



**CATOLICA  
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## **Hospital Branding as a strategy for differentiation:**

Does Hospital Branding Leverages Hospital Units in the  
Portuguese Market?

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# ABSTRACT

**Title:** Hospital Branding as a strategy for differentiation: Does Hospital Branding Leverages Hospital Units in the Portuguese Market?

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Hospital Branding has grown in the Portuguese healthcare market as a strategy to create a unified image to consumers, as well as executing common practices among hospitals to ensure a certain level of quality expected by patients.

This dissertation aimed to understand if Hospital Branding could be used as a differentiation strategy in a way that it could leverage the private hospitals' performance in the Portuguese market. For this, three research questions were developed by proposing that hospital branding provided private hospitals with better resource allocation skills, further tools to promote patient satisfaction and improved hospital positioning, when compared with unbranded hospitals. To analyze this, a 2-group sample was defined, with both branded and unbranded Portuguese private hospitals, and a set of hypotheses was created, supporting all research questions, and tested through association's and differences' tests. After analysis, not all hypotheses were accepted and, consequently, not all research questions were fully supported.

Evidence showed that hospital branding did provide private hospitals with a higher chance of offering more resources to patients, with a higher clinical excellence and safety than unbranded hospitals. Branded hospitals were expected to be more innovative regarding used technologies and more likely to present a transparent culture with patients.

**Key Words:** Hospital Branding; Differentiation; Resource Allocation; Patient Satisfaction; Hospital Positioning.

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## RESUMO

**Título:** Marca Hospitalar como estratégia de diferenciação: será que as Marcas Hospitalares promovem o desempenho das unidades hospitalares no Mercado Português?

**Autor:** Ana Beatriz Toscano Lourinho Gomes

A presença de Marcas Hospitalares tem crescido no sector da saúde portuguesa sob forma de estratégia, capaz de proporcionar uma imagem unificada aos pacientes e de implementar práticas comuns entre hospitais, de modo a assegurar um nível de qualidade esperado pelos pacientes.

Esta dissertação teve como objetivo compreender se o uso de marcas hospitalares poderia servir como estratégia de diferenciação no sector da saúde portuguesa, de tal forma que o seu uso seria capaz de promover o desempenho dos hospitais privados. Para tal, um total de três perguntas foram desenvolvidas, no qual foi proposto que o uso de marcas facultava aos hospitais privados uma melhor gestão de recursos, mais instrumentos para satisfação do paciente e um melhor posicionamento no mercado, quando comparados com outros hospitais. A metodologia incluiu a definição de uma amostra, dividida em dois grupos, constituída por hospitais privados associados, e não associados, a marcas hospitalares. Um conjunto de hipóteses foram criadas e testadas utilizando testes de associação e de diferenças. Após análise, nem todas as hipóteses foram aceites. Consequentemente, algumas suposições não foram apoiadas.

Este estudo mostrou que o uso de marcas hospitalares proporcionou aos hospitais uma maior possibilidade de oferecer mais recursos aos pacientes, dotados de excelência clínica e segurança, quando comparados com outros hospitais. O uso de marcas hospitalares tornou os hospitais mais recetivos ao uso de inovações tecnológicas e à prática de uma cultura mais transparente com os pacientes.

**Palavras-Chave:** Marca Hospitalar; Diferenciação; Alocação de Recursos; Satisfação do paciente; Posicionamento Hospitalar.

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## LIST OF ABBREVIATIONS

Acronym	Denotation
ACSS	<i>Administração Central do Sistema de Saúde, IP</i>
SNS	<i>Sistema Nacional de Saúde</i>
NHS	National Healthcare System
PCA	Portuguese Corporation Authority
ERS	<i>Entidade Reguladora de Saúde</i>

Table 1. Complete list of abbreviations.

# GLOSSARY

Term	Definition
Hospital Brand	Corporate brand, fully dedicated to the healthcare industry, that holds all or most of, one or more, hospital shares and it presents its annual results as a global entity. This brand implements the same, or similar, strategies to all owned hospitals in a way that allows the share of practices, knowledge, image and culture.

Source: Author

Table 2. Hospital Brand definition.

Term	Definition
Hospital	Healthcare center, with differentiated services, endowed with patient admission, ambulatory services and diagnostic and therapeutic exams capacity with the goal of providing care and preventing illness to the population.

Source: ACSS

Table 3. Hospital Definition.

Measures	Definition
Geographic Partners	Number of entities within the same corporate brand that share the same concept of “hospital” and with whom it can share knowledge.
Specialties	Number of available subfields within the medicine field with trained staff, on hospital facilities.
Clinical Exams	Number of medical procedures available, on hospital facilities, to detect, diagnose, or monitor diseases, disease processes, susceptibility, and determine a course of treatment.

Source: Author

Table 4. Resource Allocation Research Question: Measures' Definition

Measures	Definition
Insurance Contracts	Number of available healthcare plan contracts to patients on the hospital facilities.

Annual presented Claims	Number of claims that were presented to the hospital facility, in the year 2016.
Annual presented Compliments	Number of compliments that were presented to the hospital facility, in the year 2016.
Option of online Scheduling appointments	Option of accessing to the hospital's official website to book a physical appointment in the facility using an online appointment schedule instrument.
Option of accessing to an online personal area	Option of accessing the hospital's official website and enter a personal area space that collects patient information, previous exams and relevant historic.
Available Information rate	1-10 rate, depending on the number of available information on the hospital's official website (10 info's were selected to rate transparency: information regarding support services, news about the hospital, necessary care needed before taking exams, schedule, visiting hours, hospital's location, how to arrive to the facility using public transportation, pricing, payment methods and estimated waiting time.

**Source: Author**

*Table 5. Patient Satisfaction Research Question: Measures' Definition.*

<b>Measures</b>	<b>Definition</b>
Support Services	Information regarding Patient's parking, cafeteria and canteen.
Hospital's News	Specific section presenting current news regarding the facility.
Schedule	Facility schedule for admissions, consults and urgencies.
Visiting Hours	Schedule in place for visiting admitted patients.
Prices	Information regarding the practiced pricing for all services.
Payment Methods	Information regarding the payment possibilities (such as cash or card).
Localization	Information regarding the hospital's localization.

How to Arrive	Information regarding how to arrive to the facility using public transportation.
Waiting Time	Information regarding the estimated waiting time for non-urgency cases.

**Source: Author**

Table 6. Patient Satisfaction Research Question: Measures' extended Definition.

Measures	Definition
Clinical Excellence	<p>This dimension aimed to evaluate the care quality given by healthcare providers., by assessing the institutional compliance with guidelines and good practices. A total of 16 evaluation areas were defined:</p> <ul style="list-style-type: none"> <li>• Cardiology Area- Acute Myocardial Infarction</li> <li>• Cardiac Surgery Area - Myocardial Revascularization Surgery</li> <li>• Cardiac Surgery Area - Valvular Surgery and other Non-Coronary Heart Surgery</li> <li>• Ambulatory Surgery Area- Ambulatory Surgery</li> <li>• General Surgery Area- Colon Surgery</li> <li>• Vascular Surgery Area- Arterial Revascularization Surgery</li> <li>• Intensive Care Unit - Intensive Care Units</li> <li>• Transversal Care Area - Venous Thromboembolism</li> <li>• Cross-Sectional Care - Acute Pain Assessment</li> <li>• Gynecology Area- Hysterectomies</li> <li>• Neurology Area- Stroke</li> <li>• Obstetrics and Gynecology - Obstetrics and Gynecology</li> <li>• Orthopedics Area - Total Hip and Knee Arthroplasty</li> <li>• Orthopedic Area - Surgical Treatment of Proximal Femur Fractures</li> <li>• Pediatrics Area - Neonatal Care</li> <li>• Pediatrics Area- Pneumonia</li> </ul> <p>Specific indicators were associated to all areas, proving therefore an individual assessment to each of the selected areas.</p> <p>The result for this metrics reflects upon the fulfilment of all necessary requirements for each of the 16 areas analyzed. If none of the areas fulfilled the requirements, the institution fails.</p>
Patient Safety	<p>This dimension aimed to evaluate the safety level that patients are put through on hospital facilities. 2 optics are considered:</p> <ul style="list-style-type: none"> <li>• First, safety procedures assessment, which complements the following categories: <ul style="list-style-type: none"> <li>○ Safety culture;</li> <li>○ Patient's identification and discharge;</li> <li>○ Information and Communication;</li> <li>○ Medication safety;</li> <li>○ Safe surgeries;</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>○ Risks.</li> <li>● Secondly, adverse events assessment, which presents the following indicators: <ul style="list-style-type: none"> <li>○ Mortality in low mortality GDH;</li> <li>○ Stage III and IV pressure ulcer;</li> <li>○ Nosocomial infection (infection associated with central catheter placement);</li> <li>○ Hip fracture in the postoperative period;</li> <li>○ Postoperative hemorrhage or hematoma requiring re-exploration;</li> <li>○ Nosocomial infection (postoperative sepsis);</li> <li>○ Suture dehiscence;</li> <li>○ Accidental piercing or laceration;</li> </ul> </li> </ul> <p>Failing any of the critical points, which are some specific requisites among the categories analysis, will directly fail the healthcare facility. After analysis, the facility can either pass or fail the dimension.</p>
<p>Suitability and Comfort of facilities</p>	<p>This dimension aimed to analyze the physical, structural and organizational conditions of healthcare facilities as well as evaluating requirement management for food quality, physical security and work hygiene.</p> <ul style="list-style-type: none"> <li>● Regarding the facility’s suitability, the following categories were considered: <ul style="list-style-type: none"> <li>○ Mobility and accesses;</li> <li>○ Maintenance;</li> <li>○ Fire Safety Self-Protection Measures</li> <li>○ Non-Clinical Risk</li> </ul> </li> <li>● Regarding the facility’s comfort, the following categories were considered: <ul style="list-style-type: none"> <li>○ Patient admission;</li> <li>○ Complementary areas;</li> <li>○ Comfort;</li> <li>○ Quality control.</li> </ul> </li> </ul> <p>Failing any of the critical points, which are some specific requisites among the categories analysis, will directly fail the healthcare facility. After analysis, the facility can either pass or fail the dimension.</p>
<p>Patient-centered approach</p>	<p>This dimension aimed to evaluate, objectively, the level of care orientation towards patients’ needs and expectations. The results were positively influenced when patients and their companions were evolved in the decision-making process when choosing treatment.</p> <p>The following categories were considered:</p> <ul style="list-style-type: none"> <li>● Informed consent</li> <li>● Booking and Cancellation Appointments</li> <li>● Booking and Cancellation of Complementary Diagnostic and Therapeutic Surveys</li> <li>● Patient Admission</li> <li>● Second Opinion</li> <li>● Spiritual Support</li> <li>● Patient Associations</li> <li>● Visits</li> <li>● Alimentation</li> <li>● Formation</li> <li>● Communication with patients</li> </ul>

	<ul style="list-style-type: none"> <li>• Documentation and Support for Dismissal</li> <li>• Terminal Condition Patients</li> <li>• Standby Times</li> <li>• Confidentiality</li> <li>• Suggestions, Complaints or Complaints</li> <li>• Satisfaction Surveys</li> <li>• Feedback</li> </ul> <p>Failing any of the critical points, which are some specific requisites among the categories analysis, will directly fail the healthcare facility. After analysis, the facility can either pass or fail the dimension.</p>
Patient Satisfaction	<p>This dimension aimed to evaluate how big is the distance between the hospital's good practices the it's patients' perception of it. In order to evaluate this matter, it was verified if hospitals had, in place, a patient satisfaction evaluation so that healthcare providers are aware of their patients' expectations.</p> <p>After analysis, the facility can either pass or fail the dimension.</p>

Source: ERS

Table 7. Hospital Positioning Research Question: Measures' Definition.

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Starting by quoting Haper Lee “*Things are never as bad as they seem*”.

Throughout this dissertation, uncertainty and fear of failure were 2 very present feelings when deciding towards what path to choose for this work. Over the pressure, frequently I doted what were the best choices and found myself questioning all the previous work already done. In these periods, truth support and friendship were clearly noticeable and help me understand who was there to help in times of need. With them, the stated quote makes perfectly sense because, thanks to them, difficult times progressed to times of understanding and laugh. Consequently, all those involved in this process deserve a special salutation, stating my appreciation towards them, not only for this work, but for all the times they are there for me.

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# 1. CHAPTER – INTRODUCTION

On today's Healthcare Industry, hospitals are faced with daily tasks that challenged them to elevate their performance and their outcomes. Professionals work hard to improve this environment, as do the organizations supporting them.

It is clear to say that most hospitals' main goal is, at its primary, to promote patient safety and positive results. But, such as it happens in every industry, a strong factor may influence every hospital's performance: competition. The present healthcare sector participants may need to, not only be concerned about their outcomes, but also about the competitors surrounding them, regionally and nationally.

According to PORDATA (INE, 2017), in 2015, the Portuguese Healthcare industry presented a total of 225 operating hospitals, specifically 111 of them referred to private facilities, evidencing the existing rivalry within the market. Hospitals must adopt strategic decisions that help them overcome all their tackled challenges. These decisions may target specific action plans, such as operations or marketing, or it can target an integrated action plan designed to overcome obstacles following identical guidelines, such as corporate brands.

This dissertation intended to analyze the impact that branding could have on Portuguese private hospitals. Its core was to understand if hospital branding could be used as a differentiation strategy for hospitals, helping them leverage their performance within the market.

For this, an extensive analysis was done to better understand the Portuguese healthcare sector and relevant factors leading to hospital differentiation. From this, 3 areas of fields of study were dipper analyzed and later transformed into research questions for this dissertation:

- The first field of analysis was the hospital's resource allocation ability. By identifying core variables impacted by differentiation, the investigation aimed to verify if branding could improve the ability of private hospitals. The following research question was created:

- Does hospital branding improve the resources allocation of private hospitals, on the Portuguese market?
- Secondly, patient satisfaction was the next field of study. In this, satisfaction sources were identified and an analysis was done to understand if branding could, or not, provide better tools to private hospitals to achieve a higher patient satisfaction. The following research question was analyzed:
  - Does hospital branding provide tools that lead to a higher patient satisfaction on private hospitals, on the Portuguese market?
- Finally, the third field of analysis was the hospital positioning. In there the intention was to identify if branding could provide a better positioning for private hospitals. This said, the following research question was developed:
  - Does hospital branding leads to a better positioning of private hospitals, on the Portuguese market?

By analyzing the previously 3 fields of study, this dissertation's purpose was to understand if the concept of Hospital Branding, which refers to the practice of creating a brand associated with the healthcare practice, could be considered a successful strategy to promote and differentiate the hospitals units, within the brand, in the Portuguese industry.

## 2. CHAPTER – LITERATURE REVIEW

### 2.1. The Portuguese Healthcare Industry

#### 2.1.1. Introduction

Over the past 40 years the Portuguese Healthcare system has undergone several structural changes with the goal of improving its overall performance (Major & Magalhães, 2014).

Back in 1979, an original public health service system was introduced to the Portuguese population. This came as one of the results of the Portuguese revolution of 1974 that led to the right to universal health to all citizen. Later, this public health scheme evolved to the current National Health System (in Portuguese “SNS”), that is still in practice until today.

The NHS was based on the “Beveridge Model”, the United Kingdom’s health system, and its core is focused upon promoting free access to high quality health care to all citizen, independently of their social or economic status. Its structure was ideally designed to promote equity, efficiency, quality, accountability and devolution of power (Oliveira & Pinto, 2005). However, many were the problems surrounding this system. In fact, the NHS presented several issues that needed urgent fix. Problems such as lack of efficiency, low productivity, large waiting lists, an excessive level of dissatisfaction from both patients and professionals and overall high costs while providing health care (Ribeiro, 2004). All these factors were target of criticism and lead to a pressing need to release responsibilities from the government with the goal of increasing service quality and transparency among the public administration (Simões, 2004).

By 2002 the NHS suffered a structural renovation (Dias & Neves, 2006). A new law was introduced allowing new juridical forms for hospital practice that encouraged them to have a broader enterprise view of their management activities. Thanks to this, agreements could now be made between public and private establishments to comprise management conditions and therefore relieve Government responsibilities. Public Hospitals would, consequently, be less seen as Government’s dependent and more as public enterprises, responsible from their managerial and administrative decisions (Varanda, 2004).

This new managerial perspective represented a large change for the health system. Before this, public and private health care facilities worked completely independent from each other's (Major & Magalhães, 2014) but thanks to this law a new engine for change would be introduced. Public facilities could now be managed or take advice from private ones and adopt work principles focused on autonomy reinforcement, hospital management accountability and health care quality and operational efficiency reinforcement, among others (Pereira, 2004).

This structure renovation was escorted by 5 main challenges, proposed by the government, to resolve key issues in the Portuguese health sector:

- Quality: how to ensure the best health care for the population?
- Access in equity, without discrimination: how to ensure healthcare effective access to all population?
- Consumer's needs: how to satisfy the consumer's needs?
- Resources efficient management: how to ensure an efficient use of resources?

It was assumed that the “enterprise phenomenon”, by itself, would not be able to lead to a visible sector change. A new culture, with these challenges in mind, would have to be integrated among facilities to fix the previous issues and succeed in the future (Dias & Neves, 2006).

#### 2.1.2. The Growth Private Hospitals

Back in 1990, the Health Base law had previously introduced some business practices in the public healthcare system (Campos, 2003) but it was only after the 2002's law that a change was detected among the presence of public/private facilities.

Private institutions have had a growing part in the Portuguese health system (Eira, 2011) not only on the increasing number of institutions but also on the growing demand. Reasons behind the rising demand are supported by the strong assumption of high quality among the services provided in private hospitals, the large investments in R&D, the increasing number of private hospitals and lastly the complex treatments offered, such as artery bypass.

As for the growth of the private offer, one of the main reasons cares with the fact that the new legislation allowed private institutions to have a higher impact in the sector, independently and together with public institutions. Also, physicians have demonstrated a preference for private institutions as it represents a possibility for a better income and professional growth. Finally,

patients are moving their care services for private facilities, just as seen above (Oliveira M. , 2010).

## 2.2. Competition in the Healthcare Industry

### 2.2.1. The Portuguese Healthcare Sector

The Portuguese health system has, at its core, the National Health system, available to all population. Still, a growing demand has been noticed for private institutions. These have existed before the NHS implementation with forms of individual and small-office practices and have, since then, evolved to large institutions that represent a threat to the NHS (Barros, 2017).

With the growing offer in the Health sector, consumers have changed habits when choosing public or private sectors. Over the past years an increase has been detected in the number of emergencies in private institutions, while the number of scheduled appointments has since decreased. The opposite occurrence has been detected in public institutions, with a diminution on emergencies and an increase on the number of planned visits.

The Portuguese population values competition among institutions, considering that it provides consumer's choice while providers strive to be more innovative, provide higher quality and, in some cases, start a price war. However, consumer's choice can sometimes be biased by the lack of knowledge regarding information and prices.

According with the analyzed sector, different elements are considered to provide competition among hospitals.

#### 2.2.1.1. The Portuguese Public Sector

Hospitals within the NHS are under a limited design that enables competition. All services and prices are regulated by the Government equally and location is designed in a way to create local monopolies. This last factor easily leads to excess demand that can harm the provided service' quality.

Still evidence of competition in public hospital can be found. Since 2016, patients were given the right to choose the hospital to perform elective procedures. However, this does reflect on significant competition in the sector because the increase number of patients does not mean an

increase on financial flow. Another potential source of competition is the recruitment of experienced clinical professionals that can bring with reputation for the hospitals and the development of specific medical specialties.

Still, overall, we can consider that the public healthcare sector has no relevant competition among providers.

#### 2.2.1.2. The Portuguese Private Sector

Private hospitals are under the PCA, that controls the abuse of power in the health market. Aside from that, private institutions are not under strict regulations like the NHS hospitals.

There are several elements of competition among private providers. Private hospitals, in Portugal, are free to set their own prices and schedules, allowing them to attract patients and represent a threat to other providers.

Unlike what is seen for NSH hospitals, Portuguese private hospitals are not under local monopoly strategies and can choose their own location as well as to choose what services to provide. Especially when located in main cities, large providers can succeed by the cost of smaller and independent practices, taking advantage of their low reputation or perceived quality (Gombesky Jr., 2014).

Private hospitals can compete to attract patients by providing agreements with voluntary health insurance companies or health subsystems. By making these agreements providers are, once more, presenting a threat to other competitors and providing patients with payment systems beyond the direct service payment (Barros & Gomes, 2002).

It is clear to admit that private sector faces competition among providers. There is a strong link between what threatens competitors and what attract consumers. Patient satisfaction is directly dependent of competition since it ensures the provision of better products and (Rivers & Glover, 2008).

#### 2.2.2. Competition in the Healthcare Industry – theoretical view

Rivalry within the healthcare sector will always exist while vital players are there present (Rivers & Glover, 2008). First, professionals are necessary to provide the care, such as

physicians and nurses. Secondly, physical units must have place so that professionals may operate. Hospitals, health centers or clinics are example of it. Third and last, organizations that provide healthcare financing and healthcare plans play an important role on attracting patients. Overall (Harris & McDaniel, 1993) hospitals may compete to attract physicians, third-party payers and patients simultaneously.

To attract patients, hospitals are more likely to unceasingly improve their provided goods and services (Fuch, 1988). Therefore, competition can be seen as a mechanism to ensure patient satisfaction (Rivers & Glover, 2008). Aside from improving their services, hospitals can use competition as a key to improve internally by developing reducing costs mechanisms. However, cost reductions must be integrated within the hospital's strategic mission and goals.

Uncompetitive providers are being excluded from the industry. But to succeed mere competition is not enough. It must be correctly performed. To compete 4 key dimensions must be considered: segment scope, vertical scope, geographic scope and industry scope (Porter & Millar, 1985).

The healthcare competition has faced some unfortunate strategic choices mainly focused on cost reduction and not correctly evaluating the inserted market, underestimating factors like the level of competitors or the geography. To succeed in the healthcare industry value must be created instead of divided and a correct analysis over the market must be made to plan the next actions (Porter & Teisberg, 2004). Focus on regional and national geographic market instead of just local's, provide distinct services and products with unique value, develop areas of excellence and expertise and provide useful information about providers, treatments and available alternatives are some of the guidelines suggested. By analyzing the provided services, the market area, the influence in the industry and its accounting managed area we can measure the hospital's level of competition in the market and consequently its positioning in the sector (Baker, 2001).

When successfully investing in competition, hospitals tend to distinguish themselves from others and therefore increase their differentiation level in the market (Zwanziger & Melnick, 1996). This differentiation may result on adopting high visibility services, that are also offered by competitors, but adding value in a way that fills market niches.

## 2.3. Healthcare Differentiation

### 2.3.1. Achieving Competitive Advantage

To succeed in the healthcare industry hospitals must develop competencies in a way that it will highly position themselves and it will create respect and influence others within the sector (Porter M. , 1991). To develop themselves hospitals must focus their attention on meeting the consumer needs by providing services with significant value, that are different from competitors, and that are difficult to imitate (Douglas & Ryman, 2003).

Competitive advantage can be achieved by focusing on a strategy related with cost reduction or differentiation. To achieve differentiation a value contribution must be delivered to the consumers (Porter & Millar, 1985). Hospital differentiation can be reached through vertical differentiation, depended on quality, and horizontal differentiation, where geographic location is considered (Tay, 2003).

When building strategies upon differentiation, hospitals are focused on offering something that is valued and yet unreached for consumers. Targeting the consumer's experience helps identify how can differentiation be achieved (MacMillan & McGrath, 1997). Therefore, the consumer's opinion is crucial to understand how to succeed in the industry.

### 2.3.2. Patient Satisfaction

Understanding the consumer's needs and opinions may greatly influence their experiences and outcomes (Bolster & Manias, 2010), as well as helping hospitals to achieve market differentiation. Factors like the physician-patient communication, appropriate expectations and waiting time are examples of factors conditioning the patient's satisfaction (Shirley & Sanders, 2013).

Nowadays work routines and traditions are not leveling with consumer's needs ( Bolster & Manias, 2010). It is proven that healthcare professionals (physicians and nurses) can improve the patient's satisfaction by understanding the implications of their practices. Focusing on a person-centered approach while practicing medical activities has the potential to improve the overall patient experience. Listening, explaining and giving patients the chance to participate can significantly influence their understanding, satisfaction and outcomes.

Transparency towards healthcare information is currently becoming available but still patients frequently misinterpret what is given (Duke, Smith, Lynch, & Slover, 2014). There continues to exist a lack of information referring to pricing, safety and quality that can easily lead patients to take incorrect conclusions. When balanced information regarding procedures' quality and safety is taken into consideration patients tend to perceive safety as a preference instead saving money. In addition to choosing quality over costs, patients are also willing to incur expenses of travelling to obtain better quality of service. The factor distance is considered but still patients opt for service quality (Tay, 2003). However, distance is not always diminished (Sivey, 2012). When confronted with waiting time patients tend to be more sensitive to the wasted time on travelling and prefer to wait, and consequently save travelling costs.

When considering quality of service, patients perceived that a superior quality is delivered in larger, high-volume hospitals facilities, that offer more sophisticated services than the smaller hospitals (Bronstein & Morrissey, 1991). This may be because, usually, hospitals that deliver a broader range of services can be considered above industry standards (Douglas & Ryman, 2003).

Aside from customer's experience, hospital reputation can significantly influence the costumer's perception and thus their satisfaction (Fisher, 2014). Factors such as the hospital's market share, its financial gains, the malpractice claims delivered and its reimbursement rates can strongly influence the patient's appreciation for the hospital.

### 2.3.3. Service Quality

With patient's satisfaction in mind hospitals should try to adopt a framework based on value creation for patients (Porter, Pabo, & Lee, 2013) with the goal of improving the primary care practice. This framework should gather patients by needs and give them appropriated care not only during but also after the full care cycle is concluded so that patient's needs are, at all time, answered.

Aside from adopting a patient-centered system, hospitals should try to address current issues such as fighting physician fraud, provide more convenient business models for primary care, invest on reducing medical errors, improve care coordination and increase electronic medical records.

Besides meeting patient's needs, quality must be a concern for hospitals. By adopting a Clinical Governance approach (Bugada, 2006), whose pillars are focused on continuous quality improvement, team development and leadership and innovation dissemination, hospitals should be able to increase health consumption while they reach higher levels of wellbeing, better skills and productivity and provide better life quality for patients.

The healthcare industry has faced 2 core issues through time: the rising costs associated with care services and the uneven provided quality of services, despite the efforts. Many have been the attempts to fix this (Porter & Lee, 2013) and although a successful solution as not yet been reached, forces are reshaping the industry (Vitalari, 2016). Over the following 20 years it is expected that new regulations will be in place, as well as structural changes, including innovation in the technological field, and new business models further based on patient quality.

#### 2.3.3.1. Knowledge creation and transfer

Knowledge is increasingly representing a big portion in this industry, as its creation and transfer is leading hospitals towards competitive advantage (Argote & Ingram, 2000). By sharing information, organizations are internally improving their networks and externally improving relations with others. The healthcare industry is becoming a knowledge-based community (Bose, 2003) connected with hospitals, clinics, pharmacies and customers with the goal of sharing information, reducing administrative costs and improving care quality. Having a well-designed knowledge management infrastructure, supporting both clinical and administrative information, is needed to facilitate decision-making, management and improve efficiency (Beveridge, 1997).

#### 2.3.3.2. Use of Technologies

As the urgency of having a knowledge infrastructure within hospitals is increasing, so it's the need for an integrated healthcare delivery system (Wan, Lin, & Ma, 2002). Having an integrated system allows hospitals to improve their clinical and administrative efficiency, as well as to reach higher profits, market power, acceptance, better relationships with customers and an improved quality of care.

Innovation in the healthcare industry plays an important role (Berwick, 2003) especially in the digital environment (Vitalari, 2016). Among other reasons, digital technologies can connect

physicians and their patients, potentially improve their relationship and provide more information and control over healthcare (Topol, 2015).

In addition to strong links between delivery healthcare systems and innovation diffusion, recurring to technology can also introduce new research, allow cost reductions and be used as an element of non-price competition (Spetz & Maiuro, 2004). Choosing to adopt high technologies can attract patients and insurance providers (Spetz J. , 1999) and therefore serve as a tool for competitive advantage.

Regardless of the potential associated with the use of technologies, it's always an important decision to invest in such an elaborated technologic system. making that decision may be conditioned by many factors, such as financial constraints (Baker & Phibbs, 2002).

#### 2.3.3.3.Resources allocation

Healthcare services commonly face limited financial resources, which can bound the hospital's performance. Valid business models must be in place to help govern hospitals, especially when those are influence by factors such as complexity, uncertainty, variability or limited resources (Harper, 2002). Managerial and planning tools must be available to exam all available resources and plan its efficient use.

The process of decision making incorporates both internal and external resources that must be managed (Kash, Spaulding, Gamm, & Johnson, 2014). Using a Resource based view is extremely useful, especially when dealing with capital and human resources and Its use focuses on internal organizational resources and capabilities to achieve competitive advantage. However, its analysis only considers resources within the organizational boundaries, ignoring the potential of combining resources across borders in the pursuit of competitive advantage with other providers (Thompson, 1967). Hospitals can form alliances with other healthcare organizations to adapt to the competitive environment surrounding them and to achieve better performance (Wan, Lin, & Ma, 2002).

To reach patients, hospitals need to be real and believable (Solomon, 2012). Presenting a unified strategy is necessary to promote a unified identity, able of meeting patient's needs, be sustainable, provide unique care and focus on its mission and goals.

## 2.4. Hospital Branding

### 2.4.1. Corporate Brand

Healthcare services can be very intimate (Kemp, Jillapalli, & Becerra, 2014) and patient's emotions can greatly influence the perceived care quality. Variables like trust can establish an effective commitment towards the hospital's brand, which can carry a unique meaning for patients. A brand reflects upon a promise of delivering a certain level of care, besides continuous changes in the industry. Establishing this relation means creating a strong bond between the brand and the patients which can result on long-relationships and brand advocacy. A brand can also be seen as a reflection of the patient's experience, that will later be shared with friends and family (Donohue, 2014).

Creating a brand may increase patient satisfaction, trust and commitment. As a result, the hospital's brand equity and image will be enhanced (Fisher, 2014) which may reduce the perceived risk that patients usually associate with unknown facilities (Kim, Kim, Kim, Kim, & Kang, 2008). Enhancing brand image can be a power tool for differentiating hospitals. Focusing on patient experiences, their impressions and beliefs and analyze the associated characteristics with the facilities are examples of factors that can help a brand differentiate itself in the market and self-improve.

Building a corporate brand is key to build relationships and reaching stakeholders groups (Esposito, 2017). By promoting a corporate brand, hospitals can address specific issues and draw the target's attention towards their actions, name, value and identity (Sheaff, 1991).

### 2.4.2. Patient Commitment

Branding reflects upon winning people's confidence to provide the best treatment ( (Sirisha & Babu, 2014). As consumers tend to prefer private brands in other industries (Tifferet & Herstein, 2010), so do patients tend to prefer branded hospitals. Consumers tend to believe that private labels provide higher quality products and services than other labels (Herstein, Gilboa, & Gamliel, 2014) and, consequently, a higher satisfaction is in place (Fitzsimmons & Fitzsimmons, 1994). Private branding contributes for differentiation and touches consumer's personalities and status. As result, aside product brands, services are increasingly implementing branding strategies to reinforce this quality perception.

In addition to quality awareness, branding carries a set of expectations that patients assume that will be delivered, based on the provided products, services and personal experience. If these expectations are met, hospitals can up level their corporate reputation by strengthen (Argenti & Druckenmiller, 2004).

Branding can be enhanced with both internal and external stakeholders ( (de Chernatony, 2002). When trust is reached on both sides and a strong a relationship is maintained it is expected that an emotional commitment will be established (Medina Aguerrebere, 2011) which is recognized as an essential ingredient a long-term relationship between the patient and the provider to be kept (Beatty & Kahle, 1988). When affectively committed to a brand, patients may become brand advocates, sharing their own ideas and experiences (Fullerton, 2003). This is extremely important because winning future patients may depend on the word of mouth of current patients and their shared experiences (Sirisha & Babu, 2014).

To meet patient's expectations, branding a service must reflect on delivering it in a uniform level of quality (Berry, 2000). By building a valuable brand, that not only meets but also exceeds patient's expectations, benefits will include emotional diffusion of patient's feelings. Patient commitment will be achieved by cultivating meaningful brand connections that will lead to higher differentiation and competitive advantage in market (Allen & Meyer, 1990).

#### 2.4.3. Successful Branding

The process of branding includes defining prices, adopted strategy, communication plan, content strategy, among others (Davis N. , 2016). Hospitals must leverage their brand to connect with their patients successfully and leave a unique and unforgettable image on their minds.

Without a properly planed branding strategy, hospitals will be weak and at risk of ruin (Davis N. E., 2017). Building a successful business requires brand success that can be achieve by acquiring competitive edge, engage with customers and suitably plan the brand architecture and its content.

Nowadays creating a brand is crucial to establish a competitive position in the market (Sirisha & Babu, 2014). If the hospital's brand is effective, an improvement will be attained on the flow of patients and the hospital's financial status and consequently a higher patient loyalty and market share. Branding can be considered a valuable intangible asset (Chao-Chan, 2011) and it

can influence the hospital's goodwill. Still, a preoccupation and improvement over patients, products and services should always be present while labeling a hospital facility (Balmer & Gray, 2003).

Together intangible and tangible qualities can be managed within hospital branding. Its goal should always be to create value and influence the organization's functions and how the hospital is perceived internally and externally (Esposito, 2017).

Healthcare organizations are making efforts to reinforce their brands (Thomaselli, 2010). They have been looking beyond the traditional and investing on marketing skills (DeVries & McKeever, 2008). The impact of branding on this matter has highlighted the communication importance (Shahri, 2011). Promoting hospital brands, through advertisement, can incentivize the customer relationship management (CRM) by appealing to what is most important to them, recurring to factors such as trust, satisfaction, commitment, loyalty and awareness (Kim, Kim, Kim, Kim, & Kang, 2008).

A successful branding strategy should address matters on how to preserve the current brand equity and how, in the future, leverage it (Speak, 1996). Brand equity is useful when estimating the hospital's value and when trying to source the base of productivity and motivation among the institution (Keller K. L., 1993)

Professionals within facilities can greatly influence the success of the hospital's brand (Suh, Houston, Barney, & Kwon, 2011). By performing their functions according to a customer-oriented mission, and therefore being customer-centric, patients can be positively satisfied and consequently associate that satisfaction with the brand behind.

Concluding, corporate branding reflects upon the visual, verbal and behavioral expression unique business model (Knox & Bickerton, 2003) and when successfully applied it can bring competitive advantage to the hospital (Lassar, Mittal, & Sharma, 1995), (Lassar, Mittal, & Sharma, 1995).

When successful brands are in place it can allow hospitals to create barriers to competitive entry and develop a higher resilience against competitors. Moreover, successful branding can give hospitals the opportunity to create new and effective extensions to their range of services (Managing brand equity, 1989).

#### 2.4.4. Co-branding

Co-branding initiatives are growing inside the healthcare industry (Gombesky Jr., 2014) as a form of alliances, affiliations and partnerships. Usually its core goals are to better provide services for patients and to become a stronger player in the market.

Local hospitals, especially in small towns, tend to suffer the perception that they will always provide a lower service quality than bigger and better situated hospitals. As a result, local residents may be willing to travel to further hospitals to obtain a different care. Co-branding can help disrupt common associations or at least try to improve the customer's perception and influence its attitude towards the brand, if one of them is a reference of quality (Simonin & Ruth, 1998).

By partnering healthcare organizations, it is expected that inferior hospitals will receive additional revenues and new technical procedures, which will motivate them to accept the agreement. At the same time, staff can improve their skills and patients will have access to better, or at least perceived, care in their own communities.

Linking brands among healthcare providers is becoming an important strategy to reach the optimal winning position in the market (Keller K. , 2003). In fact, it is verified that co-branding strategies are having a higher impact on efficiency than traditional marketing programs. By combining brands, organizations are sending a much more powerful message to the consumers than the one they would send individually (Clark, 2000). By co-branding hospitals may be able to reach their desire image better than before.

### **3. CHAPTER – METHODOLOGY AND DATA COLLECTION**

#### 3.1. Contextual Framework

##### 3.1.1. The Problem

The Portuguese healthcare sector has suffered, over the past years, several environmental changes that influenced its common practices and hospitals are facing daily challenges to improve their core goals, which are to improve their outcomes and to promote patient safety. Since the 2002's structural renovations on the NHS, new forms of competition have emerged on the Portuguese healthcare sector and a constant quest is in place to achieve the best culture, capable of meeting the daily challenges that every hospital faces and still be able to reach their core goals.

Competition among private hospitals has experienced a growth, both on supply and demand, and the race to attract patients, physicians and third parties has intensified over the years. Consequently, hospitals must implement a strong competition strategy to compete in the market or else they will eventually be restructured or excluded. This strategy must be wisely planned and aiming to create value, instead of dividing it.

Value creation is an extensive topic approached across out literature review and patient satisfaction is highly valorized. Meeting patient's needs and understanding their views can provide knowledge to understand how to improve and implement services in a way that it will be valued by others and how to stand out from other competitors.

As a result of emphasizing the consumer's opinion and the interest on market distinction, hospitals increase their differentiation level which consequently promotes their competitive advantage.

Throughout literature review it was found evidence that supported the relevance of creating a brand associated with the hospital. Branding a hospital has proven to highly influence patients' decisions as well as allowing hospital to achieve competitive advantage in the sector, not only

by its ability to attract patients but also by providing tools to address specific issues and target an intended audience.

Hospital branding can be found on the Portuguese healthcare sector. Given the increased number of private hospitals in the Portuguese industry, consumers have a significant number of options when choosing to visit to a private facility and many elements can be considered to diminish this decision.

As a private facility, Portuguese private hospitals have the chance to promote their entity, almost as a brand, by advertising their name and strategies. But there are actual corporate brands that can be associated with Portuguese hospitals. Some may have little to do with the healthcare industry and purely hold a significant financial share of the hospital. Others may be associated with social organizations and, as before, hold a significant financial share of the hospital but also diffuse much of the organization's missions and values into the healthcare facility. Lastly, and most relevant for this investigation, hospitals can be associated with healthcare brands that are directly focus on the industry and that hold all or the majority of the hospital's financial shares and define their internal culture, mission and values. This last type of corporate brand usually holds more than one hospital unit, providing among hospitals alliances that may help them share knowledge, resources and communicate a unified image to consumers.

Throughout this dissertation, the mission was to understand if by belonging to a corporate brand, fully dedicated to the healthcare sector, hospitals could differentiate themselves in the market in such way that it could leverage their performance and, consequently, their positioning, nationally. Therefore, this investigation intended to understand if the concept of hospital branding could be used as a differentiation strategy for Portuguese private hospitals.

### 3.1.2. Research Questions

For this topic, it was assumed that all previous literature was accurate. Still, little literature was found regarding the impact of hospital branding on hospital performance as well as the concept of hospital branding in the Portuguese healthcare sector.

Regarding the research analysis structure, 3 research questions were defined, fully dedicated to 3 areas of study impacted by hospital differentiation, according to the literature.

### 3.1.2.1. Research Question 1: Does hospital branding improve the resource allocation skills of private hospitals, on the Portuguese market?

Literature review stated that successfully investing in differentiation may reflect upon adopting new services to create value for costumers and create barriers for competitors. It also specified that one of the strongest issues when dealing with resource management its scarcity. Hospitals struggle to manage the restricted available resources and their financial assets.

By conducting an analysis based on quantitative data, this research aimed to understand if the range of resources available is higher in branded hospitals than on the remaining ones.

### 3.1.2.2. Research Question 2: Does hospital branding provide tools that lead to a higher patient satisfaction on private hospitals, on the Portuguese market?

On the previous chapter references have been cited to prove the strong link between branding a healthcare facility and the patient's final gratification. Consumers may strongly become committed to the brand, as well as having a higher trust in the provided care and become brand advocacies. Literature has also cited potential sources of satisfaction, such as transparency, pricing and quality.

By focusing the attention on both qualitative and quantitative data, this examination was designed to understand if there is reasoning proof for consumers to create a higher sympathy for branded hospitals, as the literature review suggested.

### 3.1.2.3. Research Question 3: Does hospital branding lead to a better positioning of private hospitals, on the Portuguese market?

Branding is said to be a potential tool for hospital differentiation, which leads to competitive advantage and consequently a better market positioning. However, comparing institutions can result on an impossible task if not done impartially. Evaluating a hospital's performance may be difficult to measure unless unbiased studies are conducted, using the same criteria for all.

To analyze this research question, an investigation over secondary qualitative data was conducted to understand if branding a hospital results on a higher chance of having an higher positioning in the Portuguese market.

### 3.2. Selected Approach

The conducted research was scientifically based, with a strong association to a positivistic philosophy (Collis & Hussey, 2003). It was assumed that the analyzed literature was accurate and therefore served as basis of explanation for the led investigation and expected outcomes.

A deductive approach was selected to perform the intended analysis, where hypotheses were defined for all 3 research questions. Specific measurements were selected for all hypotheses and were later explained and tested. Finally, the outcomes were collected and examined on the next chapter.

#### 3.2.1. Chosen Sample

To better understand if the concept of hospital branding had an impact on the Portuguese private healthcare sector it was understood that this sample had to come from national entities and, therefore, providing local knowledge to a specific country, in the case Portugal. This specification plays an important role in the research because little literature was found regarding the Portuguese market. However, the Portuguese industry is not similar to, for instance, the north American industry and therefore the intention was to understand if similar outcomes would be detected as it was predicted on the literature review.

As it was said on this chapter, the investigation had particular interested on understanding the role of hospital brands on the private hospitals. As previously said, most Portuguese private hospitals, in a way, advertise their entity as a brand which can hinder the understanding of hospital brand in this investigation.

For this research, the concept of hospital brand was defined by a corporate brand, fully dedicated to the healthcare industry, that holds all or most of, one or more, hospital shares and that and it presents its annual results as a global entity. This brand implements the same, or similar, strategies to all owned hospitals in a way that allows the share of practices, knowledge, image and culture (Glossary: Table 2).

A total of 21 hospitals were selected for the analysis: 12 branded hospitals and 9 unbranded hospitals (Appendices: Table 31).

To provide a fair comparison only hospitals with the same function were selected. The following definition was adopted: A hospital is a healthcare center, with differentiated services, endowed with patient admission, ambulatory services and diagnostic and therapeutic exams capacity (Table 3).

### 3.2.2. Measures of Analysis

Throughout investigation both primary and secondary data were collected, depending on the research question analyzed. A multi-method was selected (Tashakkori & Teddlie, 2003), by combining web-based data collection techniques, recurring to the hospitals' official websites and the ERS's official website.

The choice of adopting the hospitals' official websites as one of the sources of information had to do with the fact that not all hospitals provide annual reports to the public, despite its obligation. Collecting the same information parameters for all hospitals is therefore quite difficult. By using the entities' websites, the research assumed an identical transparency level on their online platforms. However, that is not truth. Still, most of the needed information was found to conduct the analysis and the one that wasn't served as an indicator of lack of transparency.

All collected data formed a cross-sectional dataset focused on the years 2016 and 2017, depending on the selected measure. Timeline is greatly important on this matter because the healthcare sector is constantly changing. If significantly different time horizons were provided, the final outcomes could not be fully compared and concluded.

As previously mentioned, research questions were shaped by taking into consideration the areas typically impacted when successfully investing in hospital differentiation. For each one, a set of measurements are proposed to exam the branding impact. Based on the measurements, hypotheses were created to test the questions 'suitability.

#### 3.2.2.1. Research Question 1: Resource Allocation

As one of the most impacted areas when differentiating hospitals, resources can greatly change their specifications, qualities and numbers. Literature review approaches the fact that Portuguese private hospitals do not follow the typical public geographic monopoly, being able to set their locations. Hospitals' supply has increased as a way of attracting physicians, third

parties and patients. Distinct services and areas of excellences are some of the factors valued by consumers when choosing a hospital and the wider and the higher number of services provided, the higher is the perceived quality. 3 Measures were analyzed to study this research question: the number of geographic partners, the number of specialties, the number of clinical exams available (Glossary: Table 4).

Resource Allocation Measures		
Geographic Partners	Specialties	Clinical Exams

Source: Author

Table 8. Resource Allocation Research Question: Measures

The following hypotheses were created, assuming the propositions cited throughout literature review:

- H1a: Branded hospitals have more geographical partners than unbranded hospitals.
- H1b: Branded hospitals present a wider range of specialties than unbranded hospitals.
- H1c: Branded hospitals offer more clinical exams than unbranded hospitals.

All hypotheses were later tested and its results are analyzed on the following chapter.

### 3.2.2.2. Research Question 2: Patient Satisfaction

Patient satisfaction is one of the strongest guides to follow when differentiating a hospital. Although branding has proven to be an effective satisfaction promotor among the population, literature has enunciated other sources of satisfaction promotion such as the existence of competition, the use of technologies and appeal to innovation. Transparency is greatly valued when promoting satisfaction because, many times, consumers feel misled by the lack of information available to make decisions. There are a lot of pointers that this research could englobe to properly test the causes of satisfaction. Among them, the following measures were taken into consideration (Glossary: Table 5 and Table 6):

Patient Satisfaction Measures					
Insurance Contracts	Annual presented Claims	Annual presented Compliments	Option of online Scheduling appointments	Option of accessing to an online personal area	Available Information rate

Source: Author

Table 9. Patient Satisfaction Research Question: Measures.

All the selected measures were considered, directly or indirectly, promoters of patient satisfaction through literature review. Next, the following hypotheses were created:

- H2a: Branded hospitals offer more insurance contracts to patients than unbranded hospitals.
- H2b: Branded hospitals have less annual claims than unbranded hospitals.
- H2c: Branded hospitals have more annual compliments than unbranded hospitals.
- H2d: Branded hospitals present more online options, like Online Appointment Option, for patients than unbranded hospitals.
- H2e: Branded hospitals present more online options, like Personal Area. for patients than unbranded hospitals.
- H2f: Branded hospitals have more support information available online than unbranded hospitals.

By testing these hypotheses, the investigation aimed to understand if hospital branding provided solid reasoning to promote a higher patient satisfaction, as it was previously cited.

### 3.2.2.3. Research Question 3: Hospital Positioning

Achieving competitive advantage allows hospitals to elevate their standards and better position themselves on the market. However, there isn't a single path to achieving higher positioning. When successfully achieving advantage over others, hospitals can create barriers against competitors. At the same time, competitive advantage allows a stronger reputation which attracts more patients. Successfully investing in competition, quality and geographic differentiation, and respecting consumers' needs are some of the available foundations to attain better positioning. Branding and alliances are also proven to be a successful positioning tool as well as allowing hospitals to achieve better results and communicate a unified message to consumers.

Measuring success is not a linear analysis. Specific procedures must be considered and unbiased data collection must be done to assure no errors. However, most of the relevant information for this study was difficult to obtain. Many hospitals opt to don't disclose certain information due to confidential matters or because the data is too procedural to be public for consumers.

Over the past years, ERS has promoted an evaluation system, available to all healthcare facilities, with the goal of analyzing the entities' performance. With the title "SINAIS@Hospitals", this study englobes all juridical forms of healthcare facilities, and therefore includes both public and private hospitals' information. Still, private institutions are free to participate on the analysis and consequently not all private institutions are found among the study.

A total of 5 areas are analyzed: Clinical excellence, Patient Safety, Suitability and Comfort of facilities, Patient-centered approach and Patient Satisfaction. For the conducted study, all areas had the same criteria of analysis, for all participant institutions.

For this research question examination, a secondary data collection was done over the "SINAIS@Hospitals" inquiry, conducted in 2016. All the previously selected hospitals were searched and the same areas of study were implemented for this research analysis (Glossary: Table 7).

Hospital Positioning Measures				
Clinical Excellence	Patient Safety	Suitability and Comfort of facilities	Patient-centered approach	Patient Satisfaction

Source: Author

Table 10. Hospital Positioning Research Question: Measures.

After confirming in previous literature that all measures were signs of competitive advantage and consequently better positioning, the followed hypotheses were designed:

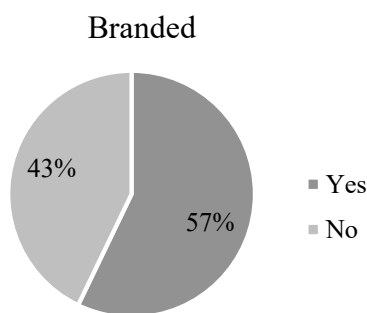
- H3a: Branded hospitals provide a higher clinical excellence than unbranded hospitals.
- H3b: Branded hospitals offer a higher level of patient safety than unbranded hospitals.
- H3c: Branded hospitals provide better facilities that unbranded hospitals.
- H3d: Branded hospitals deliver a higher care orientation towards the patients than unbranded hospitals.
- H3e: Branded hospitals present a higher level of patient satisfaction than unbranded hospitals.

By testing the previous hypotheses this research aimed to understand if hospital branding could provide a better positioning to associated hospitals, when compared with unbranded hospitals.

## 4. CHAPTER – RESULTS’ ANALYSIS

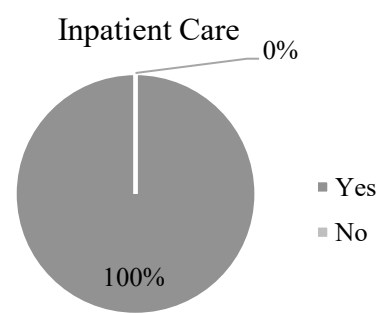
### 4.1. Introductory Examination

The results were divided into 4 sections for better explanation. Firstly, the introductory data was processed to verify the used sample. As previously reported, a total of 21 hospitals were analyzed, 12 of them belonging to hospital brands and 9 of them not. All selected hospitals owned inpatient care service at the time of the analysis (Appendices: Table 32, Table 33 and Table 34).



Source: Author

Figure 1. Branded Hospitals Percentage Pie Chart.



Source: Author

Figure 2. Inpatient Care Percentage Pie Chart.

A total of 14, out of the 29, variables were deeply analyzed to test all 14 hypotheses created. The variables “Hospital\_ID” and “Branded” are present throughout all analysis and the variable “Branded” assumes the role of independent variable for the entire study.

### 4.2. Research Question 1: Examination

#### 4.2.1. Data Presentation and Descriptive Analysis

This section’s analysis aimed to investigate if the concept of hospital branding could, or not, promote a better resource allocation among Portuguese private hospitals. By the end of this analysis our tests’ results could either approve or reject the defined hypotheses supporting this segment.

All used variables were numerical and only one presented missing data. When the independent variable was introduced the 2-group means were quite different which can later result on the approval, or not, of the defined hypotheses (Appendices: Table 35 and Table 36).

Descriptive Statistics							
	N		Mean	Std. Deviation	Range	Branded (Mean)	
	Valid	Missing				No	Yes
Geographical_Partners	21	0	4,19	3,995	10	0	7
Speacialty_Services	21	0	36,52	7,916	33	32	40
Clinical_Services	20	1	179,6	130,625	369	73	251

Source: Author

Table 11. RQ1 variables' descriptive analysis (Part I).

Highlighting the facts, only the branded hospitals presented geographical partners and “Clinical\_Services” was the variable that presented a higher numerical range.

Before executing any significance test all variables were submitted to a normality and a variance test to verify if all assumptions were fullfed to execute parametric tests.

Normality Tests						
	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Geographical_Partners	0,266	20	0,001	0,793	20	<b>0,001</b>
Speacialty_Services	0,088	20	0,2	0,991	20	<b>0,999</b>
Clinical_Services	0,161	20	0,187	0,906	20	<b>0,053</b>

Source: Author

Table 12. Normality Test for RQ1 variables.

Out of all 3 variables, only the variable “Geographical\_Partners” showed a sigma value under 0,05 (defined significance value) which led to the rejection of the null hypothesis stating normal distribution for all variables ( $\sigma_{\text{Geographical\_Partners}}=0,001$ ;  $\sigma_{\text{Speacialty\_Services}}=0,999$ ;  $\sigma_{\text{Clinical\_Services}}=0,053$ ). The remaining variables statistically exhibited to be normally distributed.

Variances Test		
	Levene's Test for Equality of Variances	
	F	Sig.
Geographical_Partners	65,143	<b>0</b>
Speacialty_Services	0,012	<b>0,914</b>
Clinical_Services	0,164	<b>0,69</b>

Source: Author

Table 13. Variances Test for RQ1 variables.

Regarding equality of variances, as before, only the variable “Geographical\_Partners” presented a sigma under the significant value ( $\sigma_{\text{Geographical\_Partners}}=0$ ) meaning that, unlike the other variables ( $\sigma_{\text{Specialty\_Services}}=0,914$ ;  $\sigma_{\text{Clinical\_Services}}=0,69$ ), it did not have equal variance assumed.

#### 4.2.2. Statistical Analysis

Due to the lack of assumptions’ fulfillment the variable “Geographical\_Partners” recurred to Non-Parametric tests, while the remaining variables were tested through Parametric tests.

Firstly, a correlation assessment was conducted to understand if the existing association between variables was statistically significant using the Pearson’s Correlation test (Parametric) and the Spearman’s Correlation test (Non-Parametric).

Correlations (with independent variable)						
	Pearson Correlation			Spearman Correlation		
	Coefficient	Sig. (2-tailed)	N	Coefficient	Sig. (2-tailed)	t
Geographical_Partners				<b>0,925</b>	<b>0</b>	21
Speacialty_Services	<b>0,545</b>	<b>0,011</b>	21			
Clinical_Services	<b>0,682</b>	<b>0,001</b>	20			

Source: Author

Table 14. Pearson's and Spearman's correlation tests for RQ1 variables.

All variables presented a sigma under 0,05 ( $\sigma_{\text{Geographical\_Partners}}=0$ ;  $\sigma_{\text{Specialty\_Services}}=0,011$ ;  $\sigma_{\text{Clinical\_Services}}=0,001$ ) that allowed the null hypothesis rejection, stating null correlation among variables. The variable “Geographical\_Partners” was the most correlated with the independent variable, having presented a correlation coefficient equivalent to a perfect positive linear relationship ( $\rho_{\text{Geographical\_Partners}}=0,925$ ). The remaining variables’ coefficient corresponded to a strong positive linear relationship which is also very robust ( $r_{\text{Specialty\_Services}}=0,545$ ;  $r_{\text{Clinical\_Services}}=0,682$ ).

To conclude the analysis, a differences test regarding the mean scores was performed to understand if evidenced mean differences among groups was statistically supported or if it could not be reflected upon the population behavior. For this, an independent T-Test was conducted. Since one of the variables did not fullfed the necessary requirements for parametric tests, the Mann-Whitney U Test was also performed.

Group Statistics					
	Branded	N	Mean	Std. Deviation	Std. Error Mean
Geographical_Partners	No	9	0	0	0
	Yes	12	7,33	1,969	0,569
Speacialty_Services	No	9	31,67	6,874	2,291
	Yes	12	40,17	6,767	1,953
Clinical_Services	No	8	73,25	125,222	44,273
	Yes	12	250,5	76,053	21,955

Source: Author

Table 15. Mean Differences Group Statistics for RQ1 Variables.

T-test for Equality of Means							
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Speacialty_Services	-2,83	19	0,011	-8,5	3,004	-14,787	-2,213
Clinical_Services	-3,96	18	0,001	-177,25	44,797	-271,37	-83,13

Source: Author

Table 16. Independent T-Test for RQ1 Variables.

All the fitted variables for the test showed a sigma value under 0,05 ( $\sigma_{\text{Speacialty\_Services}}=0,011$ ;  $\sigma_{\text{Clinical\_Services}}=0,001$ ) which led to the rejection of the null hypothesis referring to the equality of means for both groups. For both cases, it is verified that the scored means are higher when the hospitals are branded meaning that it is statistically safe to accept the hypotheses 1b and 1c stating that branded hospitals have more specialty and clinical services than unbranded hospitals.

Mann-Whitney U Test					
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Exact Sig. [2*(1-tailed Sig.)]
Geographical_Partners	0	45	-4,14	0	0

Source: Author

Table 17. Mann-Whitney U Test for RQ1 Variables.

As for the remaining variable, it is verified that the sigma value ( $\sigma_{\text{Geographical\_Partners}}=0$ ) is under 0,05 which, again, allowed the confirmation that the mean differences among groups are statistically significant and confirmed that the hypothesis 1a was accepted.

### 4.3. Research Question 2: Examination

#### 4.3.1. Data Presentation and Descriptive Analysis

The third section of the investigation aimed to understand if there was reasoning to believe that branded hospitals could provide a higher patient satisfaction, based on their elevated services.

A total of 6 variables were analyzed, 4 of them numerical and the remaining 2. There were no missing data and some variables presented distinct mean differences between groups (Appendices: Table 37 and Table 38).

Descriptive Statistics							
	N		Mean	Std. Deviation	Range	Branded	
	Valid	Missing				No	Yes
Offered_Insurance	21	0	46,19	12,432	37	41,9	49,42
Annual_Claims	21	0	138,2	246,633	1009	19	227,5
Annual_Compliments	21	0	49,27	106,742	342	0,35	85,96
Online_Appointment_Option	21	0	0,95	0,218	1	0,89	1
Personal_Area_Option	21	0	0,62	0,498	1	0,11	1
Available_Information_Rate	21	0	6,95	2,617	10	4,89	8,5

Source: Author

Table 18. RQ2 variables' descriptive analysis (Part I).

The 2 categorical variables “Online\_Appointment\_Option” and “Personal\_Area\_Option” were converted into binomial to execute the analysis. From all variables, “Annual\_Claims” is the one that presents the higher range number and with very distinct mean scores between groups.

Before starting the significance tests, all variances were tested for normality and variance.

Normality Tests							
	Kolmogorov-Smirnov			Shapiro-Wilk			
	Statistic	df	Sig.	Statistic	df	Sig.	
Offered_Insurance	0,164	21	0,146	0,91	21	<b>0,056</b>	
Annual_Claims	0,288	21	0	0,616	21	<b>0</b>	
Annual_Compliments	0,427	21	0	0,528	21	<b>0</b>	
Online_Appointment_Option	0,539	21	0	0,228	21	<b>0</b>	
Personal_Area_Option	0,397	21	0	0,62	21	<b>0</b>	
Available_Information_Rate	0,167	21	0,128	0,903	21	<b>0,039</b>	

Source: Author

Table 19. Normality Test for RQ2 variables.

Of all variables, only “Offered\_Insurance” showed a sigma value over 0,05 ( $\sigma_{\text{Offered\_Insurance}}=0,056$ ) that allowed the acceptance of the null hypothesis. All remaining variables showed a sigma value under 0,05, meaning that they did not follow a normal distribution.

Variances Test		
	Levene's Test for Equality of Variances	
	F	Sig.
Offered_Insurance	0,244	<b>0,627</b>
Annual_Claims	9,453	<b>0,006</b>
Annual_Compliments	25,15	<b>0</b>
Online_Appointment_Option	7,09	<b>0,015</b>
Personal_Area_Option	7,09	<b>0,015</b>
Available_Information_Rate	0,598	<b>0,449</b>

Source: Author

Table 20. Variances Test for RQ2 variables.

Equal variance was assumed for 2 of the 6 analyzed variables, since it presented sigma values over 0,05 ( $\sigma_{\text{Offered\_Insurance}}=0,627$  and  $\sigma_{\text{Available\_Information\_Rate}}=0,449$ ). The over variables all presented sigma values under 0,05 that rejected the hypothesis of having equal variances.

#### 4.3.2. Statistical Analysis

Because not all variables presented normal distribution and equal variances, both parametric and non-parametric tests were conducted.

Starting by the correlation analysis, the only variable “Offered\_Insurance” was tested through the Pearson’s correlation test, while the others recurred to the Spearman’s correlation test.

Correlations (w/ Branded)						
	Pearson Correlation			Spearman Correlation		
	Coefficient	Sig. (2-tailed)	N	Coefficient	Sig. (2-tailed)	t
Offered_Insurance	<b>0,307</b>	<b>0,176</b>	21			
Annual_Claims				<b>0,47</b>	<b>0,032</b>	21
Annual_Compliments				<b>0,449</b>	<b>0,041</b>	21
Online_Appointment_Option				<b>0,258</b>	<b>0,258</b>	21
Personal_Area_Option				<b>0,906</b>	<b>0</b>	21
Available_Information_Rate				<b>0,704</b>	<b>0</b>	21

Source: Author

Table 21. Pearson's and Spearman's correlation tests for RQ2 variables.

All variables showed a correlation coefficient that suggested between a positive weak to perfect linear relation. However, not all coefficients were statistically supported as significant. Of all variables, 2 of them presented a sigma value over 0,05 that approved the null correlation ( $\sigma_{\text{Offered\_Insurance}}=0,176$  and  $\sigma_{\text{Online\_Appointment\_Option}}=0,258$ ). All the other variables were significantly correlated, with 2 of the variables having perfect positive linear relation ( $\rho_{\text{Personal\_Area\_Option}}=0,906$  and  $\rho_{\text{Available\_Information\_Rate}}=0,704$ ), and 2 with a positive moderate's ( $\rho_{\text{Annual\_Claims}}=0,47$  and  $\rho_{\text{Annual\_Compliments}}=0,449$ ).

Lastly, to perform the mean differences analysis both the independent T-Test and the Mann-Whitney U tests were conducted for all variables that fullfed the necessary assumptions and the ones that didn't.

Group Statistics					
	Branded	N	Mean	Std. Deviation	Std. Error Mean
Offered_Insurance	0	9	<b>41,89</b>	13,383	4,461
	1	12	<b>49,42</b>	11,147	3,218
Annual_Claims	0	9	<b>18,99</b>	27,927	9,309
	1	12	<b>227,54</b>	299,49	86,455
Annual_Compliments	0	9	<b>0,35</b>	0,793	0,264
	1	12	<b>85,96</b>	131,487	37,957
Online_Appointment_Option	0	9	<b>0,89</b>	0,333	0,111
	1	12	<b>1</b>	0	0
Personal_Area_Option	0	9	<b>0,11</b>	0,333	0,111
	1	12	<b>1</b>	0	0
Available_Information_Rate	0	9	<b>4,89</b>	2,261	0,754
	1	12	<b>8,5</b>	1,624	0,469

Source: Author

Table 22. Mean Differences Group Statistics for RQ2 Variables.

T-test for Equality of Means							
	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Offered_Insurance	-1,406	19	<b>0,176</b>	-7,528	5,353	-18,731	3,676

Source: Author

Table 23. Independent T-Test for RQ2 Variables.

The variable "Offered\_Insurance" showed a sigma value over 0,05, meaning that the null hypothesis for mean equality was accepted. Therefore, the experienced mean differences between both groups is statistically insignificant it is not possible to affirm that having a brand

would positively influence the number of insurance contract, consequently rejecting the hypothesis 2a.

Mann-Whitney U Test					
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Exact Sig. [2*(1-tailed Sig.)]
Annual_Claims	24,5	69,5	-2,101	<b>0,036</b>	0,034
Annual_Compliments	28,5	73,5	-2,008	<b>0,045</b>	0,069
Online_Appointment_Option	48	93	-1,155	<b>0,248</b>	0,702
Personal_Area_Option	6	51	-4,051	<b>0</b>	0
Available_Information_Rate	10,5	55,5	-3,149	<b>0,002</b>	0,001

Source: Author

Table 24. Mann-Whitney U Test for RQ2 Variables.

Of all 5 variables, only one of them showed a sigma value over 0,05 ( $\sigma_{\text{Online\_Appointment\_Option}}=0,248$ ) resulting on the null hypothesis' acceptance that significant mean differences do not exist. Consequently, the hypothesis 2d is rejected.

The remaining variables all showed statistically significant mean differences between groups, where the branded group always presented higher mean scores than the unbranded. However, this does not reflect on the lasting hypotheses' approval. The hypothesis 2b specified that the number of annual claims was lower in branded hospitals than on unbranded hospital which is the opposite of what was verified. Therefore, the hypothesis 2b was rejected.

All resting hypotheses for this section (2c, 2e and 2f) are accepted.

#### 4.4. Research Question 3: Examination

##### 4.4.1. Data Presentation and Descriptive Analysis

The fourth and last section studied the impact of branding on individual hospital's positioning. The analysis was conducted through 5 variables, 1 one them numerical and the other 4 categorical that were transformed into binomial variables (Appendices: Table 39 and Table 40).

Descriptive Analysis							
	N		Mean	Std. Deviation	Range	Branded	
	Valid	Missing				No	Yes
Clinical_Excellence	13	4	6	3,317	9	2	7,2
Patient_Safety	14	3	0,64	0,497	1	0,3	1

Facility_Comfort_and_Suitability	17	0	0,82	0,393	1	0,7	0,9
Patient_Centered_Approach	17	0	1	0	0	1	1
Patient_Satisfaction	17	0	0,94	0,243	1	0,9	1

Source: Author

Table 25. RQ2 variables' descriptive analysis (Part I).

Overall, all variables presented a lower sample size than the previous sections and 2 of the variables contained missing data (“Clinical\_ Excellence” and “Patient\_ Satefy”). The variable “Clinical\_ Excellence” presented the highest range of value while the variable “Patient\_ Centered\_ Approach” presented a constant value of 1 (“Yes”). Apart from this last variable, all the other showed different mean scores for the 2 groups.

Normality Tests						
	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Clinical_ Excellence	0,264	10	0,047	0,795	10	<b>0,013</b>
Patient_ Safety	0,433	10	0	0,594	10	<b>0</b>
Facility_Comfort_and_Suitability	0,524	10	0	0,366	10	<b>0</b>
Patient_Centered_Approach	-	10	-	-	10	-
Patient_Satisfaction	-	10	-	-	10	-

Source: Author

Table 26. Normality Test for RQ3 variables.

Regarding the variables’ distribution, 2 of the dependents did not show any statistics. The first one (“Patient\_ Centered\_ Approach”), as previously stated, presents constant values, preventing a normality analysis. The second one (“Patient\_ Satisfaction”), although not constant, only presents 1 different value in all 17 observations, and therefore behaving as a constant variable and, also, preventing a normality analysis.

The resting 3 variables all presented a sigma value under 0,05 that rejects the normal distribution hypothesis.

Variances Test		
	Levene's Test for Equality of Variances	
	F	Sig.
Clinical_ Excellence	3,127	<b>0,105</b>
Patient_ Safety	26,667	<b>0</b>
Facility_Comfort_and_Suitability	3,835	<b>0,069</b>
Patient_Centered_Approach	-	-
Patient_Satisfaction	8,471	<b>0,011</b>

Source: Author

Table 27. Variances Test for RQ3 variables.

Since the variable “Patient\_Centered\_Approach” is constant, it was not considered for a variance analysis. Of the examined variables, 2 of them presented a sigma value over 0,05 ( $\sigma_{\text{Clinical\_Excellence}}=0,105$  and  $\sigma_{\text{Facility\_Comfort\_and\_Suitability}}=0,069$ ) that confirms the null hypothesis of equal variances among groups. The remaining 2 rejected its variances’ equality due to the lack of statistical significance.

#### 4.4.2. Statistical Analysis

As tested before, none of the variables used for this section were both normally distributed and had equal variances which means that none fulfilled the requirements to be tested through parametric tests.

Correlations (w/ Branded)				
	Pearson Correlation	Spearman Correlation		
		Coefficient	Sig. (2-tailed)	t
Clinical_ Excellence		<b>0,594</b>	<b>0,032</b>	13
Patient_ Safety		<b>0,745</b>	<b>0,002</b>	14
Facility_ Comfort_ and_ Suitability		<b>0,24</b>	<b>0,354</b>	17
Patient_ Centered_ Approach		-	-	17
Patient_ Satisfaction		<b>0,299</b>	<b>0,244</b>	17

Source: Author

Table 28. Pearson's and Spearman's correlation tests for RQ3 variables.

Due to its constant values, the variable “Patient\_Centered\_Approach” did not have value to present in the correlation examination.

Of all examined variables, 2 out of 4 presented sigma values superiors to 0,05 ( $\sigma_{\text{Facility\_Comfort\_and\_Suitability}}=0,354$  and  $\sigma_{\text{Patient\_Satisfaction}}=0,244$ ) that results on a null correlation with the independent variable.

The remaining 2 variables were not only statistically supported for significant correlation but also presented correlation coefficients that indicate a strong ( $\rho_{\text{Clinical\_Excellence}}=0,594$ ) and a perfect ( $\rho_{\text{Patient\_Safety}}=0,745$ ) positive linear relationship with the independent variable.

To conclude this chapter, and as it was done in previous sections, the variables were significantly tested for mean differences.

Group Statistics					
	Branded	N	Mean	Std. Deviation	Std. Error Mean
Clinical_ Excellence	No	3	<b>2</b>	0	0

	Yes	10	<b>7,2</b>	2,781	0,879
Patient_Safety	No	7	<b>0,29</b>	0,488	0,184
	Yes	7	<b>1</b>	0	0
Facility_Comfort_and_Suitability	No	7	<b>0,71</b>	0,488	0,184
	Yes	10	<b>0,9</b>	0,316	0,1
Patient_Centered_Approach	No	7	<b>1</b>	0,000	0
	Yes	10	<b>1</b>	0,000	0
Patient_Satisfaction	No	7	<b>0,86</b>	0,378	0,143
	Yes	10	<b>1</b>	0	0

Source: Author

Table 29. Mean Differences Group Statistics for RQ3 Variables.

Mann Whitney U Test					
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)	Exact Sig. [2*(1-tailed Sig.)]
Clinical_Excellence	3	9	-2,057	<b>0,04</b>	0,049
Patient_Safety	7	35	-2,687	<b>0,007</b>	0,026
Facility_Comfort_and_Suitability	28,5	56,5	-0,959	<b>0,338</b>	0,536
Patient_Centered_Approach	35	90	0	<b>1</b>	1
Patient_Satisfaction	30	58	-1,195	<b>0,232</b>	0,669

Source: Author

Table 30. Mann-Whitney U Test for RQ3 Variables.

As previously said, all variables presented different mean scores for the 2 groups except for the variable “Patient\_Centered\_Approach”. Consequently, this variable’s sigma ( $\sigma_{\text{Patient\_Centered\_Approach}}=1$ ) strongly supports the null hypothesis referring to mean equality among groups. Similarly, to this variable’s output, 2 other variables presented sigma values over 0,05 ( $\sigma_{\text{Facility\_Comfort\_and\_Suitability}}=0,338$  and  $\sigma_{\text{Patient\_Satisfaction}}=0,232$ ) that results on the acceptance of mean equality. Consequently, the hypotheses 3c, 3d and 3e were rejected due the lack of statistical proof.

The last 2 variables, on the contrary, presented sigma values lower than 0,05 ( $\sigma_{\text{Clinical\_Excellence}}=0,04$  and  $\sigma_{\text{Patient\_Safety}}=0,007$ ) that allowed the rejection of the null hypothesis meaning that the experienced mean differences are, in fact, significant according to the independent variable. As a result, both hypotheses 3a and 3b were accepted.

## 5. CHAPTER – CONCLUSIONS, LIMITATIONS AND FUTURE RESEARCH

### 5.1. Discussion and Conclusions

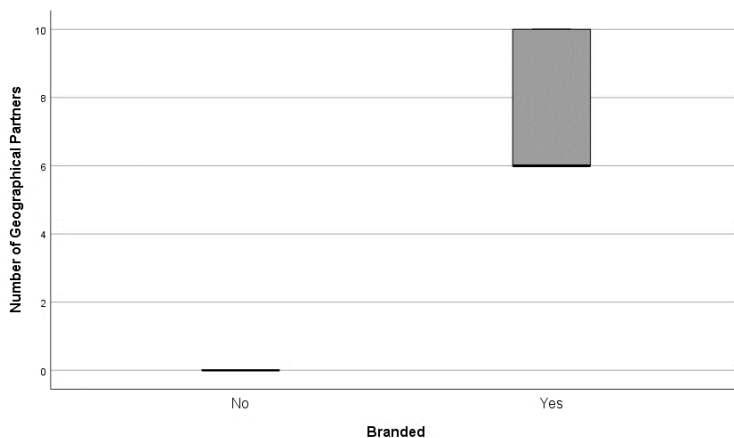
#### 5.1.1. Discussion

This investigation firstly started by analyzing the evolution of the Portuguese healthcare industry over the past years. It was possible to emphasize the importance of a fit competition within organizations to overcome the industry's obstacles. Differentiation was highlighted in the sense that it could greatly shape the hospital's path to success in the sector.

Studying the impact of branding a Portuguese private hospital's performance was the core of this investigation. By analyzing some of the most impacted areas by differentiation, specifically resource allocation, patient satisfaction and hospital positioning, this study aimed to understand if branding a private hospital could present identical outcomes to those shown on previous literature when differentiation strategies were implemented.

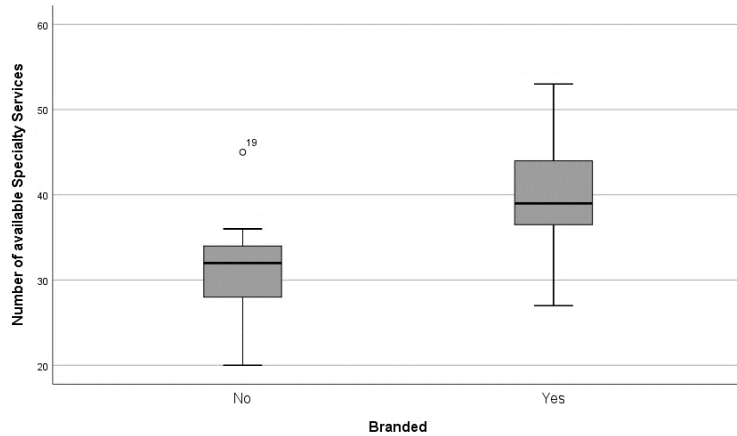
#### 5.1.1.1. Research Question 1's Discussion

Resource allocation was the first analyzed area of analysis. A total of three hypotheses were tested, all related with the offered resources of a specific hospital, specifically the number of geographical partners, specialty services and available clinical exams



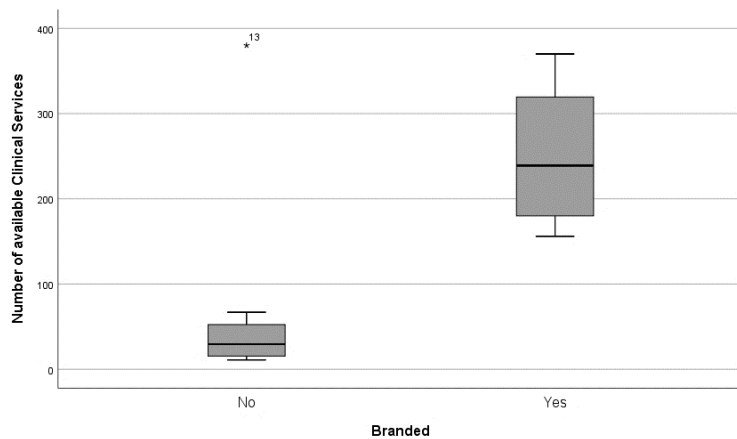
Source: Author

Figure 3. Geographic Partners per Branded Hospitals Box Plot.



Source: Author

Figure 4. Specialty Services per Branded Hospitals Box Plot.



Source: Author

Figure 5. Clinical Services per Branded Hospitals Box Plot.

All hypotheses showed significant mean differences, where branded hospitals always had a higher number of resources than unbranded hospitals. As a result, all hypotheses, H1a, H1b and H1c were approved.

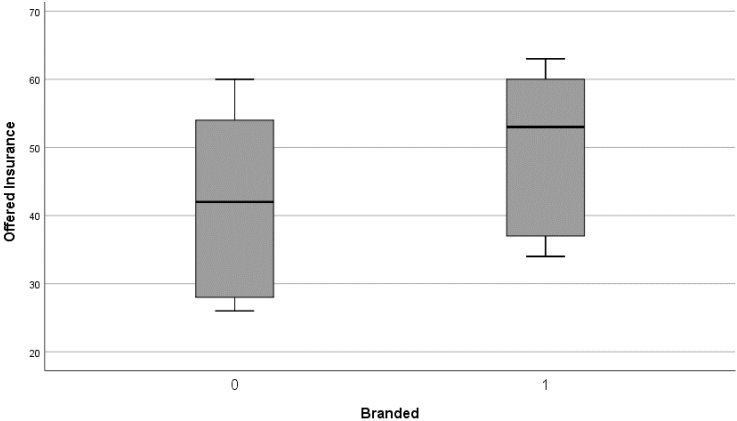
With this, the author could affirm that, such as it was verified on previous literature, branding could positively influence resources within facilities and, most importantly, hospital branding could improve the resource allocation of private hospitals, on the Portuguese market (as Research Question 1 stated).

#### 5.1.1.2. Research Question 2's Discussion

The second area of analysis was focused on patient satisfaction. Literature has stated that branding could provide a higher satisfaction to patients with, frequently, an association to better

quality. Literature has also helped identifying sources of satisfaction where a total of 4 ranges were considered relevant for the study and to support them a total of 6 hypotheses were developed.

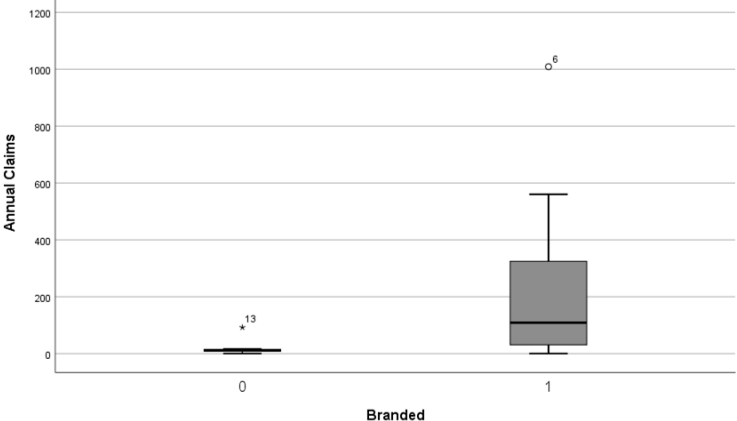
The first range of analysis was the choice ability. To support it, one hypothesis (H2a) was created stating that branded hospital provided more insurance contracts than unbranded hospitals. However, this was rejected due to the lack of statistical significance. In fact, tests showed that there wasn't even a significant association between the number of offered insurances and having a brand.



Source: Author

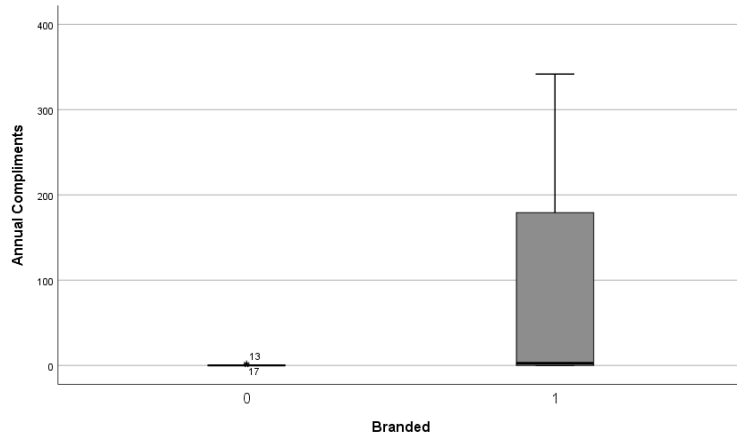
Figure 6. Offered Insurance per Branded Box Plot.

The second range was the hospital's reputation. For this, 2 hypotheses (H2b and H2c) were developed saying that branded hospitals had less claims and more compliments than unbranded hospitals. While it was proven that branded hospitals did have a higher number of compliments (H2c was accepted), it was also showed that branded hospitals had the highest number of claims (H2b was rejected).



Source: Author

Figure 7. Annual Claims per Branded Box Plot.

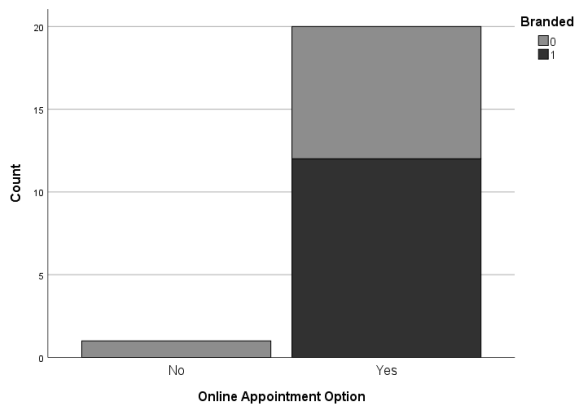


Source: Author

Figure 8. Annual Compliments per Branded Box Plot.

This came as a surprise because branded hospitals present both the highest number of compliments and claims which may suggest that patients are more willing to express their satisfaction/dissatisfaction when they are experiencing a branded service.

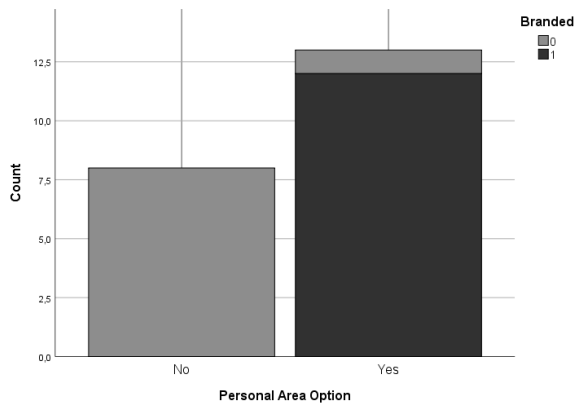
The third range of analysis was the use of technology, for patient easiness. 2 Hypotheses (H2d and H2e) were developed stating that branded hospitals, more often provide, respectively, an online appointment option for clients and an online personal area.



Source: Author

Figure 9. Online Appointment Option per Branded Histogram.

Statistics showed that the hypothesis H2d was rejected. This makes sense since most hospitals already provide an online appointment option on their official websites.

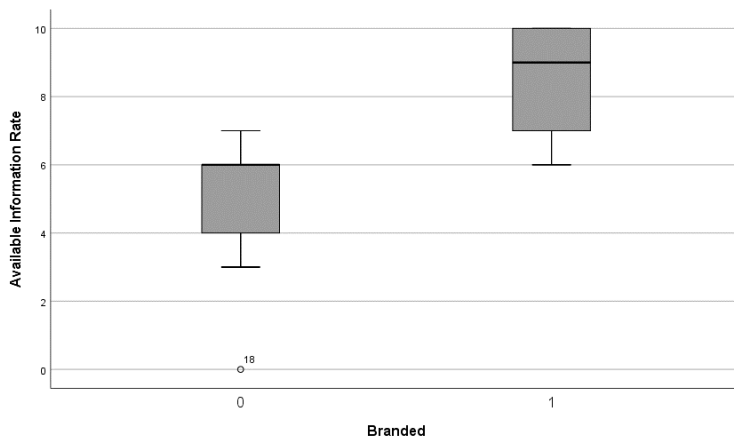


**Source: Author**

*Figure 10. Personal Area Option per Branded Histogram.*

On the other hand, hypothesis H2e was approved. In fact, none of the analyzed branded hospital lacked a personal area space, while only a low percentage of unbranded hospitals offered it.

Finally, the fourth range of analysis was transparency, where 10 specific information were searched in the hospital's official website. Hypothesis H2f, that stated that branded hospitals provided more online information than unbranded hospitals, was accepted, meaning that branded hospitals did provide a higher transparency than unbranded hospitals in the Portuguese private healthcare sector.



**Source: Author**

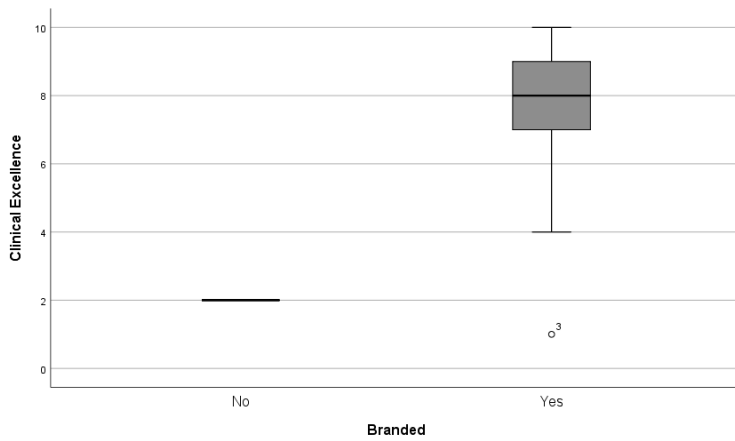
*Figure 11. Available Information Rate per Branded Box Plot.*

Overall, the author could not affirm with complete veracity that branding provided hospitals with tools that led to a higher patient satisfaction. Still, it was possible to affirm that branded hospitals were more transparent with their patients and did provide more user-technologies than unbranded hospitals.

### 5.1.1.3. Research Question 3's Discussion

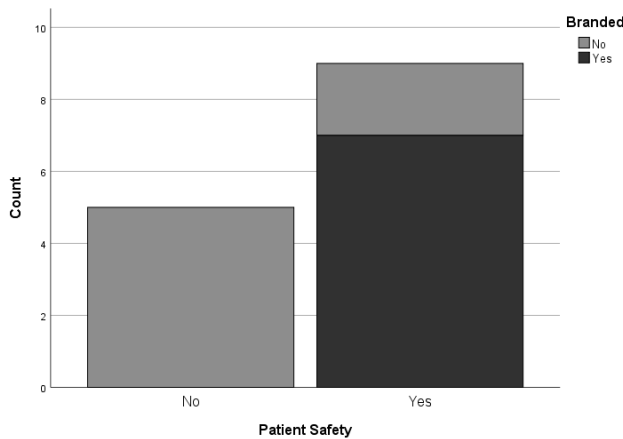
The third and last area of analysis concerned the influence of hospital branding on the hospital's positioning on the Portuguese private healthcare industry. For this, a total of 5 hypotheses were created based on the analyzed variables (collected from a secondary survey performed by ERS).

The first 2 hypotheses (H3a and H3b) focused on the hospital service quality, specifically, their clinical excellence and their patient safety assessment. Both hypotheses were accepted.



Source: Author

Figure 12. Clinical Excellence per Branded Box plot.



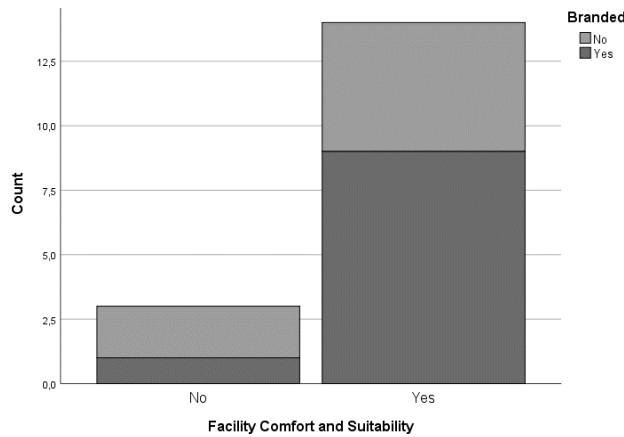
Source: Author

Figure 13. Patient Safety per Branded Histogram.

From the unbranded participants (3 of 13) all presented a low evaluation (2/16) in their clinical services while the branded participants presented a wider range of evaluations (with an average of 7,2/16). As for the patient safety assessment, all branded hospitals met the necessary

requirements while only a small percentage of the unbranded participants qualified for this position.

The third hypothesis concerned the hospital’s facility quality (H3c).

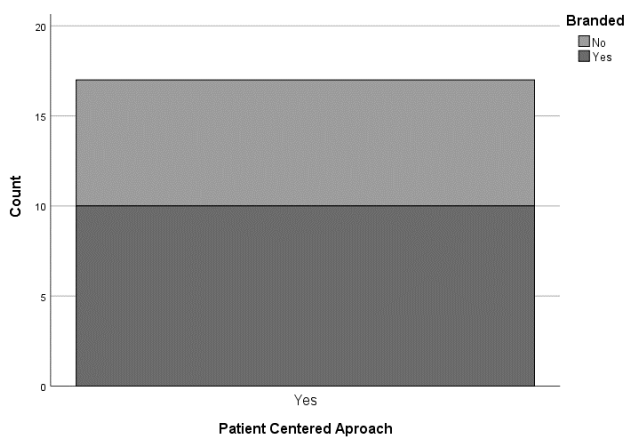


Source: Author

Figure 14. Facility Comfort and Suitability per Branded Histogram.

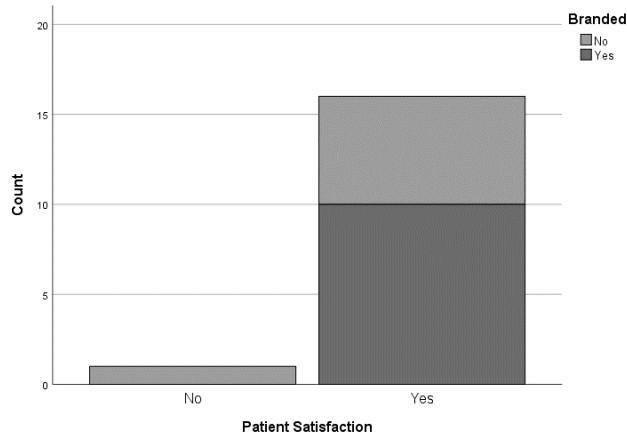
Although this hypothesis stated that branded hospital provided better facilities than unbranded hospitals, this was rejected because the tested difference was not significant enough to confirm this.

Finally, the last 2 hypotheses focused on Care Orientation and Patient Satisfaction (H3d and H3e). Both hypotheses stated that branded hospitals delivered a more patient care orientation and a provided a higher patient satisfaction than unbranded hospital. However, both variables supporting these hypotheses were totally or almost constant, meaning that there were no significant results that could state the veracity of any of hypotheses and, consequently, both were rejected.



Source: Author

Figure 15. Patient Centered Approach per Branded Histogram.



**Source: Author**

*Figure 16. Patient Satisfaction per Branded Histogram*

### 5.1.2. Conclusions

Throughout this dissertation, an extensive analysis was conducted to understand the impact of hospital branding on a private hospital’s performance, on the Portuguese market.

Regarding the first Research Question, all related outcomes supported its veracity. It was possible to affirm that branded hospitals did provide a larger range of resources, than unbranded hospitals. Branded hospitals had more geographical partners with whom they could share knowledge and ease the patient experience when visiting different partners. Branded hospitals did, as well, provide a larger number of specialties and clinical exams, that reflected on a larger selection of services and consequently a positive factor to attract clients.

About the second Research Question, not all analyses supported the studied question. There was no significant proof that patients had a higher ability to choose, nor did they verify a higher service reputation on branded hospitals. Certain technology customs, such as online appointment option, were taken as granted in both branded and unbranded hospitals. Still, there was proof to affirm that branded hospitals were offering new user-technologies, not yet adopted by others, and that they are more transparent than unbranded hospitals. Additionally, patients are more willing to express their satisfaction in this scenario.

Finally, concerning the third Research Question, just as before, not all analyses braced this topic. As stated in the beginning of this dissertation, positioning can be quite difficult to measure and different capacities were chosen in hope that it could provide a clearance for this topic. Patient satisfaction was assumed in both branded and unbranded hospital, just as it was

the hospital's facilities quality and the patient oriented care provided by physicians. Even so, evidence showed that branded hospitals provided a higher service quality to patients than unbranded, supported by their clinical excellence evaluation and their fulfilled safety requirements.

Going back to this dissertation's starting point, the author intended to understand if hospital branding could leverage hospital units in the Portuguese market, in a way that it could be used as a differentiation strategy. Successfully, this investigation showed that hospitals did perform better when associated with a hospital brand. Hospitals not only offered a wider range of services, but those services presented higher quality levels, exceeding both clinical excellence and safety assessments, when compared with unbranded hospitals. Although not always, branded hospitals offered more user technologies to ease the patient experience presenting therefore a differentiative factor when valuing clients. Branded hospitals were also more transparent regarding information display, than unbranded hospitals, providing, thus, an element of trust to patients. Apart from this, there were no other significant results to confirm that branded hospitals did have more patient satisfaction sources than others. Still, patients are more willing to express their satisfaction, or dissatisfaction, their dealing with branded hospitals. Regarding hospital positioning, previous studies did not allow the author to say that branded hospitals were better positioned than others. This is because, despite the services' excellence and safety, all inquired expressed equal satisfaction for their delivered services and all hospital facilities fulfilled the necessary requirements, making it grim to distinguish units within the sector.

## 5.2. Limitations

The lack of literature for the Portuguese healthcare industry was one of the strongest limitations of this investigation. The restricted information regarding the today's actions on the private healthcare industry, the foundations of patient satisfaction and the alliances phenomenon in the Portuguese market led the author to base his judgements on foreign literature that could, or not, be applied to the Portuguese market.

An unclear bureaucracy was detected when analyzing the Portuguese private healthcare sector. There were no complete reports of all the private entities in the sector, nor a clear definition of how hospitals could be associated with a brand. As a result, the author created assumptions for

the brand definition and its distinctions, as well, as the decision to which hospitals to incorporate in each group.

Lastly, the lack of time influenced the data collection process. Due to time scarcity, official websites were the chosen source of information. This presented 2 large issues: firstly, some of the presented information could be summarized; secondly, some hospitals simply did not share some of the analyzed information online, creating therefore missing statistics that could, or not be truth. Still, missing information was simultaneously interpreted as lack of transparency.

### 5.3. Future Research

Due to the experienced lack of time, 2 main researches are suggested. Firstly, a similar analysis should be conducted but, this time, contacting the participant hospitals and gather information directly from them. Secondly, a personal study should be conducted to test the hospital positioning, instead of using secondary data. Among others, this study should include a survey, applied to all participant hospitals, to analyze patient satisfaction neutrally instead of analysis each hospital's survey results.

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## APPENDICES

Hospital Designation	Branded	Brand Name
Casa de Saúde São Mateus Hospital	No	N/A
CUF Descobertas Hospital	Yes	José de Mello Saúde
CUF Infante Santo Hospital	Yes	José de Mello Saúde
CUF Porto Hospital	Yes	José de Mello Saúde
CUF Viseu Hospital	Yes	José de Mello Saúde
Hospital Cruz Vermelha	No	N/A
Hospital da Lapa	No	N/A
Hospital da Luz Arrábida	Yes	LuzSaúde
Hospital da Luz Lisboa	Yes	LuzSaúde
Hospital da Luz Póvoa de Varzim	Yes	LuzSaúde
Hospital da Luz Setúbal	Yes	LuzSaúde
Hospital da Ordem Terceira	No	N/A
Hospital de Santa Maria Porto	No	N/A
Hospital Particular de Almada	No	N/A
Hospital Particular de Paredes	No	N/A
Hospital S. Gonçalo – Lagos	No	N/A
Hospital Senhor do Bonfim	No	N/A
Hospital St.Louis	No	N/A
TrofaSaúde Hospital Alfena	Yes	TrofaSaúde
TrofaSaúde Hospital Gaia	Yes	TrofaSaúde
TrofaSaúde Hospital Maia	Yes	TrofaSaúde
TrofaSaúde Hospital Matosinhos	Yes	TrofaSaúde
TrofaSaúde Hospital Trofa	Yes	TrofaSaúde

Source: Author

Table 31. Selected sample: hospitals' name and brand.

Dataset 0				
Hospital_ID	Entity_Name	Branded	Brand_Name	Inpatient_Care
1	Hospital da Luz Arrábida	1	LuzSaúde	1
2	Hospital da Luz Lisboa	1	LuzSaúde	1
3	Hospital da Luz Setúbal	1	LuzSaúde	1
4	Hospital da Luz Póvoa de Varzim	1	LuzSaúde	1
5	CUF Infante Santo Hospital	1	José de Mello Saúde	1
6	CUF Descobertas Hospital	1	José de Mello Saúde	1
7	CUF Porto Hospital	1	José de Mello Saúde	1
8	CUF Viseu Hospital	1	José de Mello Saúde	1
9	TrofaSaúde Hospital Matosinhos	1	TrofaSaúde	1
10	TrofaSaúde Hospital Maia	1	TrofaSaúde	1

11	TrofaSaúde Hospital Alfena	1	TrofaSaúde	1
12	TrofaSaúde Hospital Trofa	1	TrofaSaúde	1
13	Hospital Cruz Vermelha	0		1
14	Hospital da Ordem Terceira	0		1
15	Hospital St.Louis	0		1
16	Hospital S. Gonçalo - Lagos	0		1
17	Hospital Particular de Paredes	0		1
18	Hospital de Santa Maria Porto	0		1
19	Hospital da Lapa	0		1
20	Hospital Senhor do Bonfim	0		1
21	Casa de Saúde São Mateus Hospital	0		1

Source: Author

Table 32. Dataset 0 referring to informative variables.

Inpatient Care					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Yes	21	100	100	100

Source: Author

Table 33. Inpatient Care Frequency Distribution.

Branded					
		Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	No	9	42,9	42,9	42,9
	Yes	12	57,1	57,1	100
	Total	21	100	100	

Source: Author

Table 34. Branded Frequency Distribution.

Dataset 1				
Hospital_ID	Branded	Geographical_Partners	Specialty_services	Clinical_Services
1	1	10	27	198
2	1	10	53	212
3	1	10	39	162
4	1	10	45	162
5	1	6	39	340
6	1	6	39	340
7	1	6	37	370
8	1	6	34	225
9	1	6	48	299
10	1	6	36	156

11	1	6	43	289
12	1	6	42	253
13	0	0	36	380
14	0	0	27	67
15	0	0	20	27
16	0	0	32	32
17	0	0	28	15
18	0	0	34	38
19	0	0	45	16
20	0	0	33	
21	0	0	30	11

Source: Author

Table 35. Dataset 1 referring to RQ1 Variables.

Descriptive Analysis (Part II)							
	Median	Mode	Percentiles			Minimum	Maximum
			25	50	75		
Geographical_Partners	6	0	0	6	6	0	10
Speacialty_Services	36	39	31	36	42,5	20	53
Clinical_Services	180	162	33,5	180	296,5	11	380

Source: Author

Table 36. RQ1 variables' descriptive analysis (Part II).

Dataset 2							
Hospital_ID	Brand	Offered_Insurance	Annual_Claims	Annual_Coimpliments	Online_Appointment_Option	Personal_Area_Option	Available_Information_rate
1	1	63	330	122	1	1	10
2	1	56	0	0	1	1	10
3	1	45	0	0	1	1	10
4	1	54	51	25	1	1	10
5	1	52	560	342	1	1	9
6	1	60	1009	301	1	1	9
7	1	60	319	236	1	1	9
8	1	60	11	0	1	1	9
9	1	38	155	2	1	1	6
10	1	35	62	0	1	1	6
11	1	34	179	4	1	1	6
12	1	36	54	0	1	1	8
13	0	60	92	1	1	0	6
14	0	54	16	0	1	0	6
15	0	42	15	0	1	0	7

16	0	38	8	0	1	0	4
17	0	57	15	2	0	1	6
18	0	46	8	0	1	0	0
19	0	26	0	0	1	0	7
20	0	26	6	0	1	0	3
21	0	28	11	0	1	0	5

Source: Author

Table 37. Dataset 2 referring to RQ2 Variables.

Descriptive Statistics (Part II)							
	Median	Mode	Percentiles			Minimum	Maximum
			25	50	75		
Offered Insurance	46	60	35,5	46	58,5	26	63
Annual Claims	16	0	8	16	167,29	0	1009
Annual Compliments	0	0	0	0	14,41	0	342
Online Appointment Option	1	1	1	1	1	0	1
Personal Area Option	1	1	0	1	1	0	1
Available Information Rate	7	6	6	7	9	0	10

Source: Author

Table 38. RQ2 variables' descriptive analysis (Part II).

Dataset 3						
Hospital_ID	Bran ded	Clinical Excellence	Patient_S afety	Facility_confort_and_ suitability	Patient_cen tered	Patient_Satisf action
1	1	7		1	1	1
2	1	9	1	1	1	1
3	1	1		1	1	1
4	1	4		1	1	1
5	1	10	1	1	1	1
6	1	10	1	1	1	1
7	1	7	1	1	1	1
9	1	8	1	0	1	1
11	1	8	1	1	1	1
12	1	8	1	1	1	1
13	0		0	0	1	1
14	0	2	0	1	1	1
15	0		0	0	1	1
16	0		1	1	1	1
17	0		1	1	1	0
19	0	2	0	1	1	1
21	0	2	0	1	1	1

Source: ERS

Table 39. Dataset 3 referring to RQ3 Variables.

<b>Descriptive Analysis (Part II)</b>				
	Median	Mode	Minimum	Maximum
Clinical Excellence	7	2	1	10
Patient Safety	1	1	0	1
Facility Comfort and Suitability	1	1	0	1
Patient Centered Approach	1	1	1	1
Patient Satisfaction	1	1	0	1

**Source: Author**

*Table 40. RQ3 variables' descriptive analysis (Part II).*

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