, through cross-sectional work, which outputs companies have obtained as a result of their investments in SQ, in order to be able to understand which are the most frequent and whether there are some not mentioned by any research.

Thus, the fourth and final research question of this paper arises:

² TQM (Total Quality Management) refers to the quality-focused management approach in which all members of an organisation participate in order to achieve customer and employee satisfaction in the long term. This approach consists of different processes and tools in order to achieve the desired result.

For an in-depth discussion on this topic: Martínez-Lorente, A.R., Dewhurst, F. and Dale, B.G. (1998), 'Total quality management: origins and evolution of the term', *The TQM Magazine*, Vol. 10 No. 5, pp. 378-386.

- *Research question 4 (RQ4): What outputs have companies that have invested in SQ achieved?*

3. METHODOLOGY

Data were collected by means of structured interviews. Based on the literature review on service quality, the SERVQUAL model and future developments in the field, a set of interview questions was developed (see Appendix A). The protocol was pre-tested with faculty members. The pre-test consisted of personally interviewing an individual to check the appropriateness, correctness and clarity of the questions. This phase allowed us to improve the quality of the information obtained, adjust the wording to clarify all questions, and clear up any emerging doubts. Each pre-tested faculty member provided written and oral comments that helped to improve and validate the protocol.

The interviews were conducted virtually, via the Qualtrics platform.

There are three questions in total, and they cover the four main topics on which this paper is based (see Appendix).

The topics in question are: the dimensions of the SERVQUAL model on which companies focus most, the investments made by companies to improve their Service Quality, the outputs that companies obtained from these investments and the technologies in which companies plan to invest in the future in order to improve their Service Quality. The first two topics are contained in question number one, the third in question number two and the fourth in question number three.

Following the collection of data of a qualitative nature, we proceeded to transform it into quantitative form. In order to carry out this process without losing the veracity of the collected data, it was decided to construct a dataset containing only binary data. Specifically, with regard to topic number one, each respondent was to describe their company's service quality strategy using one or more dimensions of the SERVQUAL model. If the respondent mentioned a dimension, a 1 was placed in the box for that dimension, if that dimension was not mentioned by the respondent, a 0 was placed.

Regarding topic number two, as many columns were created as all investments in Service Quality mentioned by the respondents. When a respondent mentioned an investment made by his company, a 1 was placed in the box for that investment, otherwise a 0 was placed.

The same procedure as for argument number two was also performed for argument number three and number four.

In the event that several respondents answered as employees of the same company, as in the case of WindTre and Nexi, it was decided to combine the data in one line for each company in order to obtain a more precise analysis of the analysed sample.

In conclusion, a complete dataset of variables assuming only binary data was formed.

This procedure allowed the data to be processed in statistical form in order to present a more precise work.

4. DATA ANALYSIS AND DISCUSSION

4.1 PRELIMINARY SAMPLE ANALYSIS

In this section, the purpose is to make a brief preliminary analysis of the sample in order to create the foundation for the following discussion through the proposed research questions.

First, let us recall that the sample consisted of 31 units, which were reduced from the starting 34, i.e. the total number of respondents to the questionnaire.

Each unit represents a company.

As a first factor in the analysis, we consider the size of the companies in question: to make the analysis more precise, it was decided to use Italian law as a measure for the size of companies.

In particular, the Ministerial Decree of 18 April 2005 'Adaptation of the criteria for identifying small and medium-sized enterprises to the Community rules' identifies four distinct enterprise sizes based on the number of employees and annual turnover:

- Micro enterprise: less than 10 employees; annual turnover or balance sheet assets not exceeding EUR 2 million.
- Small enterprise: 10 to 49 employees; annual turnover or balance sheet assets not exceeding 10 million euro.
- Medium-sized enterprise: 50 to 249 employees; annual turnover not exceeding EUR 50 million and an annual balance sheet assets not exceeding EUR 43 million.
- Large enterprise: more than 249 employees; annual turnover of more than EUR 50 million; annual balance sheet assets of more than EUR 43 million.

Figure (3) Size of Companies distribution chart

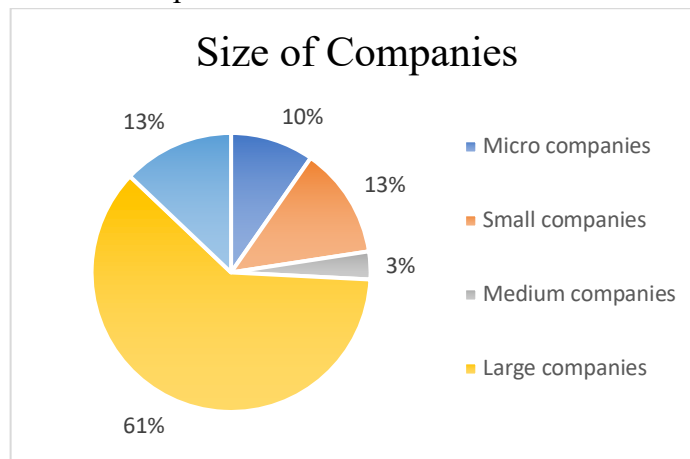


Table (3) Size of Companies

Size	Number of companies	%
Micro companies	3	9,68%
Small companies	4	12,90%
Medium companies	1	3,23%
Large companies	19	61,29%
Unknown dimension	4	12,90%
Total	31	100%

As we can see in the figures (Figure (3), Table (3)), there is a majority of large companies in the sample, while the least represented are medium-sized companies with only one unit.

It is possible to see that there are four companies whose size is unknown, as no information on turnover or employees could be found.

Regarding the sector in which the companies operate, it was decided, in light of the subject matter of the paper, to divide the sample into 7 sectors.

First of all, there is the 'product-based' sector, which includes companies whose main focus is the supply of goods, so that the supply of services is ancillary to the sale of a good, i.e. pre-sale or post-sale services.

Then we find companies that offer services as their core business, which in turn are divided into 6 sectors: 'Consulting' sector, containing consultancy companies; 'Financial Services' sector, where we find companies offering services of a financial nature; 'Professional Services' sector, where we find companies offering professional services such as lawyers, architects and designers; 'IT' sector, where we find companies offering services of a technological and telecommunications nature; 'Accommodation Services' sector, where we find companies offering services such as hotel or estate; 'Utility Services' sector, where we find companies offering utilities, i.e. gas, oil, energy or water.

Figure (4) Sector of Companies distribution chart

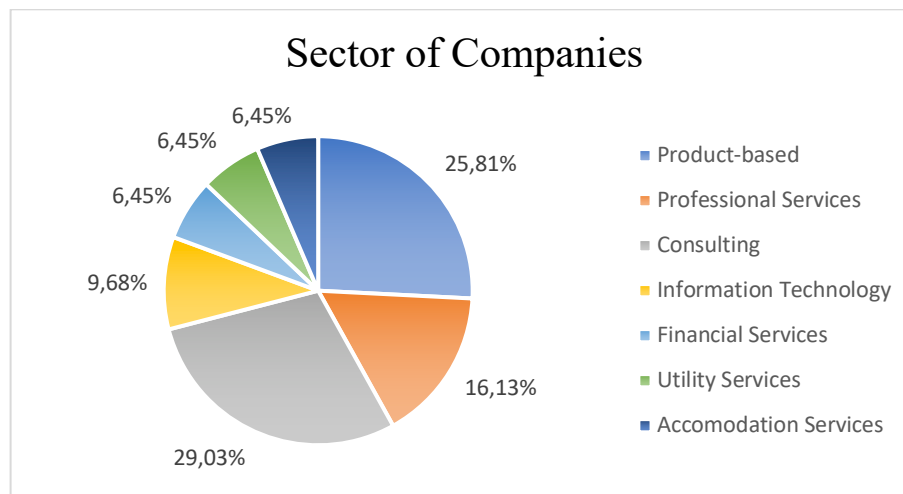


Table (4) Sector of Companies

Sector	Number of Companies	%
Product-based	8	25,81%
Professional Services	5	16,13%
Consulting	9	29,03%
Information Technology	3	9,68%
Financial Services	2	6,45%
Utility Services	2	6,45%
Accommodation Services	2	6,45%
Total	31	100%

In the figures (Figure (4), Table (4)) we can see the distribution of the units in relation to the sector they belong to.

The most represented sector is the Consulting sector, followed by the Product-based sector; next are the Professional Services and Information Technology sectors and finally the Financial Services, Accommodation Services and Utility Services sectors, which are equally represented within the sample.

4.2 RESEARCH QUESTION 1

In posing research question No. 1, we explored the literature concerning the SERVQUAL model, as we needed evidence regarding the existence of a hierarchical scale of importance of the dimensions of the above-mentioned model.

As stated above, such a hierarchy exists, and is certified by the authors of the SERVQUAL model themselves.

Remember that it is a hierarchy of a cross-sectoral nature, so it does not consider a particular sector, but rather gives an idea of which dimensions customers pay most attention to regardless of which sector the company offering the service belongs to.

For ease of reading, the hierarchical scale for the SERVQUAL dimensions, drawn up directly by the authors of the model, is again presented:

- Reliability: 32%.
- Responsiveness: 22%.
- Assurance: 19%.
- Empathy: 16%.
- Tangibles: 11%.

It should also be emphasised that this scale is totally dependent on customer preferences, based on the score given to each of the dimensions in the survey.

Instead, the focus of this paper is to understand whether the companies in the sample surveyed concentrate their SQ strategies on the dimensions preferred by customers as per the hierarchy just outlined, or whether the focus is shifted to different dimensions.

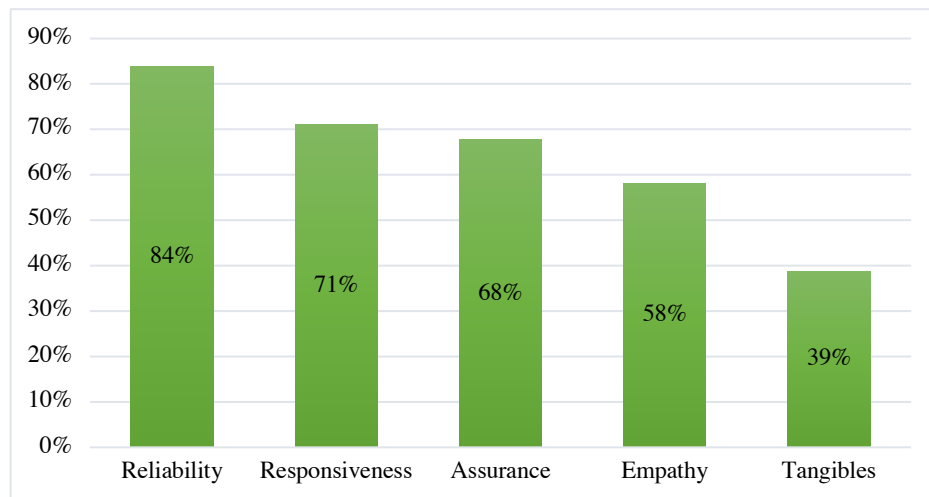
Therefore, with this study I wish to analyse and understand whether a SERVQUAL dimension hierarchy also exists on the part of companies, shifting the focus from a client-based to a firm-based hierarchy.

Well, when analysing the interview data, interesting results emerge, especially in light of the literature review.

Table (5) Dimension Preferences

	Tangibles	Reliability	Responsiveness	Empathy	Assurance
Number of Responses	12	26	22	18	21
Percentage of Respondents	39%	84%	71%	58%	68%

Figure (5) Dimension Preferences chart



As can be seen in Figures 6 and 7, all dimensions were mentioned more than once, in light of the fact that for the purpose of offering a quality service, all dimensions must be considered, and furthermore, all respondents mentioned at least one dimension in their answers.

There are, however, clear preferences as to where to place the focus when offering a service.

4.2.1 Reliability

The dimension most frequently mentioned by the interviewees is undoubtedly Reliability, with 26 mentions out of 31 interviewees, and the reason is quickly stated: the certainty of being able to benefit from a service, even more so if it is carried out with precision, is the basis of quality; without this certainty the very concept of quality is lacking.

As mentioned in the interviews, it is indeed of vital importance, when one wishes to offer a quality service, the '*respect of deadlines, milestones and lead time*', as well as, in the case of the signing of more articulated contracts, the respect of customers who desire '*expected reliability to the terms of the signed contract*'.

4.2.2 Responsiveness

The second most frequently mentioned dimension is Responsiveness, described by the authors of the model as '*willingness to help customers and provide prompt service*'.

This dimension was mentioned no less than 22 times out of 31 respondents, i.e. by 71% of the sample, showing that it is considered of notable importance by the majority of respondents.

Responsiveness has become even more important in recent years, where the concept of customer care has been expanded and adopted by most companies, so much that it is one of the elements underpinning the values and missions of the world's largest corporations. While previously this approach was mainly adopted by companies offering only services, it has recently spread like wildfire and permeated the life of product-based companies as well.

The importance that companies give to the Responsiveness dimension can also be seen in the words of the interviewees, in fact to offer quality service it is necessary to satisfy customers who *"expect a prompt response in case some service disruptions happen and they expect to be followed by a competent and trustworthy customer service, that will assure them their issues are going to be resolved shortly."* Offering a service with these characteristics has, over time, taken on the value of core competence, giving its holder a considerable competitive advantage.

4.2.3 Assurance

Next in terms of the number of mentions is the Assurance dimension.

This dimension is mentioned 21 times out of 31 respondents, i.e. by 68% of the sample, only one respondent less than Responsiveness.

In fact, the two dimensions are often mentioned together, even though as characteristics they are quite distinct.

Assurance, as described by the authors of the SERVQUAL model, is *"knowledge and courtesy of employees and their ability to inspire trust and confidence"*.

Here again, the importance of this dimension is repeatedly emphasised by the interviewees, since companies offering services nowadays must necessarily pay attention to aspects such as *'trust, confidence and attention'* towards the customer, aspects that must be communicated by the employees, since as *'people representing us to our customers'* they must be *'trustworthy'* and also *'must be the first to have those feelings (trust, confidence and attention) towards the company'*.

4.2.4 Empathy

As the penultimate dimension in terms of mentions, we find the Empathy dimension, mentioned 18 times out of 31 respondents, i.e. by 58% of them.

Defined by the authors of the SERVQUAL model as *'caring, individualised attention the firm provides its customers'*, this dimension fits into the concept of customer care expressed above, but takes on more of the facet of service offered in an individualised, customised manner and fully understanding the customer's wishes.

This dimension is important for slightly more than half of the respondents, as it relates more to a type of services in detail, rather than to services offered in series.

Through the words of the interviewees, we can see how this dimension can be, for those who take it into account in their SQ strategies, a founding element of corporate values, so much so that in most cases it is either not considered at all or is described as the most important of the SERVQUAL dimensions.

For example, with regard to empathy, it was said: *"this is perhaps the most important dimension for us and the one that characterises our company best as a whole"*, a clear sign of what was said earlier, as well as *"without empathy, such a service could not be delivered ... The capacity to feel empathy and communicate empathy is crucial for creating a real relationship with the prospect and raising the chances to turn him or her into a client"*, demonstrating that this dimension requires special attention in the application, as it creates a bond with the customers that is difficult for competitors to replicate.

4.2.5 Tangibles

Last, based on mentions, we find the Tangibles dimension, with 12 mentions out of 31 respondents, i.e. 39% of the sample.

In light of the description of this dimension itself, which is '*physical facilities, equipment, and appearance of personnel*', we can understand why it is the one that is given the least importance in percentage terms.

The reason is quickly stated, as it is an aesthetic dimension, it assumes greater importance for certain services, where the place of offer, the appearance of the personnel and all the equipment necessary for the offer are considered determinants of quality.

Later in the paper we will analyse which sectors are most affected by this dimension.

This dimension is given importance by companies that consider it essential to have a state-of-the-art headquarters, as was suggested to us in the interviews: '*important investments have been made to have a headquarters of excellence from an aesthetic and sustainability point of view and in line with the corporate mission*', but also in cases where there is frequent contact with customers in stores or through events: '*The same applies to stores and events in which the company participates where attention to detail and the presence of collaborators are fundamental points*'.

Summarising the above, and reviewing Figure 6, we can therefore make a comparison between the hierarchy found by the authors of the SERVQUAL model and the hierarchy found in this study from the perspective of companies.

In Table (6) we can in fact see the two hierarchies compared.

Table (6) Dimension Hierarchies

Hierarchy based on SERVQUAL model	Hierarchy based on the data collected
Reliability: 32%.	Reliability: 26.3%.
Responsiveness: 22%.	Responsiveness: 22.2%
Assurance: 19%.	Assurance: 21.2%
Empathy: 16%.	Empathy: 18.2%.
Tangibles: 11%.	Tangibles: 12.1%.

The hierarchy positioned on the right, i.e. the one based on the analysed sample data, is formed by the percentages calculated by relating the number of mentions of a dimension to the total number of dimensions mentioned, it is thus a percentage relative to the total number of answers given.

We can see that, although the percentages differ, they do so by a few units, but above all, the order of the hierarchy is fully respected.

This confirms the idea presented in Figure (2), which is that companies should focus on the dimensions considered by customers as most influential for quality service, which they actually do, as demonstrated by the data in our possession.

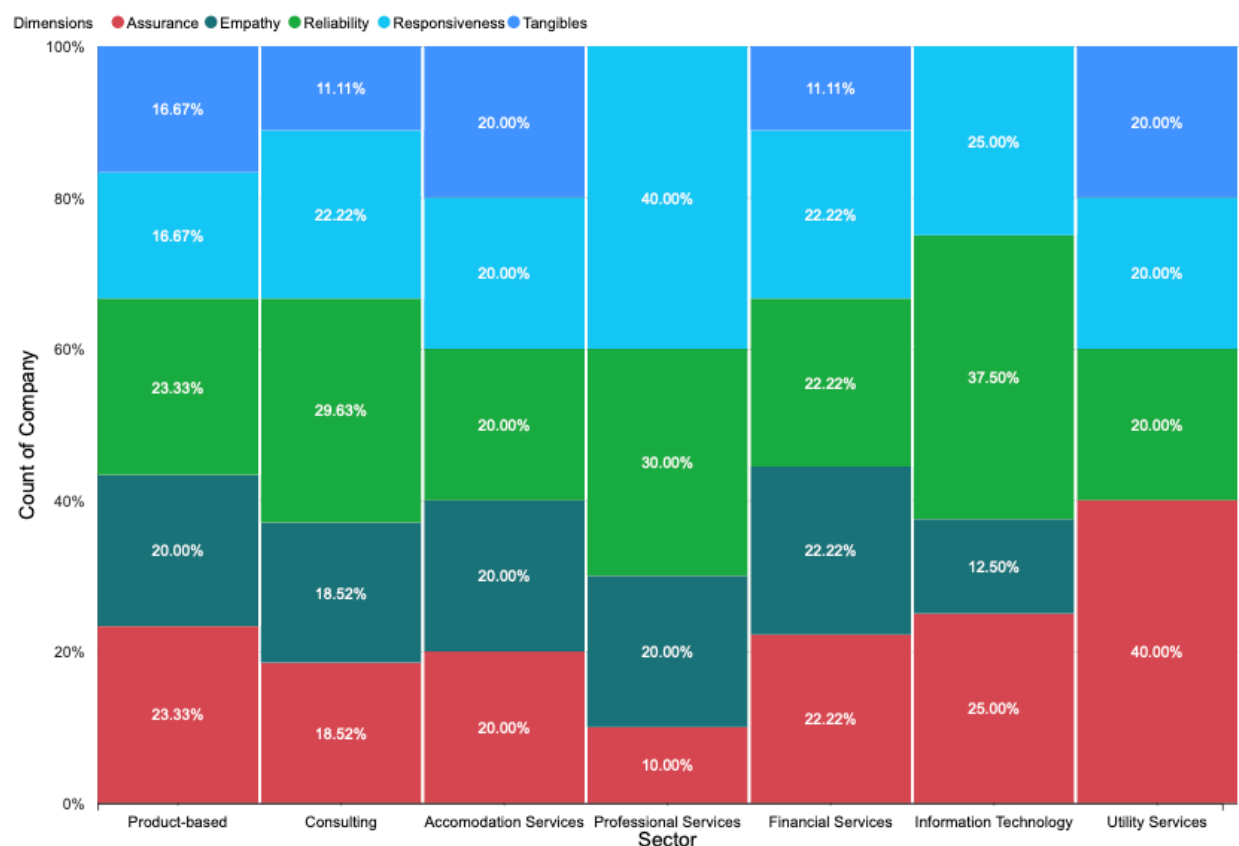
Although the way in which services are offered, as well as the services themselves, have changed radically over time, the SERVQUAL dimensions most influential for quality, and thus the service characteristics on which companies should focus, remain firmly established in both customer and company preferences.

4.3 DIMENSIONS BY SECTOR

Once the analysis has been carried out from a cross-sectorial point of view, it is worth continuing it by deriving further insights from the data broken down by sector of the companies, as seen in Chapter 4.1.

Regarding this, Figure (6) helps us in the analysis.

Figure (6) SERVQUAL Dimensions distribution by sector



4.3.1 Reliability by sector

The Reliability dimension is well spread across all sectors, with a greater presence in the IT sector.

This stems from the fact that, as expressed above, good performance in this respect is the basis for offering a quality service, which is why this dimension is taken into strong consideration regardless of the sector to which the company belongs

The IT sector, however, in view of the nature of the services offered, which nowadays form the basis of every individual's life, requires that there is certainty of being able to benefit from the service in a complete and uninterrupted way, which is why in this sector

we find 37.5% mention of the Reliability dimension out of the total number of dimensions mentioned.

This analysis is also confirmed by the words of the interviewees, who add as a further determinant of the need for Reliability the pandemic period, with the consequent shift to a smart-working model for many companies: *"above all they expect a reliable service, especially in these troubled times where thanks to the pandemic people in smart working have drastically increased"*.

4.3.2 Responsiveness by sector

The Responsiveness dimension is also well distributed across the different sectors, but sees a very high percentage of mentions in the Professional Services sector, i.e. 40% of the total dimensions mentioned in the sector.

Again, the explanation lies in the nature of the sector: services of this kind, which we remember being offered by lawyers, architects and designers, require an extraordinary *'willingness to help the customer'* by the service provider.

These types of professionals, being in personal contact with clients over long periods of time and having to offer services regarding particularly important needs, such as lawsuits or renovation work, have the onus to be on call at all times, focusing on the *'responsiveness with which problems that can lead to delays in the delivery of the work are solved'*.

4.3.3 Assurance by sector

Regarding the Assurance dimension, we can see two different peculiarities in the distribution.

Firstly, we see a greater distribution in the Utility Services sector than in the other sectors. The Assurance dimension is mentioned 40% of the time in this area.

In this area, the underlying goods, and thus the service offered, are not differentiated in any way from the competition. Therefore, it is of even greater need for the method of service delivery to be differentiated. Meticulous preparation of employees, as well as their ability to *'inspire trust and confidence'* may be necessary in order to win the competition in the oil, gas and energy markets.

For this purpose, there is a need to invest heavily in employees in order to make them as prepared as possible to respond to customer needs, which is why, according to interviewees, companies invest in *'personnel training'* and *'checking and improving call centres'*.

Another consideration concerning the distribution of the Assurance dimension in the respondents' answers is the low amount of mentions in the Professional Services sector. Such a finding might go against what is possible to expect about the companies in question.

From the point of view of professionalism, lawyers, architects and other professionals, basing much of their work on a face-to-face relationship with clients, need to inspire confidence in the client, as well as being very knowledgeable.

The reason why this may come in the background is because respondents are answering in respect of the companies they work for or have worked for in the past; thus, from a

global perspective that considers the whole organization, dimensions such as Reliability and Responsiveness may be more important for quality service, whereas from the perspective of the individual practitioner, Assurance is fundamental in the customer relationship. A further reason could be that when responding, respondents may have decided not to mention the Assurance dimension because they did not consider it as a strength of their company in the same way as other dimensions. In this case, it might be necessary to focus more on this dimension in light of the services offered by professionals of this kind.

4.3.4 Empathy by sector

Regarding the Empathy dimension, two peculiarities in the distribution in the answers can again be noted, from which as many points of discussion arise.

In fact, we note that this dimension is mentioned less than the others in the IT sector, with 12.5 per cent of all dimensions mentioned.

The reason for this can be found in the nature of the customers and the service offered. Companies participating in this sector usually operate B2C, so they have to deal with a very broad customer base, which makes it impossible to offer customized solutions, individual attention and caring at the level of other sectors.

Even those who do not operate with a large customer base may find it difficult to offer highly customized technology solutions, as well as being unable to take care of the customer as much as other companies because of service delivery points, which are often virtual.

An exception has to be made for companies in the IT sector operating in the B2B segment: in this case it may be more common to offer customized solutions and more individual attention to the customer, as the conclusion of this type of contract requires conditions that are favorable to both parties. This is confirmed by the words of the interviewees, who consider the Empathy dimension *'easier to carry out and more widely applied in the B2B market segment'*.

Further considerations concerns the Utility Services sector, where the Empathy dimension is never mentioned.

The determining factor in this respect could be the nature of the good offered, and thus of the service attached to it, as previously said.

As with the IT sector, goods such as energy, gas and oil are also offered to a wide audience, which is why an individual customer focus may take second place to a dimension such as Assurance.

4.3.5 Tangibles by sector

Finally, when analyzing the Tangibles dimension, several points for reflection arise.

As we have seen above, the Tangibles dimension is the least mentioned of the five, which is why in no sector does it find more than 20 per cent of mentions out of the total number of dimensions mentioned.

In the Professional Services and IT sectors, the Tangibles dimension is never mentioned.

Being a more aesthetic dimension by nature, it sees less of a resonance in a sector where companies offer technological services. In fact, customer contact is rare, and when present, it does not thrive on the aesthetics that are characteristic of other sectors.

Similarly, companies operating in Professional Services very often do not have complex headquarters, nor do they pay attention to the appearance of their employees, as they are more individual-driven companies, where the focus on group aesthetics takes second place.

Further interesting data comes from the Accommodation Services sector, where the Tangibles dimension sees a 20% mention out of the total number of dimensions mentioned, considering what was expressed in the interviews.

As can easily be imagined, in this sector, the place where the service is offered becomes decisive for the purposes of the service, as the place where the service is offered is characterized at the same time as the object of the service itself, assisted by other activities.

In the case of hotellerie, the '*physical facilities, equipment, and appearance of personnel*' are to be considered as the '*framework of the hotel*', and obviously translate into '*renovated building with a developed architecture, mandatory uniforms*', as well as high quality items available to the customer in the rooms.

The same argument can be extended to estate companies, since although the appearance side of the personnel is missing, the place where the service is offered, i.e. the flats offered, remains of great importance.

4.4 RESEARCH QUESTION 2

Research question number 2 puts the focus on the investments made by the analyzed companies in order to improve their SQ.

Data collection allowed the creation of a database that included any investment in SQ mentioned by the respondents, thus it is not limited to a set of investments prepared beforehand and then presented to the respondents.

This method made it possible to collect data regarding a large number of different investments, which, however, allows for a detailed understanding of what various companies have been doing to improve the quality of their services.

The investments range in different business areas: personnel, hardware, business divisions or functions.

As a first step, a table is presented containing all the investments that have been mentioned, also containing a brief description of them.

Table (7) SQ Investments Description

Feedbacks Systems:	This refers to investments reserved by companies for improving or creating the post-sale or post-service feedback system, which may involve analyzing or creating review systems or satisfaction questionnaires, or focusing on collecting more difficult-to-find information such as word-of-mouth.
Hiring:	Hiring refers to investments made by companies in increasing the number of corporate staff allocated to corporate service

	quality management functions, regardless of the function in question.
Project Management:	This refers to investments made to improve the operational aspects of business projects such as managing schedules, deadlines, staffing, and output in order to provide a higher quality of service to the end customer.
Support Activities:	Investments of this type involve activities carried out by the company parallel to and subsequent to the sale/offering of the service. Activities such as customer service, returns service or repairs involve the formation of the idea in the customer that he or she has benefited from a quality service.
Physical Stores:	Quality service can also come through a physical presence on the territory, either of sales/offering outlets or support centers, which is why companies sometimes invest in this aspect in order to improve the quality of their services.
Training:	This type of investment focuses on improving and creating skills and know-how in the employees already within the company. This type of investment can manifest itself in the form of courses, upgrades or workshops in order to train employees to provide the best possible service. Sometimes investment in training can also improve the quality of services because trained employees are better able to communicate the company's vision and values to the customer.
Requirements Compliance:	Sometimes it may happen that some customers require the service provider company to meet or be certified on certain standards or requirements (e.g. ISO), so very often companies invest in order to achieve these standards. It may also happen that companies decide to invest in this area of their own choice in order to offer a service that is better than the competition.
Infrastructure Enhancement:	This type of investment is more about the hardware part, in fact depending on the service offered, a physical infrastructure of a certain type may be required. In fact, this type of investment is concerned with the creation or improvement of infrastructure necessary to offer the service.
Automatization:	Investment in this area has increased in recent years, as it relates to resources spent on automating some or all of the procedures related to offering a service, through hardware or software technology tools. Investments of this kind make it possible to offer services of the same quality from one client to another in shorter time, or to streamline certain types of paperwork within the company by outsourcing them to technology.
Indicators Monitoring Mechanisms:	Some companies invest in monitoring certain indicators that may relate to their supply chain or to their target market. Some indicators also have the benefit of substituting for direct

	customer feedback, as they measure the loyalty relationship between company and customer (e.g., NPS). Monitoring such indicators allows them to make more informed choices in service delivery.
Sustainability:	In recent years, the provision of quality service has necessarily come through the adoption of sustainable practices that are environmentally friendly and pollute as little as possible. Many companies have therefore made investments in this direction, finding that many customers considered an unsustainable service as not being of quality.
Quality Division:	It may happen that, usually large enterprises, have an entire business division in charge of quality control and delivery to the customer. Investments in this field therefore refer to the creation or improvement of such business divisions.

The definitions in Table (7) were extrapolated from the interviews in order to make the subsequent analysis of the data clearer.

Data on the amount of mentions for each investment are presented below, both in absolute and relative terms, i.e., compared to the total investments mentioned.

Table (8) SQ Investment Research Data

	Number of Mentions	Percentage of Respondents	Percentage relative to the Total Responses
Feedback Systems	10	32,26%	14,71%
Hiring	7	22,58%	10,29%
Project Management	7	22,58%	10,29%
Support Activities	9	29,03%	13,24%
Physical Stores	5	16,13%	7,35%
Training	5	16,13%	7,35%
Requirements Compliance	9	29,03%	13,24%
Infrastructure Enhancement	4	12,90%	5,88%
Automatization	4	12,90%	5,88%
Indicators Monitoring Mechanisms	3	9,68%	4,41%
Sustainability	2	6,45%	2,94%
Quality Division	3	9,68%	4,41%

The data presented in Table (8) are to be considered inter-sectoral, thus they do not take into account divisions by sector, an analysis that will be performed later.

Table (8) presents data regarding the number of mentions for each investment, after which it shows the percentage of respondents who mentioned each investment and finally presents the percentage of mentions of an investment relative to the total investments mentioned.

4.4.1 Feedback Systems

At a first glance we immediately see that the most frequently mentioned investment concerns Feedback Systems. This type of investment is to be considered entry-level, and is in fact the basis of SQ, which is why it was mentioned by 32.26 percent of respondents, with a relative percentage of 14.71 percent.

These systems can, of course, take different forms and different levels of development, from the simplest to the most complex and articulated, depending on need.

As seen in previous chapters, a Feedback System can also be based on the SERVQUAL model, which was developed for this very purpose, and in fact in the interviews it emerged the fact that *"standard models" were "implemented ... with the ServQual to be able to redirect all the data ... and finally find where improvements were needed."*

Integrating Feedback Systems with the SERVQUAL model *"provides a direct and adaptive approach of questionnaire which helps the company to evaluate its performance as per the basic skeleton of the business"* and also allows for faster data processing, as without an effective Feedback System *"the data has to be manually inputted in order to create a database."*

Sometimes some companies even decide to *"build ... (their) strategic plans based on customer feedbacks,"* or even to supplement these plans with *"customers' expectations ... collected through questionnaires,"* a system that thus involves double data collection from customers, before and after the service is delivered.

Therefore, this type of investment is the most mentioned, since regardless of the size or sector of the company, a Feedback System at any level of development allows SQ to be improved in a way that is more adherent to customer preferences.

4.4.2 Support Activities

As the second most frequently mentioned investment we find Support Activities.

This type of investment, which embraces various activities parallel to the main service offering, may be taken for granted, as we have become accustomed to this type of service. In practice, however, we see that many companies have invested in these Support Activities, probably considering the pre-existing ones insufficient to satisfy the customer or totally nonexistent.

In fact, this investment is mentioned by 29.03% of respondents, with 13.24% mentioning it relative to the total number of investments mentioned, reflecting the fact that several companies have made *"huge investments"* in order to provide customers with support alongside the core service delivery.

This in most cases results in customer service, in fact respondents mentioned investments such as *"a well prepared customer service team," "dedicated Service Managers for very relevant Customers," "automatic responders to provide an ever-better assistance service," "checking and improving call centers."*

Sometimes other Support Activities were mentioned in the interviews, which broaden the scope of this investment, such as return service or repair service, which are usually contextual to the main service, i.e. the sale of a good.

We easily understand why this type of investment is much mentioned, as nowadays offering a service means supporting the customer through a wide range of additional activities that make the customer feel taken care of before, during and after the delivery of the service.

4.4.3 Requirements Compliance

We find the same amount of mention of investments in Support Activities for investments in Requirements Compliance.

The range of requirements to which societies have adapted is wide and varied.

The most frequent in the interviews are the ISO standards, which are also the best known, and in particular the ISO 9001 standards related to quality management systems.

Related to internal processes, parallel to ISO standards, companies' commitment to obtaining other standards is mentioned, such as investing *"to obtain the DFSS (Design For Six Sigma) certification,"* which is an engineering approach to business processes.

Other types of requirements to which companies have adhered are also mentioned, some dictated by changing industry regulations, others by ethical choices.

The former relates to investments made by companies to make the service fit the requirements of the law, as this, especially in certain industries such as pharmaceuticals or financial, tends to change frequently.

This type of investment, if made timely and in advance of competitors, participates in shaping the idea of quality service into customers.

The second type of investments, on the other hand, concern compliance with requirements chosen by the company because they respect the values and ethics of the organization.

Mentioned here are environmental standards, which are the subject of debate in all types of organizations.

Indeed, some companies have committed to *"looking at ESG"* (Environmental, Social and Governance rating) and *"obtaining sustainable certifications,"* with the aim of reflecting corporate values.

4.4.4 Hiring

Next, we find investments in Hiring, with 22.58% of respondents mentioning this investment and 10.29% compared to the total investments mentioned.

Regarding this type of investment, it is not necessary to explain in detail what it is.

Rather, interest should be placed on the reasons for expanding the number of employees, exposed in the interviews.

The reasons range from the general to the particular, from companies that invested *"a lot in hiring the appropriate number of people ... with the correct competencies,"* to those that hired *"qualified and specialized waiters ... to serve the coffee."*

This shows how investments of this kind can have quite different purposes depending on the company making them, as we will see in the following section regarding the analysis by sectors.

Several times, however, investments in hiring for the purpose of creating *"dedicated teams"* that have *"Service Quality specialists"* or *"Customer Engagement Managers or SC Supply Chain Managers"* within them were mentioned in the interviews, in light of the difficulties that may be encountered by companies wishing to improve their SQ without a specialist helping with the strategy.

4.4.5 Project Management

This is followed by investments made Project Management, which are mentioned the same number of times as investments in Hiring.

In most cases this investment was made, according to the interviewees, to adapt the service offering to the *"current scenario affected by the disruption of the supply chain,"* where by current scenario is meant the consequences of the recent pandemic and the critical geopolitical scene.

The current circumstances, in addition to the changing environment of some economic sectors, lead some service companies to make *"a lot (of investments) in ensuring its client the respect of the production schedule and deliveries."*

Attention to the timing of delivery of a service is indeed critical to achieving a high level of quality, which is why *companies "continuously invest ... in the improvement of operation and supply chain management activities in order to provide ... services in the required time and manner."*

4.4.6 Physical Stores

We continue the analysis with investments in Physical Stores, which are mentioned by 16.13 percent of respondents, with 7.35 percent mentioning them out of the total investments mentioned.

While several companies, either because of the different possibilities offered by the web or because of the worldwide pandemic scenario, have decided to disinvest in physical service delivery points, there are others that have found the investment necessary to offer physical touch points to customers.

As found in interviews, several companies have made *"huge investments ... to provide ... several physical stores all over the ... territory"* in light of the fact that some *"service provided ... can be performed only by humans, (because) such strategies (use of online delivery points) have proven to be quite less effective than the one which relies on the activity of a human."*

The focus on human contact should be seen as the main reason why this type of investment is made, as many customers *"rely on the store staff as the human face and main contact for the brand."*

4.4.7 Training

The same number of mentions as the previous investment is reserved for investments in Training.

This type of investment has often been mentioned simultaneously with investments in Hiring, as it shares their object, which are the employees.

This concept emerges from the interviews, perfectly expressed by the motto *"we have invested in people."*

The constant here turns out to be the goal of improving service quality, but the scope of employee training is multiple and difficult to identify precisely.

Certainly this activity, as evidenced by the words of the interviewees, can have a dual function: on the one hand the improvement of *"skills through courses and certifications,"* while on the other hand the goal is the communication of corporate values and culture through *"various initiatives to enhance employees' sense of belonging."*

What follows is that *"training ... is therefore crucial"* to enable the service to fully satisfy customers, since *"most of their loyalty is built ... through interaction with the staff."*

4.4.8 Infrastructure Enhancement

Next, we find investments in Infrastructure Enhancement, mentioned by 12.90 percent of respondents, with 5.88 percent mentioning it compared to total investments.

These investments concern the improvement of physical and hardware infrastructure that companies need in order to raise the quality of their services.

Within the interviews, this type of investment, like those we will see below, begins to be little mentioned, as it is made by just over one in ten of the companies surveyed.

The types of infrastructures that are affected by this investment are mostly *"ICT infrastructures,"* demonstrating that whatever service is to be offered, a technological background that can support this activity is now necessary, sometimes achieved through *"investments in the modernization and upgrade of the network infrastructure."*

In particular, however, it is the provision of services of an IT nature, whether they are principal or ancillary to the principal, that triggers the need to invest in *"reliable architectures ... to guarantee service continuity even in the event of hardware failures or unavailability of some of the infrastructural components."*

In addition, as seen above, those related to the improvement of headquarters, such as to achieve the *"excellence from an aesthetic and sustainability point of view,"* are also part of this category of investments, as they are necessary to make the working environment better for employees, which participates in offering higher quality service.

4.4.9 Automatization

With the same number of mentions we next find investments in Automatization.

This investment, compared to the others mentioned, is the one that is more technological in nature.

The reason why this type of investment is mentioned a rather low number of times is attributable to the fact that very often the deployment of resources in this area marks the transition from one phase of the business life cycle to another.

In fact, at an early stage it is very difficult for business processes to be automated, except in the most advanced companies, whereas in more mature stages of the life cycle some processes are automated in order to make the quality and performance of these processes constant over time.

In fact, many of the companies under analysis may have been making such investments for quite some time, not tracing them back to the goal of SQ improvement, but simply as a necessary prerequisite to the stabilization of business operations.

Other companies, on the other hand, may see this investment as a future project to be implemented, as we shall see in the next chapter of this paper.

The third category, on the other hand, includes companies that have recently made this investment as a result of SQ-related strategies.

Thus, different types of investments in Automatization are found in the interviews, described either in a simple way or in a complex way.

Indeed, several companies have made *"huge investments in operations, mainly through the automatization of as many processes as possible,"* as well as *"monitoring tools capable of proactively identifying possible problems and automatically proceeding with their resolution,"* so there is the existence of a dual objective: on one hand the automatization of operational processes, and on the other hand the development of systems for automating problem solving, with the ultimate goal of improving SQ remaining the same.

It may be noted, however, that more complex investments in Automatization have also been described in detail, such as the introduction of *"75 automated solutions and AI software bots,"* which *"by automating repetitive transactional tasks"* allow employees to focus their efforts *"on specialized tasks."*

4.4.10 Indicators Monitoring Mechanisms

We then find investments in Indicators Monitoring Mechanisms, mentioned by 9.68 percent of respondents, with 4.41 percent mentioning them relative to the total investments mentioned.

Any type of company monitors indicators of different types on a daily basis, as a regular activity of corporate life.

However, only a limited number of companies (fewer than one in ten in the sample) have invested resources in adopting mechanisms to improve the quality of their services through Indicators Monitoring.

Again, interviews help and provide topics for analysis.

An example that fully encloses what is being exposed comes from a company that has invested in *"the Net Promoter Score (NPS) monitoring."*

Indeed, in the interview it is explained to us that this investment has made it possible to constantly measure *"the willingness of customers to recommend our products or services to others"* with the aim of *"identifying customers' pain points and drives internal processes and products' evolution to respond to customers needs and improve the service quality."*

Thus, what was expressed in the initial analysis of this investment is confirmed (Table7), that is, if carried out correctly, it can effectively replace direct customer feedback or review, conveying the improvement of corporate SQ according to market demands.

The same type of investment can also be used for internal process improvement, particularly related to Supply Chain Management, where *"a number of indicators throughout the supply chain that we can use to flag up potential risks or incidents with the various players"* are monitored.

In this case the investment is necessary in cases of long supply chains, or relationships with suppliers that require special attention in relation to the type of supply, such as in the pharmaceutical sector.

4.4.11 Quality Division

With the same number of mentions we find investments involving Quality Divisions within the organization.

The peculiarity of this type of investment, based on the interviews' findings, is that it is made only by large companies.

The reason lies in the fact that only established companies can afford to set up business divisions with the sole task of managing quality outputs.

In this case, company size seems to be almost a *condicio sine qua non* for the deployment of resources in this particular area.

The creation or improvement of Quality Divisions, moreover, may seem to be a prerogative of companies whose core business is the sale of products, for which *"monitoring quality from start to finish is critical,"* as found in the interviews.

However, even companies that have service offerings as the basis of the business may consider the option of investing in Quality Divisions, as witnessed by one company that invested in *"a robust Quality and Compliance department that systematically evaluates the level of service provided,"* demonstrating that the company's industry is not a determining factor in this case.

4.4.12 Sustainability

Last we find investments related to Sustainability, mentioned by 6.45 percent of respondents, with a relative share of 2.94 percent.

While almost all companies, regardless of industry or size, are investing a large part of their resources in sustainable practices, a very low number of them are doing so with a customer centric perspective, thus contextually improving SQ.

From a regulatory standpoint, in any geographic area and in any economic sector, regulations regarding environmental commitment by companies are becoming increasingly stringent.

Moreover, increased competitiveness and a greater focus on business ethics are leading companies around the world to make compromises regarding the adoption of environmentally sustainable practices.

From a customer-centric perspective, attention to the environment in service delivery can be seen as a determinant of quality, which is why there are companies that decide to invest in Sustainability with the contextual goal of making their SQ better.

In the interviews this very point of view emerges, in fact in the case of a consulting company the interviewee states that his company has *"set up a strategy which looks at ESG ... (by) accurately selecting ... business partners/suppliers,"* also in order to improve the customer's idea of quality with respect to service.

This also happens in light of the fact that companies that belong to this sector, because they often find themselves advising in this subject, would not be credible if they were not the first to put in place this kind of investment.

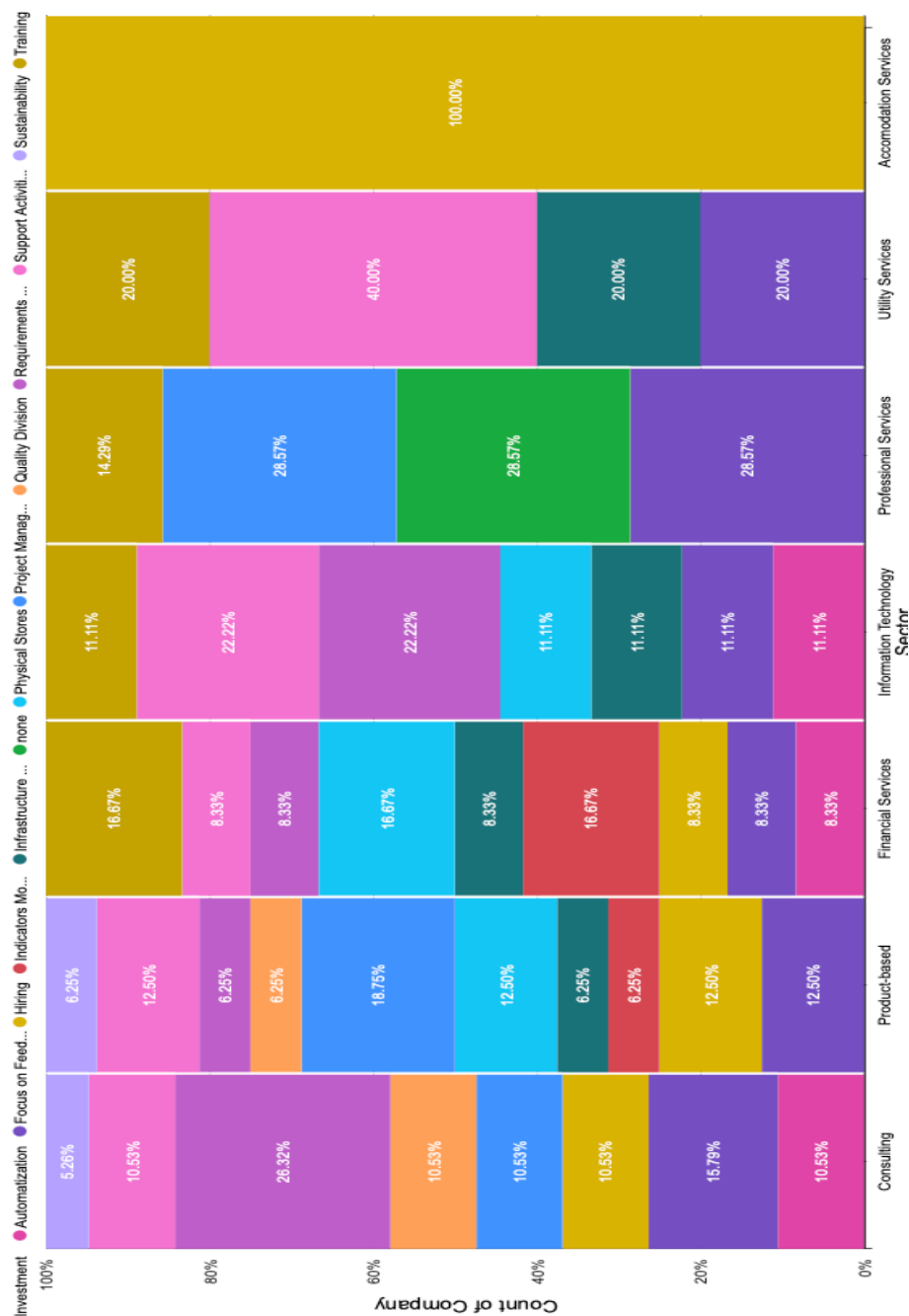
Confirming this are the words of one respondent, who in relation to environmental strategies, says, *"before doing that for our client (strategic consulting regarding eco-sustainability) of course we have implemented this approach in our company."*

4.5 INVESTMENTS BY SECTOR

As done in the previous chapter regarding SERVQUAL dimensions, also in the case of investments it is good to continue the analysis by adding the determinant of the sector to which the companies belong.

For this purpose, we are helped by Figure (7), which gives us the percentages of mention of each investment, relative to the total investments mentioned in each sector.

Figure (7) Investments distribution by sector



A discussion will be conducted here concerning the data of most interest that emerged from the interviews, without mentioning again each type of investment divided by sector.

4.5.1 Hiring investments by Accommodation Services companies

The most easily visible figure concerns the investments made by companies belonging to the Accommodation Services sector.

In fact, we see from Figure (7) how all the investments made by these companies to improve their SQ concern only Hiring.

In the sample under consideration, companies of very different sizes are part of this sector, so the size of the company does not influence the choice to invest in this area.

Instead, it comes to mind that the need to invest in Hiring arises from the need for continuous personal contact between customers and staff, when operating in the hospitality industry, in order to offer the best possible service.

In fact, the customer *"is not only paying for his coffee or his room, but also for all the services that surround it,"* as expounded by an interviewee who works in the hotel industry.

Having the appropriate number of employees makes for a much better customer experience, which is obviously the basis of the SQ concept itself.

4.5.2 Lack of investment from Professional Services companies

Another finding of interest is the Professional Services sector, not so much about investments that have been made, but about investments that have not been made.

Specifically, 40 percent of respondents belonging to this sector explained that the company for which they are or were employed has not made any recent investments with the purpose of improving SQ.

This finding may seem unexpected, but in light of the characteristics of this sector such a case may not be entirely unpredictable.

This happens because it is more complex for companies in this sector to make investments that affect the entire organization, the work being instead focused more on the individual professional.

This leads, once the organization is set up and the work started, to hardly employ resources for the overall improvement of SQ within the company as a whole.

Interviews confirm this notion, in fact *"regarding investments in the field of quality, it must be said that only the most structured ... firms carry out this type of investment."*

Only the larger Professional Services companies take an overall view of the organization, which inevitably leads to investment in corporate SQ.

4.5.3 Requirements Compliance investments by Consulting companies

Further insights emerge from the relative percentage of investment in Requirements Compliance in the Consulting sector.

As we see in Figure (7) this investment is mentioned with a relative percentage of 26.32%, making it the most frequent investment made in this sector.

Companies operating in this sector, in addition to having to comply with various legal regulations, often need to comply with particular requirements based on the different clients to whom they offer their services.

For example, in interviews it is also possible to find institutional clients, who, by requiring *"strict and robust procedures in place to ensure all internal and external procedures are up to the quality standards of the U.S. Government,"* demand compliance with various requirements in which the company must invest.

Similarly, non-institutional clients with a lot of bargaining power may also ask for compliance with certain requirements as they are critical to them for the purpose of SQ.

4.5.4 Project Management investments by Product Based companies

The Product Based sector is where the largest number of investments are mentioned, that is ten.

The one that is mentioned the most, however, is Project Management, with 18.75 percent of relative mentions.

The reason lies in a twofold market condition.

On one hand, the complicating global geopolitical situation, adding to the negative effects of the pandemic, has led Product Based companies to have great difficulties in Supply Chain Management.

On the other hand, in order to adapt to the service standards demanded by customers and set by industry giants, companies have had to make huge investments.

This has led Project Management to be a necessary investment in this area, which results in better management of the SC and a substantial improvement in the *"time and manner"* with which the different projects related to the services offered are managed.

4.5.5 Physical Stores investments by Financial Services companies

The Financial Services sector sees three investments mentioned more than the others, which are Indicators Monitoring Mechanisms, Training, and Physical Stores.

While the first two are more predictable, the third investment among these deserves a closer look, with 16.67 percent relative mentions.

This is due, from the interviews, to the need to offer customers a greater choice of service delivery points, in this case distributed throughout the territory.

This data is interesting in that it stands in contrast to the trend in this sector, which is moving in the direction of offering all kinds of financial services online.

In fact, even the companies with the greatest presence in the area are working in the direction of offering a full range of services virtually, which is why the investment in Physical Stores by companies belonging to this sector found in the interviews should be considered significant.

4.5.6 Support Activities investments by Utility Services companies

Further data that deserves attention relates to the investment in Support Activities by companies belonging to the Utility Services sector, with 40 percent related mentions.

Interviews show that this sector, previously characterized by a lack of individual customer focus, is evolving to address the ever-increasing individual attention that customers require.

This has led to investment in Support Activities, which assist the core service by placing the customer at the center of the organization's focus.

These investments, in detail, resulted in *"checking and improving call centers and the synergies between front office and back office in order to improve our general customers' satisfaction,"* i.e., practical activities, but also in changes *"of the company management approach and culture, that is always oriented to the full customer satisfaction,"* allowing *"the constant pursuit of a customized solutions for the customers."*

This makes us realize that an industry that is based on the provision of homogeneous goods, i.e. oil, gas and energy, is moving in the direction of offering ancillary services and alternative solutions to provide individual attention to the customer, which are aimed at achieving a higher level of SQ through customer satisfaction.

4.5.7 Sustainability investments by Product Based and Consulting companies

As a final thought, it is worth to notice the only two sectors that have invested in Sustainability to improve their SQ, which are the Consulting sector and the Product Based sector, with 5.26 percent and 6.25 percent relative mentions, respectively.

The reasons in this case are predictable but still worthy of mention.

Regarding the Product Based sector, it is now critical that product offerings be surrounded by environmentally sustainable practices and processes to avoid the certain consideration of the service as shoddy and harmful to the environment.

For this reason, several companies, for the purpose of improving their SQ, are moving in the direction of sustainability, some even making it a point of strength.

Regarding the Consulting sector, on the other hand, as set out earlier in this paper, it is the attention paid to the customer that has necessarily driven investment in Sustainability. It should also be noted that the respondents who mentioned investments in Sustainability work or have worked for large companies, which in this case turns out to be a determining aspect.

4.6 RESEARCH QUESTION 3

Having analyzed in the previous chapter the data that have been collected regarding the investments made by companies within SQ, it is useful to continue the analysis by changing the topic of the discussion.

Research Question 3, as posed in the literature review, is: *In which technologies do companies feel they should invest in the future in order to improve the quality of their services?*

Well, to answer this question the data collected, in conjunction with the words of the respondents, come to our aid.

I should mention that again the data collection is inclusive of every technology mentioned in the interviews, so the analysis is not limited to a pre-existing set of technologies.

This method made it possible to create a database that included very different technologies, from the simplest to the most complex, which we will try to explain in Table (9), in order to understand how the field of SQ will evolve in the near future.

As a first step, Table (9) is presented, containing all the technologies that were mentioned, with their brief descriptions, extracted from the interviews.

Table (9) SQ Technologies Description

Procedures digitalization:	This type of technology, already used by many companies, involves digitalizing some or all of the procedures related to offering a service in order to reduce the workload for employees and the time needed to offer the service.
Virtualization:	This technology is concerned with moving certain processes related to the provision of a service from the real world to a virtual world, enabling the faithful reproduction of these processes while drawing advantages related to cost, timing and the ability to predict the emergence of problems.
Online Platform Development:	This technology is about creating or enhancing an online platform, usually a website, that allows the customer to obtain information or directly take use of the service or a part of it.
Software Adoption:	This technology concerns the adoption of one or more existing software in order to improve one or more processes related to the delivery of a service.
Software Development:	This technology is about creating software from scratch to meet the needs encountered in offering a service. This allows software to be created, tailored to meet the company's requirements. Sometimes the development of these software may be outsourced to companies specialized in the field.
A.I. and Machine Learning:	This type of technology is particularly advanced and typical of high-tech sectors and large enterprises. A.I. is in fact the name given to all those technologies that try to create intelligent machines that can replicate human behavior. Machine Learning, on the other hand, is an underlying technology of A.I., used more frequently, which involves machines learning directly from the data they analyze without being explicitly programmed.

Blockchain:	This type of technology comes to the spotlight with the advent of cryptocurrencies, but it has untapped potential in every field. Specifically, Blockchain is a subfamily of technologies, or as it is often clarified, a set of technologies, that exploit the characteristics of a computer network of nodes and allow a ledger containing data and information (e.g., transactions) to be managed and updated in an open, shared, and distributed manner without the need for a central control and verification entity, in a unique and secure manner. The application areas for this technology are more those that need disintermediation and decentralization.
Cloud Tecnology:	Cloud Technology refers to a family of different systems that can help in improving the quality of service delivery. The "cloud" is a virtual storage space, which allows access to the resources within it only through connection to the Internet. In the context of services, this technology can be used to make an infinite amount of resources available to users without constraints of hardware or geographic location.
Data Collection and Analysis:	These types of technologies include all those that involve the collection and analysis of data through informatic systems. This type of technology can take basic forms such as virtual questionnaires, or advanced forms such as Big Data analysis.
Environmental Innovations:	This technology includes within it all innovations concerning environmental aspects. It includes innovations in business processes, adoption of eco-friendly technologies, monitoring of indicators on emissions, and other technologies concerning environmental protection.
Hardware Enhancement:	There is Hardware Enhancement in cases where a company improves its hardware peripherals to enable the implementation of more advanced software systems, or simply to make the hardware background more stable for the purpose of improving service delivery. Again, this is a very broad family of technologies, which can range from acquiring enterprise PCs to building a server system

	to manage the offering of an on-demand service, but is necessary if the company does not have a technology infrastructure that adequately supports the services it wants to offer.
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I also recall that in the interviews, regarding this topic, we do not mention technologies in which the companies analyzed have invested, but rather we find technologies that the interviewees believe should be implemented in the future within the company they work for; or technologies for which a future investment has been planned but has not yet been made.

This allows us to outline in what direction SQ is going from a service provider's perspective, rather than a service recipient's perspective.

The analysis begins by presenting the numerical data collected, in Table (10).

Table (10) SQ Technologies Research Data

	Number of Mentions	Percentage of Respondents	Percentage relative to the Total Responses
Procedures			
Digitalization	14	45,16%	25,00%
Virtualization	5	16,13%	8,93%
Online Platform Development	4	12,90%	7,14%
Software Adoption	3	9,68%	5,36%
Software Creation	5	16,13%	8,93%
A.I. and Machine Learning	5	16,13%	8,93%
Blockchain	3	9,68%	5,36%
Cloud Technologies	2	6,45%	3,57%
Data Collection & Analysis	12	38,71%	21,43%
Environmental Innovations	2	6,45%	3,57%
Hardware Enhancement	1	3,23%	1,79%

Again, Table (10) presents cross-sector data, so the analysis is carried out at this stage without dividing companies by sector.

4.6.1 Procedures Digitalization

The technology most mentioned by respondents was Procedures Digitalization, mentioned by 45.16 percent of respondents, with a relative share of 25 percent of the total technologies mentioned.

In the previous chapter we have already analyzed similar investments under the name of "Automatization."

In this case its concept is expanded, since all technologies involving the digitalization of internal business processes are calculated in this percentage, as well as their automation, which is an even later step

Indeed, among the companies interviewed there are several that base many of their internal processes on traditional tools, such as paper and pen may be, but also word of mouth.

So in cases like this we found that the technology most needed to improve service quality should be precisely the digitalization of these processes.

Other companies in the sample, which have already carried out this digitalization process in the past, wish to carry it out for the remaining processes that still remain traditional, or they wish to make these processes automatic.

In the interviews we can see all these needs.

We see evidence of companies where tasks are *"still done in the old way, so meetings, handshakes and shared coffees,"* despite the fact that the scenario requires *"more and more flexibility, and less wasted time,"* and that tasks should be handled *"automatically, with no room for subjective evaluations."*

This thus translates into the need to make processes *"smoother, faster and less error prone"* through the adoption of technological tools that enable the digitalization of certain internal processes.

Among these we can find *"digital systems that allow the company to optimize and streamline the supply chain, improve supplier management, inventory forecasting and management,"* which are more advanced tools, but also simpler technologies such as *"the transition from paper to digital contracts"* since *"many of the Company's processes ... are physical paperwork filled out by managers and our clients."*

Thus, the effect of the transition to digitalization is that *"less human work will be required,"* as well as the fact that this technology *"will be essential to improve the quality of services, increase response speed, avoid production blocks and meet customer needs."*

4.6.2 Data Collection And Analysis

In second place in terms of number of mentions are technology tools related to Data Collection and Analysis.

This technology was mentioned by 38.71 percent of respondents, with 21.43 percent of mentions relating to the total number of technologies mentioned.

Obviously this type of technology is much more advanced than the Feedback Systems we saw in the chapter on investment.

In fact, in this case we are talking about systems capable of collecting and analyzing data of all kinds that can be much more complex to process than simple reviews.

In the interviews is expressed the need for further understanding clients through the processing of data, whether simple or complex, in order to be able to offer a service that has all the characteristics required by potential customers.

As clearly expressed in one interview, *"the data collection activities relating to usage habits, preferences, interests ... will allow the company to customize the services offered for each customer to meet their specific needs and increase their user experience,"* demonstrating that the data collected is often aimed at tailoring the service around the needs of clients.

So there are companies that plan *"to adopt new data analytical tools ... to convert the massive data into required information that helps in boosting the main output of the company."*

However, there are other motivations for using this type of technology, such as a desire to understand *"what attracts them (the clients) the most and what represents a barrier for them,"* or the help this technology can provide in the area of *"product innovation."*

In addition, data collection and analysis can also benefit Supply Chain Management, as *"through data collection" it is possible to facilitate the work of the "supply chain department."*

Finally, we can therefore state that *"the data collection and analysis system will therefore be of fundamental importance also to be able to predict future trends and scenarios and be ready to respond with greater precision to future customer expectations,"* with the aim of raising the level of SQ to the highest level.

4.6.3 Virtualization

Next, we find technologies concerning Virtualization.

This type of technology, which differs significantly from Digitalization, involves the use of more advanced technologies in order to move some or all of the processes related to offering a service from the real world to a virtual world.

They are therefore two very different technologies, in the sense that Digitalization requires rather basic tools to be implemented, while Virtualization requires more advanced hardware and software tools.

This type of technology, although used in the past in various areas, has gained further importance due to the emergence of the Metaverse, which is seen as a potential market for many companies to conquer.

These technologies are mentioned 16.13% of respondents, with a relative mention of 8.93%.

In the interviews, the reasons why respondents see these technologies as the future of SQ emerge.

In particular, *"investing in peculiar digital technologies, such as the virtualization" can have as its purpose a "significant reduction of prototyping costs and it is capable to highlight design issues in advance,"* if used in a Product Based environment.

The ability to avoid the occurrence of problems is also highlighted with regard to the virtualization of Accommodation services, which through the ability to visit locations virtually, on the one hand allows the customer to avoid undesirable situations, and on the other hand allows the service provider to remotely resolve various issues.

Finally, let us recall that even technologies that enable virtual meetings, although considered habitual, are to be seen as the future of service quality in the field of Virtualization.

In fact, several companies are planning to implement this type of technology to reduce the distance between the customer and the company, allowing them to take advantage of human contact without necessarily having to reach a physical service delivery point.

4.6.4 A.I. And Machine Learning

With the same number of mentions compared to the previous technology we find A.I. and Machine Learning technologies.

These types of technologies are to be considered particularly advanced and difficult to adopt, which is why they were mentioned with low frequency.

Systems of this type require a technological background that many companies, especially small ones, do not have, and do not even plan to implement, when tied to more traditional tools.

Let us recall that Machine Learning technologies are a subset of A.I. technologies, in fact the latter includes technologies that give a computer system the ability to acquire human capabilities such as learning and problem solving; Machine Learning, on the other hand, is an application of A.I. by which a computer system can learn through the processing of data into mathematical models without being given any instruction.³

Having thus made the necessary distinctions, let me present the reasons why the respondents considered these kinds of technologies as the future of SQ.

The most frequently stated reason is the ability to predict the occurrence of problems during service delivery, in fact *"artificial intelligence ... technologies have already proven to be very effective to improve reliability in many sectors, allowing for instance to understand when operation disruptions could arise, drastically decreasing service downtime."*

The possibility of eliminating the human factor in decision making is also to be seen as a driver of progress toward improving SQ, in fact *"organizations must focus on ... artificial intelligence and machine learning to uncover business insights that will help drive decision making,"* as long as there is a concomitant change in mindset that sees a shift to a *"holistic approach to reimagine (the) operations ... to reap the full rewards of these digital investments."*

As an additional motive to the adoption of technologies of this type there is the possibility of better understanding the consumer and predicting their decisions, in fact *"these technologies help the company in sentiment analysis of the consumer,"* providing the data that allows the company to shape the service to the customer's preferences.

4.6.5 Software Creation

Technologies in the area of Software Creation are mentioned as frequently as the previous two technologies.

This type of technology can take various forms, since obviously software can be used in any area concerning the provision of a service.

³ <https://azure.microsoft.com/it-it/solutions/ai/artificial-intelligence-vs-machine-learning/>

In particular, we will see that softwares useful for speeding up the company's internal processes are mentioned in interviews, as well as others needed to get in touch with the customer.

The aspect that characterizes this type of technology is the fact that in this case the improvement of SQ comes through the creation of software from scratch, and this allows for its greater customization based on the needs encountered by the company creating it. In the interviews, different needs are exposed, which therefore lead to software from various areas, completely different from each other.

First we find software related to internal resource management, such as software for *"Engineering Document Management,"* which aims to *"create a traceable environment where employee, clients and suppliers can share projects deliverables and documents,"* as well as *"represent the knowledge repository of the company."*

In the area of resource management, in addition to documents, we find *"centralized and automated inventory management software,"* which *"could help to manage the availability of products and their supply."*

Another category of software mentioned relates to the company's control over the activity of employees and service delivery points: this includes software used for a transportation service, which is a *"fleet manager system"* with the purpose of *"coordinating and controlling the drivers and trucks independently from other platforms"* through *"GPS overview, hours of services and DOT regulations"*; also in the same sphere is software that helps in the management of sales points, which *"will allow each selling point to better price and present the feature of our products."*

Last we find software used to bring customers closer to the company, such as *"a digital app to enable stores to better manage after-care services and achieve superior SQ standards and customer satisfaction."*

All the software just mentioned should be seen as *"great support and important tools to improve the overall SQ (performance),"* as long as companies adopt *"the right systematic mindset and approach to service quality."*

4.6.6 Online Platform Development

Next, mentioned by 12.90 percent of respondents, with a relative proportion of 7.14 percent, we find Online Platform Development.

While this technology is widely used and considered standard, again there are companies that for various reasons have not yet adopted it.

Online Platforms, frequently simple websites, have revolutionized the service industry by providing customers with greater choice and connection to companies without incurring in research costs.

However, some companies in the sample analyzed highlighted the need to plan investment in these technologies, which are seen as a first step toward digital transformation.

Thus, investments in this area are planned *"since the fact that the company at the present days does not have a website,"* but these are considered as *"short-term goals for the future."*

There are also companies that already have these kinds of technologies but wish to expand them as necessary to further improve their SQ.

For example, we can read about companies planning to implement *"an e-commerce section in our website where private end users can request spare and replacement parts."* This type of interview is very interesting since it is now hard to imagine that companies offering services do not have Online Platforms, yet there are cases where investment in similar technologies has not yet been made and thus is either a necessity or a desire. Obviously the use of these Online Platforms is to be seen as the present of SQ, and as we see from the data there are few respondents who indicate this as the future of SQ for their company.

4.6.7 Blockchain

Next we find Blockchain technology, mentioned by 9.68 percent of respondents, with 5.36 percent relative mentions.

This technology was born in 2008 with the advent of cryptocurrencies and its inventor has unknown identity.

Although it began as a technology to support digital currencies, its use was first expanded to various activities in the financial sector, then to other different activities unrelated to finance.

As much as it is a very advanced technology, its use is only in its embryonic stage, maintaining a huge potential for development in various economic fields.

We easily understand why this is mentioned as the future of SQ by some interviewees.

In fact, this technology provides for multiple benefits if applied properly, which can also be experienced by businesses offering services.

Indeed, this is a technology that brings a higher level of security of sensitive data protection, as well as total transparency regarding the information recorded; it also allows for greater efficiency and speed in transactions, as well as the possibility of automating them.⁴

We can also see these potential advantages in the interviews that were collected.

It is attested that the future use of Blockchain technology will be able to help companies in stipulating so-called "smart contracts," which are contracts whose compliance, performance and transparency will be guaranteed by the Blockchain.

Another reason why this technology is mentioned is privacy, a topic of fundamental interest to some companies that base their work on the use of data.

In this regard it has been said that the *"blockchain mechanisms will be able to guarantee a greater protection of sensitive data and facilitate the access to consultancy services,"* greatly improving the SQ provided to the client.

We can say that this yet unexplored technology represents a transformation of services so advanced that it is only conceived by a few companies, according to the interviews.

4.6.8 Software Adoption

With the same number of mentions with respect to Blockchain technology we find Software Adoption.

⁴ <https://www.ibm.com/it-it/topics/benefits-of-blockchain>

Respondents who mentioned Software Adoption say that the company they work for or have worked for desires or plans to invest in the adoption of existing software, once again for reasons that can be the most diverse.

It is appropriate to point out the difference between Software Adoption and Software Creation mentioned earlier: while the former involves the adoption of existing software, designed by a third party, in order to accomplish one or more activities concerning the offering of a service, the latter involves the creation from scratch of totally new software, thus customized in the best possible way to meet the needs of the organization.

Since Software Creation turns out to be much more resource-intensive, many companies turn to Software Adoption, which, however, does not necessarily provide less satisfactory results.

Several areas of application of these software are mentioned in the interviews, including *"collaboration among the support team and users"* through software such as *"Teams, Trello ... jointly with technologies that enable trouble / issues tracking"* such as *"Jira, ServiceNow."*

On the other hand, for companies that offer services for which reviews are a key aspect, it is indicated that they can evolve by adopting software *"to process and monitor reviews left on the internet or on applications that concern the (company),"* such as *"Capterra."* Software Adoption can thus also be a step in the direction of SQ improvement, despite being an easier project to implement than others mentioned in this paper.

4.6.9 Cloud Technologies

Next we find Cloud Technologies, mentioned by 6.45 percent of respondents, with a relative percentage of mentions of 3.57 percent.

The so-called "cloud" is a virtual storage space where data, software, files and applications can be placed, by any user.

"Cloud computing," on the other hand, is the technology that makes it possible to have access to the resources contained in this virtual space, only through connection to the Internet.

In the field of services, such a technology should be considered game changing, as it allows a reduction in costs and an increase in the responsiveness of the organization, as well as the possibility of offering the service (or parts of it) without the constraint of geographic location or hardware peripherals.

In the interviews we find that *"the evolution of cloud technologies"* is to be considered *"the biggest evolution in the SQ,"* according to one respondent.

The adoption of *"cloud technologies could allow in the future even better understanding of customer needs and expectation, allowing an operator to better understand customer issues and granting and even more prompt response when they need help."*

Thus, one of the purposes mentioned will be a more effective understanding of the customer, as well as an increase in responsiveness in solving problems.

Another respondent provides additional possible benefits of this technology such as *"improve our ability to respond quickly even to unexpected requests from our customers without the need for complex inventory management, ...*

increase the infrastructure redundancy (the infrastructure could be spread in different geographical regions)" or *"be able to use new digital technologies as soon as they are*

available on Cloud Providers catalogs (we can test new services very quickly and with lower initial investment)."

In such a scenario, however, the relationship with *"Cloud Providers ... to guarantee the established service level,"* will become critical, which is why it will be necessary to *"reduce the risk of lock-in and ensure the possibility of using ... other (providers) in case of problem with one of them."*

Thus, we have seen how this technology, although mentioned by a small part of the sample, has the potential to open up many possibilities for those who will implement it in their business processes while significantly improving their SQ.

4.6.10 Environmental Innovations

Following, with the same number of mentions as Cloud Technologies, we find Environmental Innovations.

These types of sustainability-related innovations can take many forms, but the constant is the goal of improving SQ through the introduction of technologies that look at environmental protection.

With this in mind, as we can read in the interviews, *"new operational and business processes will have to be implemented to make (companies) flexible and ready for new challenges,"* in light of the fact that *"sustainability issues can no longer be obscured."*

In this regard we read the testimony of another respondent who says: *"The SQ of my company ... will evolve in the future looking at the sustainability ... The digital technologies helpful in this regard will be for sure the tools able to monitor the environmental impact (e.g. reporting CO2 emissions)."*

While it may take a variety of forms, the future of SQ for some companies will necessarily come through the adoption of Environmental Innovation, although scarcely mentioned in this sample.

4.6.11 Hardware Enhancement

Last in terms of mentions we find Hardware Enhancement, mentioned by 3.23% of respondents, with a relative mention rate of 1.79%.

Not much explanation is needed, as Hardware Enhancement is an investment to be practiced at the same time as other technological investments.

When adopting technologies of a certain type, it may also be necessary to improve the organization's hardware background.

Indeed, in the interviews there is a need for *"bigger servers and more powerful chips,"* which *"will play a major role in this regard (the improvement of the SQ) since they will allow to collect more data, in a more reliable ... and faster way."*

This interview shows us that the implementation of hardware tools is to be considered parallel to the introduction of other technologies, thus as a support.

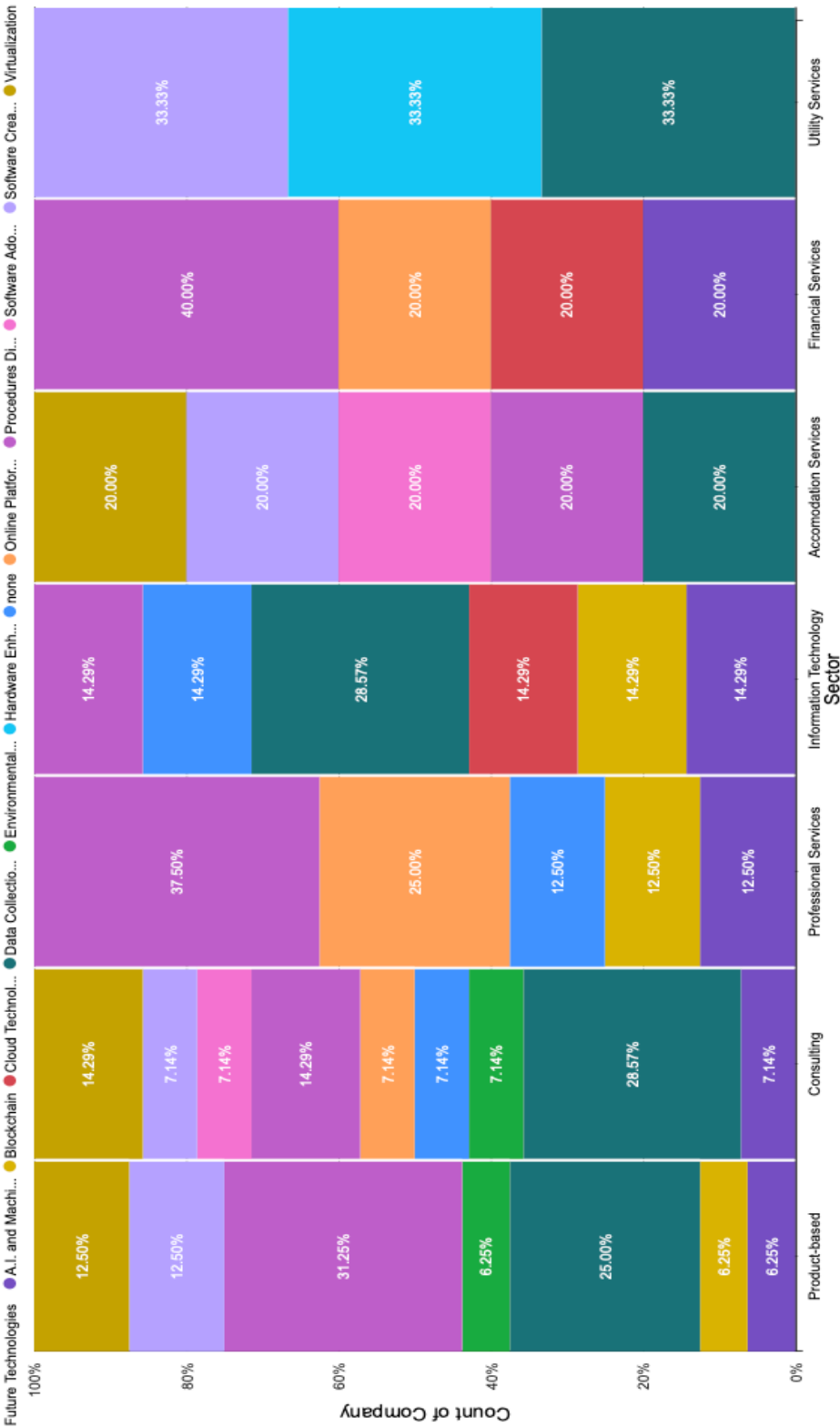
However, it is still worth mentioning that investments of this kind enable improved service performance, especially when offered virtually, which is why Hardware Enhancement also contributes to an improvement in the organization's SQ.

4.7 TECHNOLOGIES BY SECTOR

As done in previous Research Questions, the analysis continues by dividing the companies in the sample according to their sector.

This is helped by Figure (8), which shows the percentages of mentions of each technology, relative to the total number of technologies mentioned for each sector.

Figure (8) Technologies Distribution by sector



The data of major interest will be presented below, without repeating again an analysis that includes all technologies, as done in the previous section.

4.7.1 Cloud Technologies in the IT and Financial Services sectors

The first statistic that stands out is the one related to Cloud Technologies.

It is interesting to see how this investment is mentioned in only two sectors, which are the IT sector and the Financial Services sector.

This technology sees a natural application in the services offered by companies belonging to the IT sector: in fact, services of an IT nature have all the prerequisites to be offered via cloud, which is not the case for companies belonging to other sectors.

Regarding companies in the financial sector the discourse is similar, in fact most financial services are offered virtually, which is why Cloud Technologies are perfectly suited to offer more efficient solutions for the companies that implement them.

To conclude, we can say that Cloud Technologies are mentioned only in these two sectors, for the reason that nowadays they are the most technologically advanced ones and offer the customer a wide range of online services, which, when offered via the cloud, allow for cost savings and greater efficiency, thus an increase in SQ.

4.7.2 Environmental Innovations in the Product Based and Consulting Sectors

Another figure that stands out is the relationship between Environmental Innovations and the Consulting and Product Based sectors.

A similar analysis had also been conducted regarding investments, with the Consulting and Product Based sectors being the only ones that contained companies that had stated that they had invested in Sustainability.

The analysis should be considered similar, as the respondents who said that investments in Sustainability had been made in their companies were the same ones who mentioned Environmental Innovations as the technologies that will mark the future of their company's SQ.

The fact that the respondents came from these two sectors is by no means coincidental, as set out in Section 4.4.7.

These two sectors are among the most exposed to criticism and regulations regarding environmental aspects.

On the one hand, the Product Based sector is constantly under the lens because of its production processes, which are often found to be poorly compatible with environmental well-being.

On the other hand, there is the Consulting sector, where companies are asked to implement environmentally sustainable practices directly by their clients, as before they provide advice regarding environmental aspects, they need to be the first to implement them.

For the reasons just stated, it is understandable why these companies have made investments in Sustainability.

There is, however, an additional aspect that emerges from the interviews, which is the corporate culture and values.

Indeed, the interviewees mentioned Environmental Innovations as the future of their company's SQ probably because an environmentally friendly culture has now been formed within the organization.

The investments made earlier thus appear to be the basis for the future evolution of their companies in the direction of environmental sustainability.

4.7.3 Digital transformation in the Professional Services sector

Further data worthy of interest concerns the Professional Service sector and the technologies that were mentioned.

In particular, we see that more than 50 percent of the mentions, precisely 62.5 percent, concern Procedures Digitalization and Online Platform Development technologies.

As expressed in the analysis of individual technologies, these two belong to a category of so-called "entry level" technologies.

This is due to the fact that nowadays these tools are used by most companies, and are considered ordinary.

According to the data collected, however, this sector is the one that is most in need of a digital transformation, which would allow for various benefits that are impossible to obtain at present.

Indeed, in the interviews, it is possible to see how this sector sees the lack of websites or still sees the use of physical systems for data collection and processing, such as pen and paper.

It is for these reasons that respondents mentioned so frequently these two technologies, which are the ones that enable the first step in the transition from a traditional to a digitally driven company.

The reasons for this can be found in the nature of the industry, where companies, those that are less structured, thrive on little communication, leaving more room for the independent work of individual professionals.

4.8 RESEARCH QUESTION 4

Up to this point in the paper, several areas of interest have been analyzed, starting with the SERVQUAL model approach, moving on to the investments made in SQ, and then concluding with the technologies that will shape the SQ strategies of the analyzed companies in the near future.

After doing this work, it becomes necessary in my opinion to conduct a further analysis, which will go on to explore what companies have achieved in relation to the SQ efforts and strategies that have been applied.

This will make possible to delineate what benefits for the organization can be obtained if strategies are implemented to improve the quality of services offered.

This analysis will also complement the research work done in the literature review, as it will offer data of a cross-sectoral nature, including every output mentioned by the respondents.

In fact, while the scientific literature had previously focused more on analyzing the relationship between SQ improvements and individual economic outputs, this research

aims to broaden the field by allowing respondents to mention every output they encountered, thus even more than one if there were any.

Table (11) is presented below, including brief definitions of all the outputs that were mentioned in the interviews.

Table (11) SQ Output Description

Customer Satisfaction	It represents the satisfaction felt by clients with a product or service. Usually a client's satisfaction incurs when his or her expectations are met or even exceeded. This output can be measured in several ways, the most intuitive of which is by the satisfaction questionnaires distributed to customers.
Customer Retention	This refers to the company's ability to retain the customer during a medium to long period of time, thus leading them to repurchase the product or service again and again. The most popular method of measuring this output is through the customer retention rate.
Sales	This output measures the company's sales as emerging from the financial statement.
Market Share	Market share refers to the percentage of a particular industry's market held by one company and usually measures a company's competitive position relative to its competitors. Of the various ways to measure this output, the simplest is to compare a company's sales with the total sales of the industry to which it belongs to extract the percentage.
Level of Service	This output measures the quality of a service and was created to measure the quality of physical infrastructure such as roads. It can be measured from a company-centric point of view, thus through objective measurements of the service provided, or from a customer-centric point of view, through customers' opinions regarding the quality of the service.
Agility	Improving the quality of services offered, if it comes through a change in the corporate mindset and business model, leads to outputs that are difficult to measure but are of fundamental importance to a company. One of these is the ability to evolve and react quickly to external impulses, which in this case we will refer to as Agility.
Word of Mouth	This output occurs if a company finds that its customers are likely to recommend the service they purchased to their acquaintances.

Cost Control	This output occurs when a company finds that following the application of SQ strategies, process reorganization has led to more efficient use of resources.
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Table (12) is also provided, containing data regarding the distribution of the outputs mentioned in the various interviews.

These data will help to conduct an analysis regarding the conditions that led to the achievement of these outputs, along with the words extracted from the interviews.

Table (12) SQ Output Research Data

	Number of Mentions	Percentage of Respondents	Percentage relative to the Total Responses
Customer Satisfaction	23	74,19%	29,49%
Customer Retention	19	61,29%	24,36%
Sales	9	29,03%	11,54%
Market Share	9	29,03%	11,54%
Level of Service	12	38,71%	15,38%
Agility	1	3,23%	1,28%
Word of Mouth	4	12,90%	5,13%
Cost Control	1	3,23%	1,28%

4.8.1 Customer Satisfaction

As the most frequently mentioned output we find Customer Satisfaction, mentioned by 74.19% of respondents, with a percentage of mentions relative to the total outputs mentioned of 29.49%.

The data show that this output was widely mentioned, by almost $\frac{3}{4}$ of the sample analyzed.

This is to be considered a predictable finding, also in light of the Literature Review, since the relationship between SQ and Customer Satisfaction has been demonstrated by multiple studies, and this is confirmed in the data that were collected.

The reason why most of the respondents mentioned Customer Satisfaction as the main output of their SQ strategies can be found in the interviews.

In fact, Customer Satisfaction is the output that has the most immediate connection with SQ strategies. The latter are aimed at improving customers' consideration of the service provided, which is why, if well applied, they will bring higher Customer Satisfaction as the first verifiable result.

What has just been said is confirmed by the interviews, where we can read that "*customer satisfaction is ... very relevant ... in this context (in the context of a SQ strategy) and NPS is the tool used by (the company) to improve it.*"

Obviously Customer Satisfaction takes on further importance as it is the first step in achieving other kinds of economic outputs, which will be set out later, since for example *"it will lead the consumer to give us a better review both online and by word of mouth,"* as it is stated in an interview.

A successful SQ strategy thus has as its first goal to *"highly motivate customers by making them feel satisfied and keeping them satisfied also in the long term,"* keeping in mind, however, that it is only the first step in a relationship that can bear greater rewards.

Further confirming this, we read that *"higher customer satisfaction"* can have as a consequence *"to be able to sell to ... clients also other kinds of services,"* which can be of great interest to companies.

We therefore conclude our discussion by saying that customer satisfaction is the natural output of a SQ strategy, but it is also to be seen as a starting point for developing a customer relationship that proves profitable in the long run.

4.8.2 Customer Retention

Moving on in the analysis, Customer Retention was mentioned by 61.29% of respondents, with a relative proportion of mentions of 24.36%.

The first finding to note is that among all respondents who mentioned Customer Retention as an output, only one did not also mention Customer Satisfaction.

This finding should raise a thought: first of all, Customer Retention is not an output that can be overlapped with Customer Satisfaction, as they represent two very different effects. On the one hand, there is the organization's ability to satisfy the customer, which can be expressed in different ways; on the other hand, there is the company's ability to retain its customers over time.

Rather than viewing them as two overlapping outputs, they should be viewed as the consequence of each other, as set out in the previous section.

Indeed, if Customer Satisfaction is the basis for further outputs, Customer Retention can be one of those outputs; in fact, a company that succeeds in fully satisfying its customers will most likely be able to retain them for quite some time.

What has just been said is perfectly confirmed by this interview regarding the world of telecommunications, where it is expressed that *"when a client could rely on a stable and trustworthy service, when his/her issues are promptly resolved and when he/she feels assured by customer service every time a disruption happens he/she will hardly change provider."*

With an eye toward a profitable relationship with the client, Customer Retention also takes the form of a goal to be pursued because, as expressed in the interviews, *"it is less expensive to retain customers than to increase market share."*

In order to pursue this goal, *"in a fast-changing business environment, SQ can help building strong trust between companies and their customers,"* motive for which *"this aspect (SQ) is of crucial importance."*

We can conclude by saying that Customer Retention can be seen as a direct consequence of Customer Satisfaction, but it can also be seen in turn as the foundation of additional financial metrics derived from the profitable relationship that is created between company and customer.

4.8.3 Level Of Service

The most frequently mentioned output after the previous ones is Level of Service, mentioned by 38.71 percent of the respondents, with the percentage of mentions related to the total being 15.38 percent.

The LOS is an operational measure that measures the level of adequacy of a service to certain parameters.

This measure is usually calculated through measurements of a technical nature, and in fact originated with the measurement of the quality of road and transportation services.

However, it is also extended to other services of various kinds, only going to change the parameters for assessing service quality (for example, average customer service response time, customers served in a given period, customers who experienced problems)

Customer feedback regarding certain service parameters can also be used for the purpose of computing the LOS, which in any case maintain a technical nature.

Usually companies set goals for themselves in terms of LOS, which are to be achieved through improvements in service-related processes, thus through SQ strategies.

It may seem obvious, therefore, that companies experienced improvements in LOS as a result of implementing SQ strategies, but as is evidenced by the data, less than half of the companies in the sample were able to experience this output.

From this we can understand how on one hand some companies may not have achieved their LOS goals as a result of implementing SQ strategies, and on the other hand there are companies that do not involve the calculation of this metric.

In interviews we read of companies whose *"main output of ... SQ strategy is the level of service,"* since *"being a manufacturer of a high-end product the service level is one the prerequisite necessary to survive in the marketplace;"*

Measurements are made regarding *"quality of materials, design, functionality, and customer service"* to then verify *"whether the expected level of service it is actually satisfying or not."*

The LOS thus allows to check whether the services offered *"are better (in terms of number/quality of implemented features, service availability, customer caring, and so on) than those offered by ... competitors."*

In conclusion, we have seen how this output is encountered by a high percentage of respondents and should be seen as a natural consequence of an effective SQ strategy.

However, for various reasons, including lack of consideration or failure to meet goals, not all companies implementing a SQ strategy encounter LOS as an output.

4.8.4 Sales

Next we find the output of Sales, mentioned by 29.03 percent of the respondents, with a percentage of mentions relative to the total of 11.54 percent.

This output, which is perhaps the simplest to explain, measures the change in sales experienced by companies as a result of SQ strategies.

Sales is a very simple figure to analyze, but as explained in the literature review, its direct link to SQ improvements is difficult to define.

However, several interviewees mentioned Sales as the output found as a result of applying SQ strategies, which is why we will extrapolate the words of most interest.

Indeed, in the interviews it is possible to understand why this output was mentioned so many times; in fact, *"Sales is the first thing that every member of the company can see,"* so it is one of the things that jumps out most as a result of applying SQ strategies.

For others, the application of these strategies has allowed *"to increase profitability year after year selling more products,"* which translates into an increase in company Sales.

In the interviews it is also possible to see the reasons why this output is considered of paramount importance when applying SQ strategies, in fact *"the volume of sales is crucial not only to sustain the activity in a profitable way,"* but also to allow the service to continue to be improved over time.

Sales, while easy to assess, was not considered by all respondents as an output from SQ strategies, as it can sometimes be difficult to link to an increase in SQ, or it may simply not be found.

4.8.5 Market Share

To continue we find Market Share, with the same number of mentions as Sales.

First we notice how 66% of the time Market Share was mentioned together with Sales.

This figure shows that these two outputs are often found together, a symptom that these two metrics can be directly related to each other.

Indeed, an increase in Market Share, most of the time, brings with it a contextual increase in Sales, at least in this case.

As we know, Market Share is analyzed by companies because it provides important indications regarding competitive position, showing the share of sales held by a company in relation to total industry sales.

Just based on the definition of this metric we can understand why it is often mentioned along with Sales as an output from SQ strategies.

Interviews confirm the importance of this output and also identify its consequences in terms of business organization.

Indeed, it is stated that *"the main output of the company SQ ... is the market share. By increasing the market, the company can grow in terms of the number of employees and (is) able to focus on more important projects."*

Another interview confirms this by stating that the SQ strategy has brought the company *"more market share in (their) sector by taking it from the other players."*

In conclusion, we can say that this output has been found a fair number of times and is an important metric for determining the company's competitive position.

The company's goal must be the proper application of SQ strategies in order to achieve this output, and thus improve their position in the target market.

4.8.6 Word Of Mouth

Below we find the output related to Word of Mouth, mentioned by 12.90% of the respondents, with a relative percentage of mentions compared to the total of 5.13%.

At the first instance, it should be pointed out that WOM implicitly means positive WOM, resulting from the application of an SQ strategy.

We should remember that such an output can be crucial for the company for the purpose of acquiring new customers.

At the same time, it is an output that is the natural consequence of Customer Satisfaction, which is why it can be seen as an intermediate output, standing somewhere between Customer Satisfaction and Market Share.

This is where the words of the interviewees fit in, who in fact reiterate the importance of an effective SQ strategy *"so that the consumer is satisfied and spreads a positive word of mouth, which helps the company to convert the leads to consumers."*

This can happen in cases where *"the customer journey, products and services were amazing,"* therefore the consumer *"will recommend the (service) even more easily to others."*

As explained earlier, this kind of *"WOM publicity ... can lead to ... exponential growth,"* confirming the link between WOM and Market Share.

WOM is thus to be considered as a secondary output, but it was found by more than one in ten respondents, so its importance for the purposes of the analysis should be acknowledged.

4.8.7 Agility and Cost Control

Last we then find the two least mentioned outputs, which are Agility and Cost Control, mentioned the same number of times from 3.23 percent of respondents, with a relative share of total mentions of 1.28 percent each.

These two outputs had little mention in the interviews, but for the purposes of the analysis they are still important as they complete the output landscape and are also quite unusual and interesting.

Agility is an output that refers to particular business characteristics found as a result of the application of SQ strategies.

Specifically in the interviews we read that the improvement of corporate SQ has led the company to be *"agile, resilient, and able to respond to change at speed,"* which is why these characteristics have been summarized under the name Agility.

Indeed, culture change and reorganization of business processes related to the implementation of a SQ strategy can result in the emergence of business characteristics never seen before in the context of the firm.

Similarly, this kind of reorganization can make better use of existing resources and rethink some processes to make them more efficient, achieving Cost Control. This is why in the interviews we can read that *"the main output of ... SQ strategy is consumer satisfaction and cost control."*

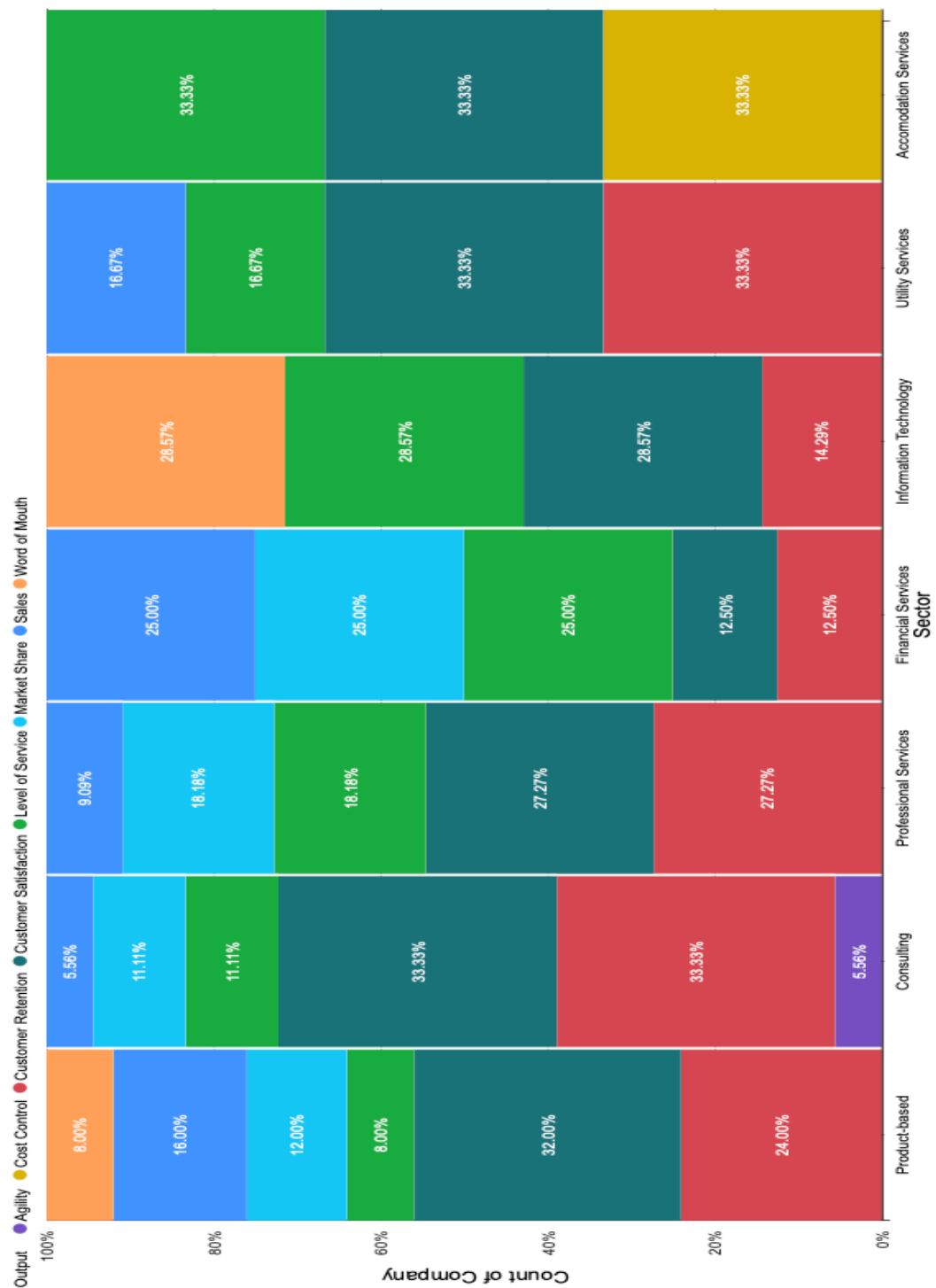
We conclude by saying that these two outputs, although unusual, represent the consequences of internal change brought by the application of SQ strategies, and for this reason they are to be considered interesting for a proper analysis.

4.9 OUTPUT BY SECTOR

The analysis concludes with a brief mention regarding the distribution of outputs by sector of the companies, as done in the previous sections of this paper.

The distribution of outputs by sector is presented in Figure (9)

Figure (9) Output Distribution by sector



Compared to the other graphs that showed the distribution of data within the various sectors, Figure (9) does not show any notable peculiarities; rather, it shows a coherent distribution of the various outputs, from which no insights arise.

The only peculiarity to highlight is the lack of mention of the output Customer Retention in the Accommodation Services sector.

From the data, this sector is the only one where there are no mentions of the output Customer Retention in the interviews.

The reason for this is found in the nature of the services offered in this sector, and the frequency with which these are repeated.

Except on rare occasions, companies in this sector do not encounter Customer Retention, nor do they desire it as much as companies in other sectors.

This is because it is rare in the Hotellerie and Housing sectors for customers to remain such for an extended period of time, rather there is a continuous turnover of customers who want to have a particular experience for the first and only time.

On the other hand, it is interesting that in such a sector there is no mention of WOM, which is one of the outputs usually most desired in this sector and most influenced by service quality.

The Accommodation Services sector, on the other hand, is the only one where Cost Control was mentioned as an output, but this is in my opinion to be considered coincidental since this output was mentioned so little.

5 CONCLUSIONS

Several topics have been addressed in this paper.

First and foremost, it should be emphasized that the entire paper aims to investigate the subject of Service Quality by going directly to interview those who put it into practice.

This made it possible to present data representing a different point of view concerning all facets of such an interesting subject.

On one hand, there was a desire to expand and confirm, if ever there was a need, the work of the authors of the SERVQUAL model by going to compare what they presented with data collected about 30 years later.

The results were, in my opinion, surprising, showing that the passage of time has not changed preferences concerning the fundamental aspects of service delivery represented by SERVQUAL dimensions.

This analysis also allowed for the collection of testimonies that expanded the definitions and opinions regarding these dimensions, enabling several insights to be drawn from the interviews.

Next, the three topics of greatest relevance to the subject of Service Quality were addressed, which are the investments that have been made, the technologies that will characterize this subject in the future, and the outputs that the application of a QS strategy can determine.

All this was done through a method that has never been applied in the literature concerning this subject.

In fact, a qualitative analysis was conducted, which led both to the creation of a database containing quantitative data and to the emergence of several insights arising from the words of the respondents.

In all three topics of the analysis, interesting quantitative data emerged, showing the prevalence of some investments, technologies or outputs over others, considering within the analysis everything that was mentioned in the interviews.

Further insights for discussion then emerged by exposing the reasons why those elements had been mentioned in the interviews, leading to a further broadening of the analysis.

Regarding the area of investment in QS, the direction that was taken is very clear: a large percentage of the companies in the sample have indeed invested in Feedback Systems, followed closely by investments in Support Activities. This shows us that the present of QS is represented by customer care achieved through listening to their Feedback and related service improvement, assisted by parallel activities that enable a 360-degree Customer Experience.

The future, on the other hand, will see a digitalization of most of the procedures related to service delivery, as the technology most mentioned was Procedures Digitalization. This also highlights the fact that despite what one might imagine many companies still rely on more traditional systems for their procedures, which very often make the service slower and less reliable.

Data Collection and Analysis is also an area that we will see more and more developed in QS in the future, although already nowadays data is one of the most important resources for the companies that collect it.

More advanced technologies such as Blockchain or A.I, because of their difficulty in implementation, are only conceived by a few respondents.

From a point of view of the outputs obtained, on the other hand, the data collected give very clear indications.

As the first outputs related to the implementation of QS strategies there are Customer Satisfaction and Customer Retention, which is why from a Managerial Suggestion point of view, if the goal is to improve business performance in these two metrics, the implementation of QS strategies can lead to the achievement of this goal.

The paper concludes with suggestions regarding future research: for future work regarding this subject, it may be necessary in my opinion to investigate regarding the relationship there is between SERVQUAL dimensions and the outputs obtained. A study that therefore links the focus on SERVQUAL dimensions to certain business outputs, again seen from the perspective of the service provider, may further broaden the subject and enable refinement of the work that has been done in this paper.

APPENDIX

A. Interview Questions

1) Name and Surname
2) Describe the services that your company offers to consumers and the investments done in Service Quality. What dimensions of the SERVQUAL model do you think would be appropriate to describe your services?
3) How do you think your company's Service Quality will evolve in the future? Which digital technologies can be helpful in this regard and why?
4) What is the main output of your Service Quality strategy? Explain the motivations behind the link between such output and the Service Quality strategy.

ABBREVIATION INDEX

SQ: Service Quality

LOS: Level of Service

WOM: Word of Mouth

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SUMMARY

LITERATURE REVIEW

The concept of quality has its roots far back in history due to the fact that it is volatile, not precisely definable, adaptive and above all subjective.

The search for a universal definition has not yielded any kind of reliable result (Reeves and Bednar, 1994), so the very idea of quality can take on different facets depending on the context in which it is used.

Quality was described as "the single most important force leading to the economic growth of companies in international markets" (Feigenbaum, 1982), reflecting the fact that since the 1980s the two worlds of quality and the market have collided to become a necessity, a postulate to which all companies must adhere for the purpose of survival.

The pursuit of quality, however, as we shall see in the paper, is not for its own sake, but rather enables the achievement of remarkable economic results when compared with those who do not pursue quality in the same way.

Garvin (1984) was the first to define five different approaches, which are transcendent approach, manufacturing-based approach, value-based approach, user-based approach, and product-based approach, to explain the different facets of such a complex concept.

What has been described above regarding quality is in most cases a prerogative of the evaluation of products rather than services. The latter in fact differ in three fundamental characteristics: *intangibility*, *heterogeneity*, and *inseparability* (Parasuraman et al., 1985; Dotchin and Oakland, 1994; Ghobadian et al., 1994). From the 1980s onwards, there have been various studies concerning service quality (Grönroos, 1982; Lehtinen et al., 1982; Parasuraman et al., 1985; Reeves et al., 1994), which have shown common points to be taken into consideration:

- a. *Certain inherent characteristics of the service sector increase the complexity of 'quality control' and 'improvement efforts.'*
- b. *The quality that the customer perceives lies in the gap between the expected outcome and the perceived outcome..*
- c. *Dimensions describing product qualities are not adequate to describe the quality of a service.*
- d. *Increasing the quality of a company's output leads to various economic benefits for the company.*

The SERVQUAL concept stems from the elaboration of these commonalities, as well as from the merging of two different quality concepts outlined above, which are the *User-based approach* and the *Product-based approach*.

Parasuraman et al. (1985), in their article 'A Conceptual Model of Service Quality and Its Implications for Future Research' published in the Journal of Marketing, conducted research that explored both of these questions in depth and channeled the work their predecessors had done on the subject into a clear framework.

The most significant discovery was the existence of five different gaps (see Figure 1.) between the quality that the company perceived it was providing to the customer and the actual output of the different tasks that make up service delivery. Studying these gaps can

enable company managers to identify their causes and plan strategies to reduce them. (Engelland et al. , 2000)

The five gaps that are indicated in Figure (1) include Consumer expectation - Management perception gap, Management perception - Service quality specification gap, Service quality specifications - Service delivery gap, Service delivery - External communications gap, and Function of the other gaps which are explained in Table (1).

The same research points out, in the same way as Garvin did with products, ten dimensions considered to be the factors by which quality is assessed by end customers.

Subsequently, the same authors (Parasuraman, Zeithaml, Berry) carried out two different studies (1988, 1991) in order to develop a model that would be useful for assessing the quality of services independently from the sector of activity of the company.

The end result was a scale of 22 items divided into 5 dimensions called 'SERVQUAL'.

The dimensions that are part of it are:

- 6) *Tangibles (four items): Physical facilities, equipment, and appearance of personnel*
- 7) *Reliability (five items): Ability to perform the promised service dependably and accurately*
- 8) *Responsiveness (four items): Willingness to help customers and provide prompt service*
- 9) *Assurance (four items): Knowledge and courtesy of employees and their ability to inspire trust and confidence*
- 10) *Empathy (five items): Caring, individualised attention the firm provides its customers*

Several criticisms have been levelled at the SERVQUAL model over the years.

However, the most interesting criticism for the purposes of the research I am conducting is the one concerning the existence of a hierarchical structure of quality constructs.

It is evident that for certain sectors there are dimensions more relevant than others for a positive assessment of service quality.

The authors of the SERVQUAL model themselves (Parasuraman et al., 1994), made several attempts in later years to understand whether a hierarchy of dimensions existed and what it was for customers regardless of the service they were using.

The result of this analysis was that there is an order of importance of the dimensions of the model, as follows:

- Reliability: 32%.
- Responsiveness: 22%.
- Assurance: 19%.
- Empathy: 16%.
- Tangibles: 11%.

There are also numerous studies that have shown a connection between investments in service quality and improved business results, analysing different aspects such as the direct relationship, offensive effects of service quality, defensive effects, effects on behavioural intentions, impact on selecting profitable customers and the key drivers of service quality, customer retention and profits.

The existence of such a hierarchy from the customer's point of view would presuppose that service-providing enterprises concentrate more on the business tasks related to service reliability, reserving less investment for the other dimensions in order of scale.

It is from this doubt that the first research question of this paper arises:

- *Research question 1 (RQ1): Do companies respect the hierarchy of the SERVQUAL model by focusing on the dimensions to which customers attach most importance?*

It is clear that companies, ideally dedicating themselves to the dimensions mentioned above, concentrate their resources on concrete investments, tangible and intangible, which in their view improve the quality of the services they offer.

While, as expressed above, the relationship between a general improvement in service and positive economic effects for the company has been analyzed from various aspects and points of view, it remains to be understood which drivers companies invest in to generate this improvement.

The inventors of the SERVQUAL model themselves wondered on numerous occasions what elements contribute most to the idea of service quality, in particular asking themselves what the "key drivers in each service encounter" were (Zeithaml, 2000).

For the purposes of this research, however, it is more interesting to analyse the research gap concerning the concrete investments that companies make in order to improve the quality of their services. This gap is also witnessed by Zeithaml in his "Service Quality, Profitability, and the Economic Worth of Customers: What We Know and What We Need to Learn" (2000), since in the concluding stages, in the section dedicated to "what we do not know", he poses the following question: "Where should investments in service quality be made to have the greatest impact on service quality, purchase, customer retention, and financial outcomes?", then specifying "Of all the company strategies, processes, approaches, and tactics that can be altered, where should companies invest money?".

This question gives us a chance to focus on the companies' point of view and what their efforts have been to improve QS.

In view of the above, it is deemed necessary to identify through this study what investments are made by companies in order to improve the quality of their services. Hence, the second research question of this paper stems from this analysis:

- *Research question 2 (RQ2): What kind of investments are made by companies offering services in order to improve their quality?*

Since the 1980s, many companies have engaged in introducing technological tools to increase the quality of their products. Only since the 1990s did the scientific literature begin to investigate regarding the relationship between technology and QS.

One of the first to do so was Jane Kingman-Brundage (1991), followed later by Berkeley and Gupta (1994), who were forerunners in pointing out what the relationship was between technology and services, and ways to improve them.

Obviously, over time, the interaction between IT and customer satisfaction has attracted increasing interest (Bonfield, 1996; Dabholkar et al., 1996; Galbreath, 1998; Pease, 1998; Philip and Hazlett, 2001), focusing above all on the concept of convenience, i.e. making more service delivery points available to the customer that were previously more complex to offer (Allen, 1997; Baily and Gordon, 1988; Cline, 1997; Milligan, 1997; Reed, 1998). Other studies, however, have shown that the real determinant for the improvement of service quality through the use of technology was the possibility to collect data in order to better understand customer preferences and habits (Cline, 1997; Furey, 1991; Randle, 1995).

In the light of the above-mentioned literature review, it is clear that the relationship between technology and perceived service quality has been extensively reviewed in several of its facets, starting with the different sectors of the companies and ending with the type of service delivery offered.

As established at the outset, however, this paper seeks to focus on the point of view of companies, rather than that of customers, which is why we ask, in light of the lack of research on the subject, which technologies managers, and thus companies, consider to be of greatest importance for the future improvement of service quality.

This examination gave rise to the third research question of this paper:

- *Research question 3 (RQ3): In which technologies do companies feel they should invest in the future in order to improve the quality of their services?*

The scientific literature since the 1980s has worked with the aim of exploring the relationship between QS and economic effects for businesses.

Many have been brought to light, analyzing in detail their relationship with QS improvements.

Several studies find the presence of negative economic effects following investments in SQ by companies (Easton, 1993; Bounds et al., 1994; Reger et al., 1994; Ittner and Larcker, 1996; Sterman et al., 1997); however, it should be pointed out that most of these studies broaden the scope of interest by considering all investments made in TQM.

Regarding the positive effects of SQ investments on profitability, numerous studies have been conducted (Rust et al., 1992; Nelson et al., 1992; Anderson, Fornell, and Lehmann, 1994; Ittner and Larcker, 1996; Easton and Jarrell, 1998).

In addition to profitability, several studies found other positive outcomes for companies that improved their SQ (Buzzell and Gale, 1987; Phillips, Chang, and Buzzell, 1983; Kordupleski, Rust, and Zahorik, 1993; Parasuraman, Berry and Zeithaml 1991b, 1994; Parasuraman, Zeithaml, and Berry 1988; Anderson and Sullivan 1993; Fornell and Wernerfelt 1987, 1988; Reicheld and Sasser 1990; Ennew and Binks 1996; Rust and Zahorik 1993).

What is lacking, however, is a study that, analyzing the perspective of companies, collects evidence by forming a database of data regarding all the outputs that have been found as a result of QS strategies.

In the light of what we have seen in this part of the paper, I consider it necessary to explore, through cross-sectional work, which outputs companies have obtained as a result of their investments in SQ, in order to be able to understand which are the most frequent and whether there are some not mentioned by any research.

Thus, the fourth and final research question of this paper arises:

- *Research question 4 (RQ4): What outputs have companies that have invested in SQ achieved?*

METHODOLOGY

Data were collected by means of structured interviews. Based on the literature review on service quality, the SERVQUAL model and future developments in the field, a set of interview questions was developed (see Appendix A).

The interviews were conducted virtually, via the Qualtrics platform.

There are three questions in total, and they cover the four main topics on which this paper is based (see Appendix).

The topics in question are: the dimensions of the SERVQUAL model on which companies focus most, the investments made by companies to improve their Service Quality, the outputs that companies obtained from these investments and the technologies in which companies plan to invest in the future in order to improve their Service Quality. The first two topics are contained in question number one, the third in question number two and the fourth in question number three.

Following the collection of data of a qualitative nature, we proceeded to transform it into quantitative form. In order to carry out this process without losing the veracity of the collected data, it was decided to construct a dataset containing only binary data. Specifically, with regard to topic number one, each respondent was to describe their company's service quality strategy using one or more dimensions of the SERVQUAL model. If the respondent mentioned a dimension, a 1 was placed in the box for that dimension, if that dimension was not mentioned by the respondent, a 0 was placed.

Regarding topic number two, as many columns were created as all investments in Service Quality mentioned by the respondents. When a respondent mentioned an investment made by his company, a 1 was placed in the box for that investment, otherwise a 0 was placed.

The same procedure as for argument number two was also performed for argument number three and number four.

In conclusion, a complete dataset of variables assuming only binary data was formed.

This procedure allowed the data to be processed in statistical form in order to present a more precise work.

DATA ANALYSIS AND DISCUSSION

PRELIMINARY SAMPLE ANALYSIS

As a first step, a preliminary statistical analysis of the collected data was conducted.

This analysis includes the division of the sample companies into sizes, calculated using the Italian norm regarding company size as a framework.

The sample is divided as follows: 9,68% Micro Companies, 12,90% Small Companies, 3,23% Medium Companies, 61,29% Large Companies, then there is a 12,90% of companies the size of which is unknown.

Then the companies were divided into 7 different sectors: Product Based, Professional Services, Consulting, Information Technology, Financial Services, Utility Services, Accommodation Services.

The sample is divided as follows: 29,03% Consulting, 25,81% Product Based, 16,13% Professional Services, 9,68% Information Technology, 6,45% Financial Services, 6,45% Utility Services, 6,45% Accommodation Services.

Data regarding size and sectors are presented in Figures (3,4) and Tables (3,4).

RESEARCH QUESTION 1

When analysing the interview data, interesting results emerge, especially in light of the literature review. As can be seen in Figures 6 and 7, all SERVQUAL dimensions were mentioned more than once, in light of the fact that for the purpose of offering a quality service, all dimensions must be considered, and furthermore, all respondents mentioned at least one dimension in their answers.

There are, however, clear preferences as to where to place the focus when offering a service.

From what was found in the data, Reliability is the most mentioned dimension (26.3 percent of mentions relative to the total dimensions mentioned), followed by Responsiveness (22.2 percent), then there is Assurance (21.2 percent), Empathy (18.2 percent) and Tangibles (12.1 percent).

We can see that, although the percentages differ from the Dimensions' Hierarchy found by the authors of the SERVQUAL model, they do so by a few units, but above all, the order of the hierarchy is fully respected.

This confirms the idea presented in Figure (2), which is that companies should focus on the dimensions considered by customers as most influential for quality service, which they actually do, as demonstrated by the data in our possession.

DIMENSIONS BY SECTOR

The distribution of SERVQUAL Dimensions based on the division of the sample into sectors is next shown in Figure (6), from which several insights arise based on the relationship between the mentioned Dimensions and the industry profile.

Reliability is well distributed in all sectors, as are the Assurance dimension and the Responsiveness dimension.

In contrast, the Empathy dimension is mentioned in every sector except Utility Service, while the Tangibles dimension is not mentioned in neither the Professional Services nor the IT sector.

RESEARCH QUESTION 2

Regarding the second Research Question, the data and interviews provide several insights.

Respondents mentioned a total of 12 different types of investments which fit into different stages of service delivery processes. Indeed, there are investments related to internal processes, personnel, service delivery points or business infrastructure.

The order of investments mentioned is as follows, with the percentages of respondents who mentioned the investment.

The most mentioned was Feedback Systems (32.26%) followed by Support Activities and Requirements Compliance (both 29.03%). Next are Hiring and Project management (both 22.58%) followed by Physical Stores and Training (both 16.13%). Finally we find Infrastructure Enhancement and Automatization (both 12.90%) followed by Indicators Monitoring Mechanisms and Quality Division (both 9.68%). Last are investments related to Sustainability (6.45%).

The data showed that investments in SQ are mainly in Feedback Systems, demonstrating that this technology is to be seen as the basis of service improvement, thus conveyed by consumer opinions.

INVESTMENTS BY SECTOR

An analysis of the distribution of different investments according to the company's industry provides further insights.

First is the distribution of Hiring investments in the Accommodation Services sector, where these investments account for 100% of the investments mentioned.

After that is the fact that in Professional Services 40% of respondents did not mention any investments.

These two data represent the most important findings in this section of the paper.

RESEARCH QUESTION 3

Having analyzed the present of SQ in the previous understood it is now time to analyze the future development of the subject, through the data collected from the interviews.

Indeed, the interviews ask what technologies are desired or planned to be invested in to improve the QS of the interviewee's company.

A total of 11 technologies are mentioned, which range from the simplest to the most advanced, demonstrating that the future of SQ takes different forms depending on who is interviewed.

The order regarding the amount of mentions for each technology is presented below; therefore, for each technology the percentage of respondents who mentioned it is reported.

The most mentioned technology concerns Procedures Digitalization (45.16 %) followed then by Data Collection and Analysis (38.71%). Next are Virtualization, Software Creation and A.I. and Machine Learning (all with 16.13 percent) followed by Online Platform Development (12.90 percent).

This is followed by Software Adoption and Blockchain (both 9.68 percent) and then Cloud Technologies and Environmental Innovations (both 6.45 percent). Last we find Hardware Enhancement, mentioned by only 3.23% of respondents.

The data allow us to understand how the future of SQ is Procedures Digitalization, which will allow companies to speed up internal processes to provide better service. This also allows us to understand how many companies have not yet made a digital transformation but still operate through more traditional tools and procedures.

TECHNOLOGIES BY SECTOR

Several insights emerge from the data and interviews regarding the distribution of the mentioned technologies across sectors.

In particular, it is of interest how Cloud Technologies are mentioned only in the IT and Financial Services sectors, which are to be considered the most technologically advanced. Further insights come from the fact that Environmental Innovations are mentioned only in the Product Based and Consulting sectors, due to the fact that these two sectors are likely to be the most exposed and most in need of an ecological transition.

Finally, we note how the Professional Services sector is the one most in need of digital transformation, as most of the technologies mentioned in the sector are Procedures Digitalization and Online Platform Development.

RESEARCH QUESTION 4

The last research question concerns the outputs that were found by companies following the implementation of QS strategies.

In this case the data present a large number of mentions for outputs that can be considered predictable, but at the same time very interesting as unusual outputs are mentioned in the interviews.

The outputs sorted by amount of mentions are presented below, with the percentage of respondents by whom they were mentioned.

The output most mentioned by respondents was Customer Satisfaction (74.19%), followed then by Customer Retention (61.29%).

Further down we find Level Of Service (38.71%) followed by Sales and Market Share (both 29.03%).

Finally we find Word Of Mouth (12.905) followed by Agility and Cost Control (both 3.23%).

These data clearly show that Customer Satisfaction is the output most encountered as a result of SQ strategies and can also be seen as the basis for obtaining other outputs.

Indeed, Customer Satisfaction is the basis for Customer Retention, which is why they are often mentioned together, but it is also the basis for positive Word of Mouth.

Agility and Cost Control, though little mentioned, are still to be considered interesting outputs since they are unexpected.

OUTPUT BY SECTOR

In this case, the data regarding the distribution of outputs by sectors is less interesting and provides less insights than in the previous sections.

The only peculiarity to highlight is the lack of mention of the output Customer Retention in the Accommodation Services sector.

From the data, this sector is the only one where there are no mentions of the output Customer Retention in the interviews.

The reason for this is found in the nature of the services offered in this sector, and the frequency with which these are repeated.

Except on rare occasions, companies in this sector do not encounter Customer Retention, nor do they desire it as much as companies in other sectors.

This is because it is rare in the Hotellerie and Housing sectors for customers to remain such for an extended period of time, rather there is a continuous turnover of customers who want to have a particular experience for the first and only time.

On the other hand, it is interesting that in such a sector there is no mention of WOM, which is one of the outputs usually most desired in this sector and most influenced by service quality.

CONCLUSIONS

Several topics have been addressed in this paper.

First and foremost, it should be emphasized that the entire paper aims to investigate the subject of Service Quality by going directly to interview those who put it into practice.

This made it possible to present data representing a different point of view concerning all facets of such an interesting subject.

On one hand, there was a desire to expand and confirm, if ever there was a need, the work of the authors of the SERVQUAL model by going to compare what they presented with data collected about 30 years later.

The results were, in my opinion, surprising, showing that the passage of time has not changed preferences concerning the fundamental aspects of service delivery represented by SERVQUAL dimensions.

Next, the three topics of greatest relevance to the subject of Service Quality were addressed, which are the investments that have been made, the technologies that will characterize this subject in the future, and the outputs that the application of a QS strategy can determine.

A qualitative analysis was conducted, which led both to the creation of a database containing quantitative data and to the emergence of several insights arising from the words of the respondents.

In all three topics of the analysis, interesting quantitative data emerged, showing the prevalence of some investments, technologies or outputs over others, considering within the analysis everything that was mentioned in the interviews.

Further insights for discussion then emerged by exposing the reasons why those elements had been mentioned in the interviews, leading to a further broadening of the analysis.

Regarding the area of investment in QS, the direction that was taken is very clear: a large percentage of the companies in the sample have indeed invested in Feedback Systems, followed closely by investments in Support Activities. This shows us that the present of QS is represented by customer care achieved through listening to their Feedback and related service improvement, assisted by parallel activities that enable a 360-degree Customer Experience.

The future, on the other hand, will see a digitalization of most of the procedures related to service delivery, as the technology most mentioned was Procedures Digitalization. This also highlights the fact that despite what one might imagine many companies still rely on more traditional systems for their procedures, which very often make the service slower and less reliable.

Data Collection and Analysis is also an area that we will see more and more developed in QS in the future, although already nowadays data is one of the most important resources for the companies that collect it.

More advanced technologies such as Blockchain or A.I, because of their difficulty in implementation, are only conceived by a few respondents.

From a point of view of the outputs obtained, on the other hand, the data collected give very clear indications.

As the first outputs related to the implementation of QS strategies there are Customer Satisfaction and Customer Retention, which is why from a Managerial Suggestion point of view, if the goal is to improve business performance in these two metrics, the implementation of QS strategies can lead to the achievement of this goal.

The paper concludes with suggestions regarding future research: for future work regarding this subject, it may be necessary in my opinion to investigate regarding the relationship there is between SERVQUAL dimensions and the outputs obtained. A study that therefore links the focus on SERVQUAL dimensions to certain business outputs,

again seen from the perspective of the service provider, may further broaden the subject and enable refinement of the work that has been done in this paper.