

UNIVERSITY OF VAASA
FACULTY OF BUSINESS STUDIES
DEPARTMENT OF MANAGEMENT

André Filipe Sousa Mendes

**CUSTOMER'S PERCEPTION ON EFFECTS OF MARKET
LIBERALIZATION ON A MONOPOLISTIC VALUE PROPOSITION IN
PORTUGUESE ENERGY SECTOR**

Master's Thesis in
International Business

VAASA 2017

TABLE OF CONTENTS

	page
LIST OF FIGURES.....	7
LIST OF ABBREVIATIONS.....	9
1 Introduction.....	13
1.1 Background of the Study.....	13
1.2 Research Gap, Research Question and Research Objectives.....	16
1.3 Structure of the Study.....	18
2 Research context.....	20
2.1 Value chain of the Portuguese Electricity Sector.....	20
2.1.1 Economic Environment.....	22
2.1.1.1 Natural Monopoly.....	23
2.2 Portuguese sector description.....	27
2.3 EDP Comercial (EDP SC) contribution to the demands of the electricity sector 32	
2.3.1 EDP Group.....	32
2.3.1.1 EDP SC.....	34
3 Literature review.....	36
3.1 Strategy and Business models.....	36
3.1.1 Strategy.....	37
3.1.2 Profile and strategic planning.....	39
3.1.2.1 Strategic Innovation.....	40
3.1.2.1.1 Means of Strategic Innovation.....	40
3.1.2.1.2 Barriers to Strategic Innovation.....	42
3.1.2.2 Resource-based view of the firm & Strategic Positioning.....	43
3.1.3 Business Model.....	47
3.1.3.1 Market segmentation and variables.....	49
3.1.3.2 Value Proposition Canvas.....	51
3.1.3.2.1 Customer Segment block.....	52

3.1.3.2.2	Value Proposition block.....	53
3.1.3.3	Relation between Customer Segments and Value Proposition	54
3.1.4	Business Model Innovation	54
3.1.4.1	Value Innovation	55
3.1.4.1.1	Value Curve & Blue Ocean Strategy	56
3.2	Role of customers' perceptions	59
3.3	Framework of the study	60
4	Methodology	62
4.1	Research design	62
4.2	Research strategy & Data collection	62
4.3	Data Analysis.....	63
4.4	Reliability and validity	65
5	Findings.....	67
5.1	Energy Solution	67
5.2	Customer Jobs & differences within EDP at regulated and liberalized market 67	
5.3	Market alternatives	68
5.3.1	Customer pains	69
5.3.2	Pain relievers	70
5.4	Gains creators & customer gain	71
5.4.1	EDP distinctiveness?	72
5.5	Customer relationship and feedback	73
5.6	EDP Comercial Value Proposition Canvas	73
5.6.1	Value Curve.....	74
5.6.2	Comparison of EDP and EDP Comercial.....	76
6	Conclusion & Discussion	77
6.1	Discussion of Findings & Conclusion.....	77
6.2	Limitations.....	80
6.3	Practical Implications	81
6.4	Suggestions for Future Research	81
	List of References	83

Appendix	98
APPENDIX 1: Business structure EDP - Energias de Portugal	98
APPENDIX 2: Organizational chart EDP - Energias de Portugal.....	99
APPENDIX 3: Portugal Continental	100
APPENDIX 4: Main Sales Companies of the Portuguese Electricity Sector (ERSE 2017)	101
APPENDIX 5: Gross electricity production in Portugal: by total and by type from 2000 to 2014	102
APPENDIX 6: Semi-Structured Interview Questions	103

LIST OF FIGURES

Figure 1. Value chain of the Portuguese Electricity Sector (ERSE ² , 2014).....	20
Figure 2. Voltage limits of the various segments of electric current, based on Decree-Law n. ° 29/2006 of 15 February.....	21
Figure 3. Changes in the organization of the electricity sector (Santos, 2012).....	24
Figure 4. Mix of electricity production in Portugal (DGEG, 2013).....	27
Figure 5. Evolution of the total number of customers active in the liberalized market (ERSE, 2015).....	29
Figure 6. Evolution of the shares of the suppliers in the liberalized market in terms of consumption.	30
Figure 7. <i>EDP</i> Brand image changes.....	33
Figure 8. Porter's Five-force Framework (adaptation of Porter, 2001)	39
Figure 9. Resource-based view of sustained competitive advantage (Barney 1991: 112)	45
Figure 10. Business Model Canvas (Osterwalder A. and Pigneur Y., 2010).	48
Figure 11. Adapted from “Some bases of market segmentation” (Johnson et al. 2008: 77.).....	50
Figure 12. Value Proposition Canvas (Osterwalder and Pigneur, 2010; 2014).....	52
Figure 13. Strategy Canvas (Kim & Mauborgne 2016).	58
Figure 14. Framework of study.	60
Figure 15. <i>EDP</i> Comercial’ value proposition canvas, interview results and online information based.	73
Figure 16. FIT/Relationship results.	74
Figure 17. Comparison of <i>EDP</i> Comercial value curve with main competitors.....	75
Figure 18. Business structure <i>EDP</i> - Energias de Portugal (Relatório e contas 2015)..	98
Figure 19. Organizational chart <i>EDP</i> - Energias de Portugal (Relatório e contas 2011).	99

LIST OF ABBREVIATIONS

AT	<i>Alta Tensão</i> (High Voltage)
BPI	<i>Banco Português do Investimento</i> (Portuguese Bank of Investment)
BT	<i>Baixa Tensão</i> (Low Voltage)
BTE	<i>Baixa Tensão Especial</i> (Low Special Voltage)
BTN	<i>Baixa Tensão Normal</i> (Low Normal Voltage)
CUR	Last Resort Supplier
<i>EDP</i>	<i>Energias de Portugal</i> (Energy of Portugal)
<i>EDP SC</i>	<i>EDP Comercial</i> (EDP Commercial)
ERSE	Portuguese Energy Services Regulatory Authority
MAT	<i>Muita Alta Tensão</i> (Very High Voltage)
MT	<i>Média Tensão</i> (Medium Voltage)
P	Production
RBV	Resource-based view
REN	National Electric Network
S	Sales or Supply
SEI	Independent Electricity System
SEN	National Electricity System
SENV	Non-binding Electricity System
SEP	Public Electricity System
SIEG	Service of General Economic Interest

UNIVERSITY OF VAASA
Faculty of Business Studies
Author:

André Filipe Sousa Mendes

Topic of the Thesis:

Customer's perception on effects of Market Liberalization on a Monopolistic Value Proposition in Portuguese Energy Sector

Supervisor:

Rodrigo Rabetino

Degree:

Master of Science in Economics and Business Administration

Department:

Department of Management

Major Subject:

Management

Program:

International Business

Year of Entering the University:

2013

Year of Completing the Thesis:

2017

Pages: 105

ABSTRACT

Since 2006, a change occurred in Portugal among energy providers due to the complete transition from a natural monopoly to a free market. The timeliness of the topic justifies a scientific analysis of the change in *Energias de Portugal monopolistic strategy*, company created in 1976 as result of the merger of key companies operating in the National Electricity System (SEN) and which had been nationalized in the previous years. This organization now operates in a market that is difficult to predict, having as main characteristic the turbulence caused by competition.

Using value proposition canvas main concepts and adopting customers' perception, this thesis will seek to identify the changes in one of the core departments of *EDP* affected by this change, sales. Whereas, this study has analysed a single company, the data for this research draw on eight qualitative semi-structured interviews with families, which are clients of company in study and information available online in the direction of obtaining the information that answers the topic of this thesis.

After analysing value proposition map and customer segment it was confirmed an existence of relationship or fit, where a company manages to satisfy or answers most of customers' segment sub-division's needs. After profound investigation, it was possible to confirm that the new requirements of customers forced *EDP* to change its value proposition configuration in order to be able to survive on this new competitive free market. One of the interesting key findings was that economic values, such as price, were not considered as a major influential factor by the customers when choosing energy supplier, but brand heritage values were perceived as more meaningful.

KEYWORDS: customer perceived value, energy sector, market liberalization, business model, value proposition, resource-based view, repositioning, strategy.

1 Introduction

This section enlightens the background of the study. Next, research gap is identified and research question and research objectives will be introduced. In the end of this section the structure of the study is outlined.

1.1 Background of the Study

Organizational innovation is today a topic of crucial relevance and a popular topic in the literature. (Mathews & Linski 2016; Poole & Van de Ven 2004; Bourne 2015; Ababneh 2016; Afonso & Vieira 2012; Calia et al. 2007; Frenz & Lambert 2012; Markides 2006; Ryan et al. 2007; Saebi et al. 2017.) Current business environment is rich in organizational innovation. For example, Poole & Van de Ven (2004) state that innovation takes place in multiple functions and levels of management processes, procedures and work organization, organizational structures, changes in customer/sales relationship, attitudes and values of employees of organizations and changes in markets, mainly related to processes of liberalization, increased competition and global competition. Mathews & Linski (2016) mention that “change is inevitable if organizations are to remain competitive”.

Organizational change can be defined as a difference that happens in an organization’s form, quality and condition over time (Poole & Van de Ven 2004: 11). Organizational change can also be seen as an adaptation of organisation’s direction towards more desired position in order to be find solutions to economic environment’s new challenges and opportunities. (Hurn 2012.) When defining organizational change, two important aspects arise: difference and time. Barnett & Carroll (1995) define organizational change in more simple way, arguing that it is a transformation that organization goes through between two points in time. According to Huber & Glick (1993), change happens in organization’s way to function, in its hierarchy regarding leaders and members, organization’s structure or resource allocating. Organizational change can be planned or unplanned, progressive or sudden and it depends on the organization’s goals and surroundings (Poole & Van de Ven 2004: 11.)

Organization's interaction with the environment is reciprocal, thus organizations are not merely passive; organizations consequently try to influence the environment that surrounds it. (Poole & Van de Ven 2004: 33.) However, it is not only the relationship between organization and environment that drives change. The dynamics of work structures and political processes of exercising power in the organization can also constitute a strong pressure for organizational change.

Organization as an open system is faced with influences caused by changes in its close and distant surroundings. Hence, following Schwarz & Shulman (2007) there exist two different views on organizational change. According to the first view, presented by Fay & Luhrmann (2004) organizations are environment-adaptive entities which need to manage with the changing demands of the environment to remain viable. Crossan, Vera & Nanjod (2008) describe this environment as characterized by social, legal, technological, and economic changes. The second view, argued by Hannan & Freeman (1984) sees organizations as inert entities which are categorized as static structures and passive forces. These sorts of organizations choose slow or little change especially regarding its core organizational features.

In this study, organizational change is viewed according to the first view and therefore the case company is examined as entity that is adaptive to its environment. Since the interaction with organization's internal and external environments is constant, it is not surprising that the simple fact of sudden changes occurring at technological level, or related to human behaviours (consumers, employees, suppliers, customers) along with changes on national or international socio-political environment, involves a constant need of innovation.

This research paper examines a core pillar of any company, strategy, its business model and innovation, more specifically value proposition innovation in customers' perception by studying a company that used to enjoy a situation of natural monopoly and thus combines the concepts of strategy innovation, customer perception and monopolistic market. *Monopoly* refers to a situation, where one producer, monopoly, controls supply of a product or service and the entry of new producers is either prevented or under control. Typically, monopolistic firms strive for maximise profits by maintaining prices high and restricting output, while acting unresponsive towards customer's needs. (Businessdictionary.com 2017.) *EDP* is a large organization that has hitherto operated in

a predictable environment, as a monopoly. In economic terms, it can be said that a natural monopoly situation is present when a set of results can be achieved more cheaply by a single firm than by several (Silva, 2007). According to Church and Ware (2000: 754-760), the condition that justifies the existence and maintenance of natural monopoly are the sub additive costs and, consequently the exploitation of economies of scale. Energy sectors are a good example of existence of natural monopolies because of the high costs of establishing power generation and power distribution to each household. In addition, Investopedia (2017) and Worstall (2013) mention that “there's not going to be enough gains from competition to cover the cost of having two sets of power distribution lines”.

The timeliness of the topic justifies a scientific analysis of the change in *EDP* (Energy of Portugal), organization that now operates in a market that is difficult to predict, having as main characteristic the turbulence caused by competition. Between 2006 and beginning of 2013 a change occurred in Portugal among energy providers due to the complete transition from a monopolized to a free market. The free market allows unrestricted competition in the electricity and gas sectors, enabling the appearance of several energy traders, and wider selection of choice for consumers. The liberalization of the electricity market in Portugal has been planned since 2000 and will enter in its full phase in 2020, with the gradual extinction of regulated tariffs for all consumers. (ERSE¹, 2014.)

This study has also practical reasoning behind its purpose. The energy sector, in which *EDP* operates, is going through a wave of liberalization at European level, for example, in countries such as United Kingdom, and Spain. Traditional energy market is confronted by the need of implementing deep changes at operational and structural level. (Pinto 2001.) Consequently, organizations are facing the threat of competition, potentially, turning it into an opportunity for transnational growth. When organization operates under uncertain, risky environment and encounters competition, this situation creates a threat to the organization's traditional strategy. However, the change in operation and structure, including the extension of its activities to other markets, could itself be a growth opportunity.

In addition, it is essential for organizations to learn to adapt into a new reality, which causes deep changes also in terms of another integral part of strategy that needs to be adapted to the market, company's business model. With the purpose of respecting the directives of European Union, many energy providers were being forced to restructure

their vertical integrated sector to be able to thrive in a business environment that is increasingly competitive. (Church & Ware, 2000: 747-748.) Consequently, there is a need to innovate the business model as a part of profit-making strategy linked to the new reorganized structure. Itami and Nishinmo (2010: 364-366) argue that the term ‘business model’ has several definitions, though there are common elements of the composition of this model, business system and a profit model. These authors argue that business system is how the company is structured in terms of production and delivery system, this can be then summarized as organizational structure. In contrast, profit model is described to be company’ strategy to achieve profit through perhaps differentiation from its competitors in terms of price and service offered. (Itami & Nishinmo 2010: 365.) In addition, Teece (2010: 172-194) and Saebi et al. (2017: 567-581) defend that adapting a business model is not an easy task and that firms are unlikely to innovate the business model unless there is a real need to do so.

The research is framed in this context. This study will seek to identify the changes in customer perception in one of the core departments of *EDP*, sales, by using value proposition canvas main concepts, which are value proposition and customer segment.

1.2 Research Gap, Research Question and Research Objectives

In the past years, implications of the regulations and comparison with other European electric markets have been studied regarding the electric market sector in Portugal (Pinto 2001). The focuses of the studies have also been on Key Performance Indicators (KPIs) and Business Intelligence concerning the electricity sector in Portugal. (Oliveira 2010.) Additionally, general studies or diagnoses about the state of Portugal’s energy sector have been conducted. For example, Portuguese Bank of Investment, BPI, (2011) provided a report of this topic analysing the structure of the sector, possible future investments and making comparison between domestic and international tariffs.

However, there is a lack of research about strategic repositioning of the company when the company in case used to be a natural monopoly company. Turner (2003) defends that strategic repositioning is “conscious adaptation to a changing environment, representing a fundamental shift in the firm’s value proposition”. In addition to Turner (2003: 251), Porter (1996) and Ryan et al. (2007) explains that this conscious act taken on by companies to adapt to a changing commercial environment represents a need to innovate

the original value proposition of the company by aiming its targeted market segment(s) or achieve differential advantage.

The elaboration of the present study stems from the initial formulation of a pertinent question. *EDP* in order to thrive in a new business environment had to strategic reposition and reengineer itself and consequently adapt its value proposition, this study will focus on the noticeable variations occurred on value proposition configuration in customers' point of view or customers' perception.

The research question will be the intersection between four related literatures, strategic innovation, business model innovation, value proposition innovation and customer perceptions literature. Based on these thoughts, the question that provide a deeper understanding of the changes in this case, is:

- *In customers' perception, what variations occurred on the value proposition configuration of a monopolist after a market liberalization?*

In this context, there is a need to describe the value chain and system and how Portuguese Electrical market is organized, since there is limited information due to ever more ongoing changes.

With the aim of answering and analysing the changing market rules and environment effects on the monopolist, the literature of strategic repositioning was used as a basic base, going deeper into one of its core bases, business model innovation, and subsequently value proposition innovation which the company had to go through to survive in the new liberalized market. However, it is important to review literature of customers' perception, so that it is possible to understand the results of interviews and perhaps the deficiency of information when asked a specific question. For example, a family still on regulated market of the electricity sector may be more attentive and notice more intensively the commercials of energy providers on liberalized market until their need has been satisfied.

In the continuation of the present study, qualitative research methods and online information were used to obtain and analyze the data. In this context, a documentary analysis of the industry and the market was carried out and company in study clients were contacted. To that end, semi-structured interviews were prepared as a means of collecting information about the company in study and to obtain relevant empirical evidence.

The main objective of the interview was to reach an extended and broader view of the main changes in industry strategy and business models.

1.3 Structure of the Study

This thesis is divided into six chapters. Chapter 1 explains the purpose of this study, including the background of the study, identification of the research gap, development and introduction of research questions as well as identification of the study's structure.

Chapter 2 begins with the explanation of the value chain of the Portuguese Electricity Sector and its economic environment, which describes the aspects of the case organization in Portugal before the liberalization, the directives provided by European Union and reasoning why some of the monopolistic characters remains in the value system. This chapter continues briefly by explaining who are the legal entities controlling the market to maintain fairness on this new liberalized market. This explanation is followed by a brief description of how the case company has evolved during recent years, framing the emergence of a subsidiary in the case company within Portuguese electricity sector, and its main tasks and responsibilities in the sector.

Chapter 3 will cover four fundamental themes in order to answer to the research question of this thesis, which represent the theoretical pillars of this research project. Thus, this chapter initially addresses and defines the concept of strategy, then strategic innovation is addressed, with some obstacles being mentioned, the concept of profile and strategic planning is explained, and the techniques of control of the strategic process are presented. In addition, the Competitive and Industry Analysis and the Generic Strategies of Porter that embodies the perspective of competitive positioning, which together with the Resource-Based View of the Firm (RBV) perspective, serve as theoretical basis for the analysis of *EDP* strategic positioning.

Third section of this chapter, a literature review of Business Model is presented, which reveals main important areas under innovation after market liberalization, one of them being the main topic of this thesis, value proposition. Therefore, the chapter presents more concrete and focused review of another model, Value Proposition canvas and its two core blocks, Value Proposition and Customer Segment. In the section afterwards, Business Model Innovation literature review is explained, as well as a sub-topic of this literature, Value Innovation.

In fifth section, it is presented the role of customers' perceptions, since this thesis is based on perceived value of the customers interviewed.

Finally, the framework of the study based on the literature is presented. Framework shows comparison concerning the company' structure when working in a monopolistic market and its organizational reengineering in order to enable working in liberalized market, and this way the framework illustrates the relation between literature and with the main topic of this thesis.

Chapter 4 is based on justifying the choice of the research methodology, strategy and data collection, data analysis as well as evaluation of the reliability and validity of the research.

On chapter 5 the results of the semi-structured interviews are analysed and the relevant literature is simultaneously reviewed. After interviewees answers analysed it was drawn *EDP Comercial'* value proposition canvas from customers perception. After this, *EDP Comercial* value curve is formed and comparison is made with regulated market *EDP* and its main competitors.

Finally, in the chapter 6 it is discussed the findings linked to the theoretical framework of this thesis. In addition, practical implications, limitations and suggestions for future research are described.

2 Research context

2.1 Value chain of the Portuguese Electricity Sector

To be able to use electricity it is necessary to produce it and then transmission it and delivered it until the consumer. This route has several steps that define the value chain for the Electricity Sector: production, transmission, distribution and sales. It is possible to analyse the value chain on Figure 1.

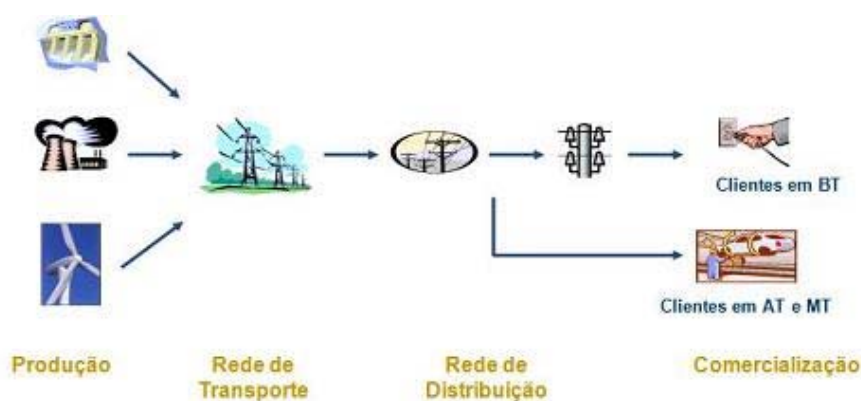


Figure 1. Value chain of the Portuguese Electricity Sector (ERSE², 2014).

At production level (*produção*) electricity can be carried out under the ordinary status or special status. The first occurs in various types of power plants, where natural resources such as oil, coal, gas, biomass or even hydropower are transformed into electrical energy that will subsequently be injected into the transmission network (*rede de transporte*). In Portugal Continental (Appendix 3) the activity of producing electricity is made by different companies.

The production of electricity in special status is made from the use of renewable energy sources and cogeneration¹ which is an alternative that can reduce the country's dependence on fossil fuels and thus pollutant emissions.

The production phase can be carried out under the ordinary regime or special regime. The first occurs in various types of power plants, where natural resources such as oil, coal, gas or even the forces of water are transformed into electrical energy that will subsequently be injected into the transmission network. The production of electricity in

¹ Cogeneration is a "form of thermal production where is exploited the heat generated in combustion for industrial purposes or heating" (MEI, 2008).

special regime is made from the use of renewable energy sources and cogeneration and is an alternative that can reduce the country's dependence on fossil fuels and thus pollutant emissions. Sometimes part of the electricity is injected directly into the distribution network at lower voltage levels, depending on the technologies used.

Through the transmission network, electrical energy is conveyed to the distribution substations or between several substations. It is also through this network that electrical energy is established to some industries, such as the car industry, rail, pulp or mining, which needs electrical energy in Very High Voltage. Figure 2 shows the level of voltage limits that differentiate this type from the others. In Portugal Continental transmission activity is carried out by a single company - National Electric Network (REN).

Segment	Voltage level
MAT – Very high voltage (muita alta tensão)	> 110 kW
AT – High voltage (alta tensão)	> 45 kW
MT – Medium voltage (média tensão)	> 1 kW
BT – Low voltage (baixa tensão)	
BTE - Low special voltage (power > 41.4 kW)	≤ 1 kW
BTN - Low normal voltage (power ≤ 41,4 kW)	
Public Lighting	

Figure 2. Voltage limits of the various segments of electric current, based on Decree-Law n. ° 29/2006 of 15 February.

In addition to the transmission of very high voltage, it is necessary to make the distribution (*rede de distribuição*) of electricity through distribution networks in High, Medium and Low Voltage, which are linked to most of the consumers' household, street lighting and other equipment operating in high, medium and low voltage level (Figure 2). In Portugal Continental distribution is carried out mainly by one company - *EDP Distribuição* – and also some cooperative distribution of electricity in Low Voltage.

So, it can be easily seen that both the transmission and the distribution network should follow the growth and location of producers and demand centres.

Finally, sales or supply (*comercialização*) is reflected in the purchase and sale of electricity, in view of the supply and meeting the needs of the final consumer (customer purchasing electricity for their own use) or other agents (wholesale customers who buy electricity for resale inside or outside the system where they are established). Sales organizations of electricity are responsible for managing relationships with end consumers, including billing and customer service. In Portugal Continental the trading of

electricity can be made on *Mercado Livre* (Liberalized Market), with the free traders and as last resort the *Mercado Regulado* (Regulated Market). Main actors on the liberalized market can be seen at Appendix 4.

We must note that these stages of the value chain have several different characteristics from each other, which justifies the fact that there are business segments that enable the existence of competition (production and sales) and others where this hardly happens (transmission and distribution). The great peculiarity which is the basis of this difference is that the transmission and distribution activities are made through network infrastructures, which establish the connection between supply upstream and downstream consumers, implying that in a context of opening of the market there is the need for those to be always available in a non-discriminatory manner in to allow competition for other activities. Another factor that keeps the competitiveness in these activities is that in them are true large economies of scale (Santana, 2003).

On the other hand, there are problems related to the own properties of the electricity, especially regarding the difficulty storage of this energy source, which requires that there is a balance between what is produced and what is consumed. One more difficulty relates to the fact that consumption is not uniform, that is, throughout the day there are large variations in energy consumption, which requires an adaptation of production in order to keep up with these changes. These and other problems make this sector object of constant improvements and investments, both in terms of technological solutions and infrastructure, or from the quality control and efficiency promotion.

2.1.1 Economic Environment

Since its' invention, electricity has increasingly gained importance in the growth and development of the world's economy. It has achieved this by contributing to higher productivity in the workplace, helping to improve the quality of life and as an aid in overcoming the problems of social exclusion and isolation.

The supply of electricity is thus a Service of General Economic Interest (SIEG) to the extent that, similarly to what happens to other network industries such as water supply, sanitation, gas and telecommunications is a service of economic nature essential to populations welfare and social participation, to the environment, and to the economy in general (Marques, 2005: 242). These types of activities must be submitted to specific

public service obligations, with the aim of ensuring quality services at affordable prices to all citizens, meeting the principles of accessibility, equality, universality and continuity, without forgetting efficiency, transparency and adaptability (CES, 2006).

Given the importance of such service to the operation of the entire economy, in 1996 the European Union issued directives that recommended liberalization, that is, to open the market to competition. In the case of the Portuguese electricity sector this process took place gradually; over three phases (Cruz, 2008).

First, it was initiated with the separation of the activities that are natural monopolies, in this case the transmission and distribution activities, from the activities capable of operating according to new market conditions.

In a second phase, it was attempted to encourage access to the networks by third parties, with the aim of increasing the number of players in the market and to ensure the increase of service quality and lower rates.

The third phase is referred to the transference of government responsibilities to the new independent regulatory authority. For example, to avoid the abuse of market power by companies operating in the areas of natural monopoly, this market regulator must set non-discriminatory and cost-reflective tariffs and to ensure the interests of consumers, concerning price, service quality, access to information and supply security. (European Commission, 2003)

2.1.1.1 Natural Monopoly

Church and Ware (2000: 748) mention that industries involving networks are considered as natural monopoly. For example, energy network, which includes production, transmission, distribution and sales. In this study, the case company *EDP* is one example of this kind of natural monopoly.

Church and Ware (2000: 748) state that “reliable and efficient provision of electricity was thought to be incompatible with a reliance on markets”, hence entitling energy providers being natural monopolies. Silva (2007) defends that in economic terms, a natural monopoly situation occurs when a set of results can be achieved more cheaply by a single firm than by several firms. In addition, Church and Ware (2000: 748.) mention that

instead of competition regulation, government regulation was used to direct the production and trade of electricity.

As mentioned in previous chapter, in 1996, European Union issued directives that recommended liberalization, that is, the opening to competition in some of the functions that were considered a natural monopoly. With the purpose to respect the directives of European Union, many energy providers were forced to restructure their vertical integrated sector, that is the companies had the need to separate production and sales from their organizational structure (Figure 3). (Church & Ware, 2000: 747-748.)

The market opening procedure is illustrated in Figure 3. It is characterized by the change of a vertically integrated sector and without competition into a vertically and horizontally disintegrated sector with competition.

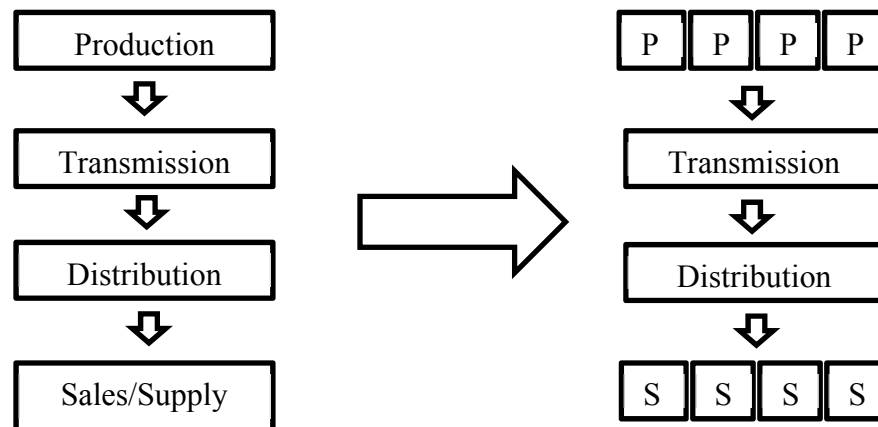


Figure 3. Changes in the organization of the electricity sector (Santos, 2012).

Vertical disintegration is described as a separation process of activities existing in the sector supply chain of the Portuguese electricity sector, for instance the activities carried out by independent entities. The horizontal disintegration corresponds to the participation of various actors in the same value chain phase.

However, as can be seen in Figure 3, the horizontal disintegration does not occur in all activities in the electricity sector, which is justified by economic theories, since network industries (transmission and distribution) constitute natural monopolies. (Church & Ware, 2000: 747-748; Santos, 2007; Santos, 2012.) This restructure was necessary towards the need to create a competitive market and free access to the natural monopolies. (Church & Ware, 2000: 747-748.) These authors (2000: 747) defend that in a case of non-horizontal

disintegration of production sector, the competitors in production of energy would be unable to have access to the transmission and distribution sectors.

According to Church and Ware (2000: 753-760), the conditions justifying the existence and maintenance of natural monopoly, are the sub additive costs and, consequently the exploitation of economies of scale. Subadditivity of costs have underlying idea that the production by a single company of a particular output level of certain good leads to less costs than if the production would be done by two or more companies. (Church & Ware, 2000: 754.)

Network industries meet these conditions, to the extent that, they support high costs for its construction, development and maintenance. These variable costs make the construction of new networks and the use of the existent by competitors ineffective, thus preventing the full performance of the market mechanisms. Therefore, in the case of natural monopolies, there should be no entry of new firms. In addition, the intervention of a regulator is necessary, and the regulator must be capable to prevent abuses of a dominant position and ensure public access to these networks by third parties, also known by Amaral (2008) as energy highways.

Nevertheless, in the electricity sector liberalization context, the creation of this regulatory authority arises, not only due to the need for regulation of natural monopolies (transmission and distribution networks), but also due to the demands of the potentially competitive segments of the value chain (production and sales/supply). (Church & Ware, 2000: 747-748.) With the opening of these activities to competition, it is necessary to limit the market power and to reduce the degree of concentration, in particular, to decrease market share of incumbent firms, with the intention of avoiding problems of poor quality and higher prices that could exist without control. According to Silva (2007) market power represents the ability of a company to influence prices or quantities offered, which are in practice difficult to measure.

Soares (2006: 4) points out that the source of market power problems may be:

- Sunk costs;
- The existence of different optimal scales for the different value chain activities;
- Difficulties in storage;

- The fact that demand tends to be inflexible, that is, from a given percentage change in price, demand will register a smaller percentage change and may lead to abuse by those companies.

These aspects show how the specific features of the electricity sector can lead to market failures, such as, situations where the market fails in the efficient allocation of resources (for example, market power, monopoly, problems of imperfect and asymmetric information). Therefore, it is essential to control the market through regulations (Church and Ware, 2000).

Another reason that requires the regulator to be present in the Portuguese electricity sector, relates to the need of ensuring compliance with the principles that an SIEG should follow. The SIEGs, as mentioned before, should be subject to strict control that maintains the equal opportunity that is, being accessible to the entire population in a non-discriminatory and fair manner, treating consumers equally. Specifically, it is necessary to fulfil the requirement of universality, even in a liberalized market environment, ensuring that there will always be a producer and a supplier to ensure the supply of electricity to all citizens, regardless of their geographical location at a specified quality and at affordable prices. (Eiras 2009.)

Regarding the principle of continuity, the energy supply should occur continuously with the minimum amount of interruptions, while maintaining the efficiency and quality of service. On the other hand, it is essential that throughout the process, there is transparency in contractual relations, from general information to dispute resolution mechanisms. (European Commission 2003.)

In conclusion, the regulation of the electrical sector is justified to maximize the liberalization of the energy market, stimulating competition in the production and sale of energy and, on the other hand, to promote economic efficiency in the network infrastructures by promoting excellent technical and economic performance of companies operating on a natural monopoly basis (Santos 2008) and to enforce the obligations of a SIEG.

2.2 Portuguese sector description

The National Electricity System (SEN) has an underlying set of principles, organizations, agents and electrical installations, these are divided into the Public Electricity System (SEP) and the Independent Electricity System (SEI), in which one can still distinguish Non-Binding Electricity System (SENV) and the Special Regime Producers. Within each of these systems there is five main activities: production, transmission, distribution, sales and market operations. The set of public service facilities for the transmission and distribution of electricity are the Electrical Network of Public Service.

In Portugal, the production of electricity is free and subject to obtaining licenses from relevant administrative bodies, and is performed with the use of different technologies and different sources of energy both in ordinary regime (bound and not bound production) or under special (mini-hydro, cogeneration, low voltage producers up to 150 kW, as well as from other renewable energy).

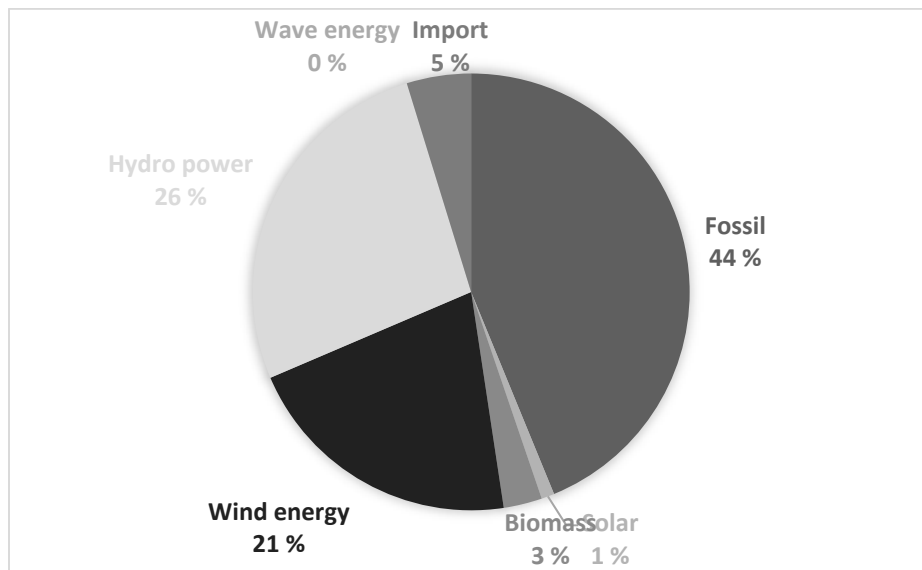


Figure 4. Mix of electricity production in Portugal (DGE, 2013).

In Figure 4 we can see that a very high proportion of electricity produced in Portugal is from natural fossil power plants, which causes major environmental impacts.

With the purpose of reducing these impacts, natural fossil power plants must meet strict programs in terms of emission control. Similarly, the hydro electrical power plants take up measures to minimize the adverse effects resulting from varying flow downstream of reservoirs (CEEGA, 2002).

On the other hand, environmental concerns also led to the creation of incentives that promote the production of electricity from renewable resources. Thus, in recent years, it has been verified that there is a significant increase in the use of renewable energy sources in electricity generation, particularly wind energy, which in year 2000 registered a value of 168GWh and in 2014, a value of 12,111 GWh (Appendix 5).

Despite these figures, Portugal is still not self-sufficient, in the sense that in addition to the energy produced in the country, it still needs to import energy through the interconnection of the European network.

Currently, the main producers of electricity in Portugal are *EDP Produção*, *Turbogás*, *Elecgas* and *Tejo Energia*, which can make agreements with suppliers and end customers, or may participate in organized markets². (ERSE³, 2015) The producers in special regime have the right to sell the electricity they produce to the Last Resort Supplier (CUR). The system operator intervention is only to ensure the security of electricity supply in SEN when it is expected situations of energy poverty.

Regarding to transmission network in Portugal, this is provided in the public system and exclusively by National Electric Network (REN), concession given by the Portuguese State. REN had to split from *EDP Group*, since, in a liberalized market environment it had to transmit energy from other producers in addition to *EDP Produção*, thus avoiding the potential conflict between the interests of the shareholders of this company and the public interest (Amaral, 2008). Therefore, REN has not only the role of physical system operator (ensure the linkage between the production and distribution through the transmission function) but also the economic operator role (the only buyer of energy producers).

The National Transmission Network covers almost all the national territory, also having some points of interconnection to the Spanish network, allowing electricity exchange in Iberia. This network must meet the quality standards set out in the Quality of Service (RQS) and allow access to all stakeholders, non-discriminatory and transparent manner.

As for the distribution of electricity, this takes place through the National Distribution Network, currently being a dependent on an exclusive basis in HV and MV of the

² Defined in Decree-Law No. 29/2006 of 15 February as "systems with different contracting arrangements that allow the meeting between supply and demand of electricity."

concessionaire, *EDP Distribuição*. Operations in LV distribution networks are carried out based on contracts settled between the autarchies or local authorities and distributors, although currently these are also concentrated in *EDP Distribuição* (may exist not-bounded distributors). This network covers the large consumption centres (for example population or major industries) and tries to satisfy the existing demand, by streamlining available resources and the technical limitations of the equipment, with the purpose of limiting the voltage drops in large networks (MEI, 2008).

Sales or supply is a liberalized activity, if possible, at present, consumers choose and change between electricity supplier without any additional charge, and are also allowed to purchase directly from producers, traders or through organized markets. The supplier switching process must be ensured by an independent entity to the other stakeholders in the sector, which will also compete the management of measuring equipment and their reading, local or remote. However, temporarily, this responsibility is the care of *EDP Distribuição*.

As we can observe in Figure 5, the liberalized market ended the month of January 2015 with an 85.2% weight of the total electricity consumed in Portugal. Having been in recent years a remarkable growth, such that in January 2015 there were, in the liberalized market, about thirteen times more customers than in January 2010.

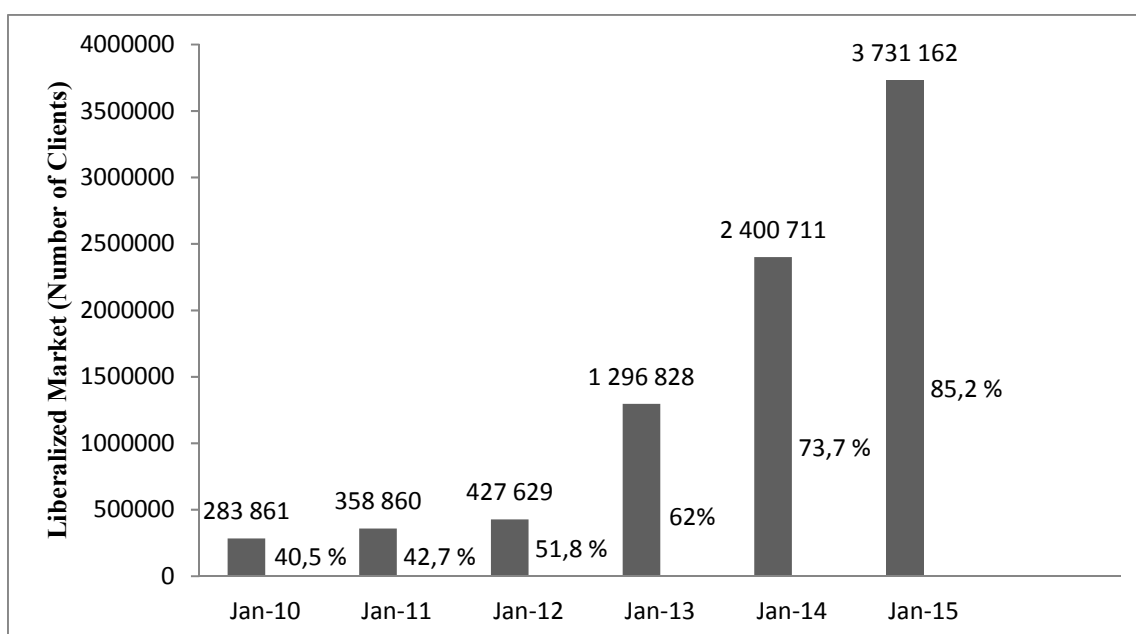


Figure 5. Evolution of the total number of customers active in the liberalized market (ERSE, 2015).

From the side of the Public Electricity System, sales is ensured by the last resort suppliers that are required to ensure the universal provision of electricity supply to everyone who requests it and to pursue a sale price set by Portuguese Energy Services Regulatory Authority (ERSE).

The Last Resort Suppliers (CUR) obtain energy by purchasing on the organized market, from other producers or traders, or through contracts with REN, in the case of the energy produced in the special regime. This function should be performed by an autonomous entity, currently the main CUR is *EDP Serviço Universal*.

In the Non-Binding Electricity System (SENV), there is not bound traders, who can buy and sell electricity freely, paying only tariffs for access to transmission and distribution networks as defined by ERSE. The main suppliers recognized in the market at the moment are *EDP Comercial*, *GALP Energia*, *Endesa*, *Iberdrola*, *Goldenergy*, *Fenosa* and *YLCE* (Deco Proteste, 2016; Appendix 4). In Figure 6 we can see how the market share of these suppliers has been evolving. In the year 2015 all suppliers have grown in volume of consumed energy, except for *EDP Comercial*.

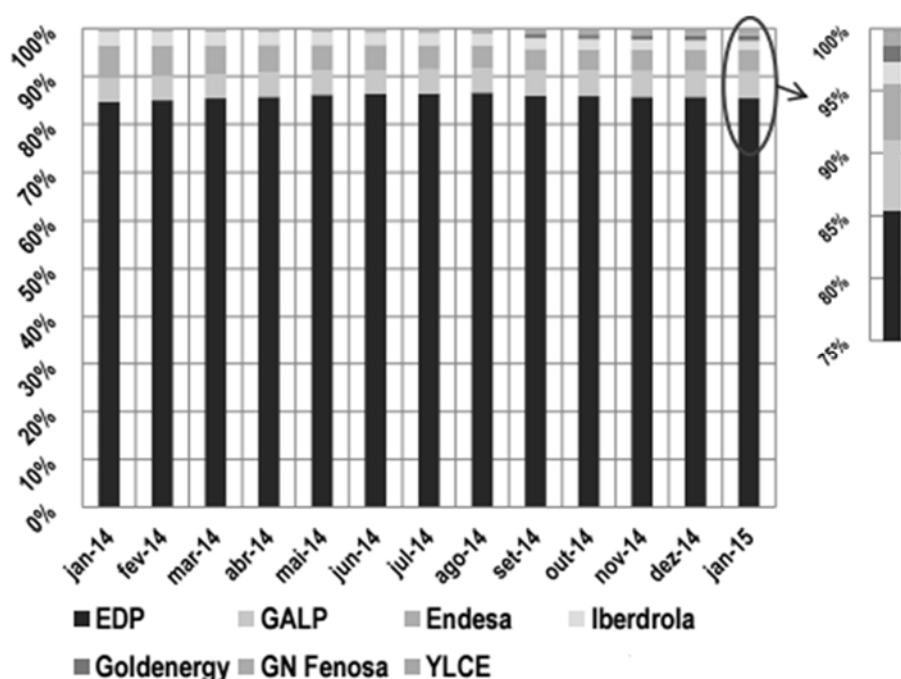


Figure 6. Evolution of the shares of the suppliers in the liberalized market in terms of consumption.

According to law, all suppliers must comply with certain standards regarding the quality of service and information provided to the consumer. This includes clarification on the right to universal service, tariffs and prices, the rational and efficient use of resources and

the information shall always be given in an appropriate manner, complete, non-discriminatory and transparent.

Currently, there are, both in Portugal and in Europe, many markets where you can make energy transactions, distinguishing between non-organized markets and organized markets. Amaral (2008) defines the first, as those “where out of stock market, the parties establish a contractual relationship of purchase and sale, adjusted to the needs (“tailor-made”)” and the latter as those “where there are stock markets for purchases and sales of energy in standardized transactions.”

It is also important to be noted that the management of the organized electricity markets in Portugal, is a free activity and responsibility of market operators, which should be integrated in the functioning of any organized electricity markets established between the Portuguese State and other Member States of the European Union. As previously stated, both producers in the ordinary regime as well as traders can become members of these markets and are subject to authorizations granted jointly by the Minister of Finance and Minister responsible for the energy sector.

To ensure that these activities of SEN are carried out without misuse, and within legal parameters to guarantee the efficiency and rationality of the activities in terms of transparency, non-discrimination and competitive, there needs to be regulation of transmission, distribution and the last resort suppliers, as well as logistics operations, change of supplier and management of the organized markets.

In Portugal, the regulation of the electricity sector is assigned to ERSE, which, as described in Article 3 of the Decree-Law # 97/2002 of 12 April, serves to not only ensure that the entire population is served continuously and non-discriminatory, as well as fulfilling the minimum standards of quality and security of supply, but also to set rules and obligations, to promote price transparency and consumer confidence and prevent abuses of dominant positions and predatory behaviour.

It is also function of the regulatory authority to protect the interests of consumers, promote access to information and promote efficient competition in order to achieve optimum performance of regulated companies and greater satisfaction of end customers. For these tasks to be achieved must be verified institutional independence, organic and functional compared to the government and regulated (Moreira, 2008). Santos (2007) also lists, as

additional functions, the promotion of environmental performance in the transmission and distribution network, the reduction of the volume of loss of electricity and the best service quality in the distribution network.

The major regulations developed by ERSE in the context of SEN, are tariff regulations, service quality, access to networks and interconnections, operations of networks and trade relations. ERSE then has the responsibility to verify and monitor the fulfilment of these regulations, as well as other legislations on the electricity sector, imposing sanctions for transgressors, resolving disputes and issuing opinions on relevant matters.

2.3 *EDP Comercial (EDP SC)* contribution to the demands of the electricity sector

In this chapter, a brief description of how the *EDP* Group has evolved in recent years is presented, framing the emergence of the company in study in this thesis, *EDP Comercial* in the Portuguese electricity sector. Later on, it will be presented the main lines of action of this company in the sector.

2.3.1 *EDP* Group³

EDP – Electricidade de Portugal was created in 1976 as result of merger of thirteen of the fourteen companies operating in the SEN and which had been nationalized in the previous year. It thus began as a public company whose main concern was the expansion of the national electricity grid, even with being one of the key-factors necessary for the technological and economic development of the country it was underdeveloped compared to the great European powers. In the mid-1980s, *EDP* supplied 80% of the electricity at low-voltage and its network covered 97% of Portuguese territory. In 1991, *EDP* was transformed into a joint-stock company and later, in 1994, into a corporate group consisting of a parent company and 19 associated companies. The privatization process ran from 1997 to 2005, gradually, and was constituted by 6 phases, at the end of which 79% of the company's capital was in private hands. In 2013, starts the last phase of privatisation of *EDP*, where it becomes 100% private company.

During this period, *EDP* also focused on its internationalization, having been present in Brazil since 1996, through *Energias do Brasil*, in the segments of production, distribution

³ <http://www.EDP.pt/pt/EDP40anos/Pages/Cronologia.aspx>

and commercialization of electricity; In Spain since 2001, and in other European countries such as France, Belgium, Romania and Poland.

In addition to the electricity sector, *EDP* started to focus on other markets, namely natural gas in the Iberian Peninsula in 2003 and renewable energy, where it strengthened its position worldwide with the acquisition of the North American company Horizon Wind Energy, in 2007.

Given these changes, and to better convey its new position, in 2004, *EDP - Electricidade de Portugal* changed its name to *EDP - Energias de Portugal*, as well as its brand image, which became a smile. Since then, the slogan that has been associated with its brand has been changing, starting with “*EDP - Energias de Portugal*” (in 2004), “*EDP – Feel our energy*” (in 2007), “*EDP – Live our Energy*” (in 2009), “*EDP - Live your energy*” (in 2010) and most recently “*EDP – A human, innovative and sustainable brand*” (in 2011) by showing the commitment to being close to the customer.



Figure 7. *EDP* Brand image changes.

In 2015 (*EDP*, 2015a), *EDP* was the largest producer, distributor and supplier of electricity in Portugal, the third largest producer of electricity in the Iberian Peninsula and one of the largest gas distributors in the Iberian Peninsula. *EDP* was also one of the world's largest wind power operators with wind farms in the Iberian Peninsula, United States of America, Canada, Brazil, France, Belgium, Italy, Poland and Romania, and has construction capacity in Mexico and is developing wind projects in the United Kingdom. In addition, *EDP* produces solar photovoltaic energy in Portugal, Romania and the United States of America. In Brazil, *EDP* is the fifth largest private operator in electricity production, has two concessions for the distribution of electricity and is the third largest private marketer in the liberalized market.

The *EDP* group, represented in the Organizational Chart on Appendix 2, is constituted by the parent company, *EDP Energias de Portugal, S.A.*, and by a group of companies that act in several stages of the value chain of the energy sector.

2.3.1.1 *EDP SC*

EDP SC, was created in 2005 originally with the name of *EDP Comercial, S.A.*, resulting from the obligatory process by ERSE of disassociation of the network activities and the commercial area, in the scope of the liberalization of the Portuguese Electricity sector.⁴ Thus, part of the activities carried out until now by *EDP Distribuição* began to be carried out by *EDP SC* "because they are likely to create synergies to other *EDP* Group companies in the liberalized market" (*EDP*, 2005). This happened due to the fact that the restructuring of the energy sector, and consequent vertical disaggregation of the company, have led to the emergence of several companies with some similar tasks, arising from the need to create a single independent entity capable of providing these services, maximizing then the efficiency in terms of costs, ensuring the capture of operational synergies between the different business areas, enhancing then the growth of these.

In this way, *EDP SC* is an independent entity from the legal point of view. *EDP SC* guarantees fairness to retailers and the management of information of a private nature. This type of information refers, for example, to information about a customer, obtained during the activity carried out on the regulated market, which, in a context of switching to the liberalized market (changes within the *EDP Group*), should only be used with the authorization of the customer.

EDP SC is then a service provider with a platform of shared services (such as customer service, billing, complaints, systems, between others) through which it provides support to other companies in the group, *EDP Distribuição*, *EDP Serviço Universal*, *EDP Gás* and other external utilities (for example, Municipal Services of Water). It is organized to ensure cooperation between the remaining Group companies and to establish the "bridge" between them and the final consumer.

In summary, *EDP SC* was created with the goal of providing services within *EDP* Group companies, acting as an intermediary between them and the final consumer, having

⁴ <http://docplayer.com.br/2266317-EDP-solucoes-comerciais-a-perspectiva-do-cliente-business-transformation-outsourcing-os-novos-modelos-de-outsourcing.html>

available various service channels through which customers can contact *EDP*, requesting information, products and/or services⁵.

⁵ <https://energia.EDP.pt/particulares/apoio-cliente/contactos/>

3 Literature review

3.1 Strategy and Business models

A liberalization process, like in this thesis topic, liberalization of the electricity sector, can be analysed that nowadays economy main concern is that is imperative to answer to the new demands of competitiveness, with essential requirements such as quality, flexibility, diversification and innovation. These essential requirements or demands, together with competition must answer to the high demand, which is increasingly demanding, uncertain and very varied.

Analysing *EDP*'s history of years of investment in the construction of a national electricity network with capacity to cover the whole country, allied to the fact that the company was in fact monopolistic, has made the organization never feel the need to communicate with customers. Perhaps this lack of communication explains, to some extent, an image of silence or inefficiency of the company. Therefore, in this study the focus is in sales and communication with the customer with the help of value proposition canvas by customers perception.

Before the liberalization of the electricity market, *EDP*' offers were standard for all the consumers, which corresponds to Fordism model "a manufacturing philosophy that aims to achieve higher productivity by standardizing the output"⁶. This model was created in the era of the maximization of consumer ideas, so that diversification and flexibility of production systems were not required. However, markets have evolved and with them the management models able to attract them.

So, with this changes on the electricity sector, there must be inevitably a space for innovation and the development of management techniques capable of responding to the needs of new demand patterns (diversified, personalized and uncertain), where advanced technologies play a vital role in providing enterprises with effective tools that enable them to respond quickly to rapid changes (flexibility).

The plans used in any organization are very important because it will be the previously established strategy that will dictate the results and positioning of the organization in the

⁶ <http://www.businessdictionary.com/definition/Fordism.html>

future. The strategy should be clear and the business model should be well-defined and appropriate to the pursuit of the organization's core business or core business idea.

In this context, the strategic objectives to be achieved materialize the strategy and allow the execution of the business plan.

3.1.1 Strategy

In general, strategy is how the organization behaves to achieve the objectives set in a long-term logic, supporting a given competitive advantage. The definition of vision, mission and objectives of short-, medium- and long-term and the development of policies and programs to achieve these objectives are the necessary elements to develop a strategy. In a dynamic context, like the market where *EDP* is part of, the strategy should be constantly adapted to situations that are constantly changing. According to Welch (2001), business strategy is not so much about being able to predict something, but to be able to respond quickly to real changes when they occur. That is why strategy must be dynamic and capable of anticipation.

To define an appropriate strategy, it is necessary to have what is termed "strategic reasoning" which allows to form a general plan based on the driving force of the business. On the other hand, for Robert (2004), the concept of business is based on a relation between the future vision for the company and the strategy pursued, therefore this author considers that the strategy is a description of the concept of business that the organization intends to implement. In addition, according to this author, the formulation of a strategic plan has three main phases. There is a preliminary phase, in the second phase the strategy is developed and in the third phase it is implemented.

In the initial phase, described as *preliminary phase*, information about the organization should be collected from its employees, usually through a questionnaire. These responses will serve as inputs to the subsequent brainstorming sessions in which strategy and business ideas will be developed.

Robert (2004) distributed the second phase, *strategy development* in five stages.

In the *first stage*, the profile elements of the prospective organization are defined, such as the products to be produced and/or services to be provided, the segments of clients to be reached, among others.

The *second stage* involves defining the business model considering the value chain, the analysis of the resources available to the company and the distribution channels. At this stage, it is also defined the players in the "arena" of current business, that is, the business stakeholders, recognizing that they are inserted in a given market.

In a *third stage*, a detailed analysis of the external environment and identification of what is the future "business arena". This requires identifying and analysing the main competitors, identifying future forms of competition and what are the competition rules relevant to the company. The business arena is also defined through a broad PEST (Political, Economic, Social and Technological) analysis, considering political, economic, social and technological factors, among others.

Competition can be analysed through Porter's five-force framework which relates the level of competition in industry to the bargaining power of suppliers and customers on one hand, and on the other hand, competition from new substitute products or services and new competitors (Figure 8).

In the *fourth stage*, the objective is to carry out the strategic diagnosis of a perspective organization, which implies defining its strengths and weaknesses, threats and opportunities - which embody the SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis.

In the *fifth stage* of this phase, the objective will be to establish the strategy through the definition of the driving force, the business concept and the areas of excellence.

In the third and final phase, the strategy is implemented and monitored according to the degree of achievement of the strategic objectives and the dimension/growth and return/profit guidelines. For this purpose, indicators such as the return on investment, the risk level of the project, the indicators of productivity, and others are considered.

Then, in Figure 8, one of the examples cited above is shown, the model of Porter's 5 forces, which, like all other models, considers and combines information about the company.

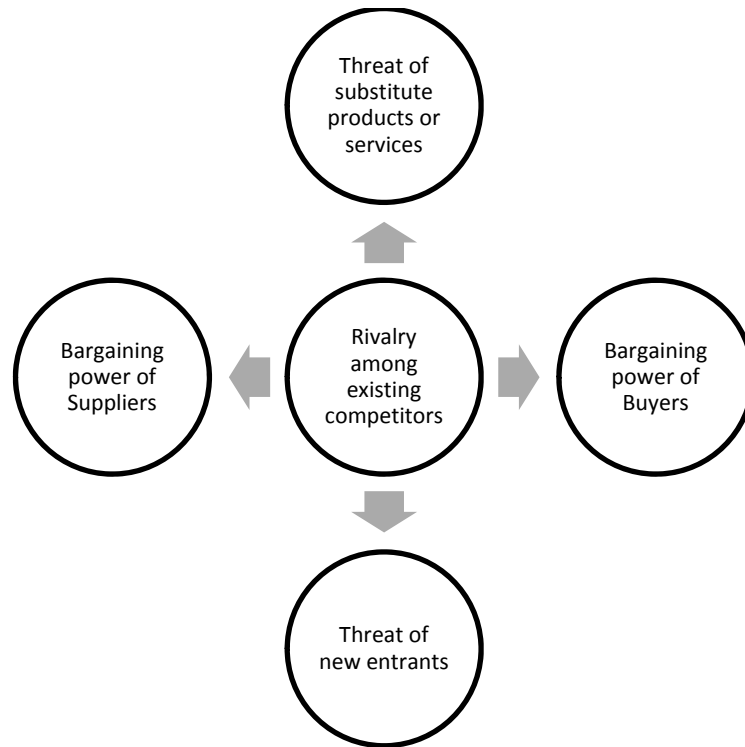


Figure 8. Porter's Five-force Framework (adaptation of Porter, 2001)

This model considers the negotiating power of suppliers and customers, the threat of incoming new products / services and the entry of new competitors, relating them to the existing rivalry in the sector.

3.1.2 Profile and strategic planning

Strategic planning is the preparation and formal analysis of the future course for an organization (Osterwalder & Pigneur, 2010).

In fact, the implementation of the strategy implies a prior planning. In practical terms, this means identifying critical issues, identifying projects/initiatives for solving critical issues and pursuing strategic objectives, also prioritizing projects/initiatives, and planning projects/initiatives in general terms. The strategic objectives are pursued by ensuring a systematic behavior of the appropriate actions to ensure control of the process. In practice, these objectives are at the heart of the strategic plan (Robert, 2004).

In most cases, the prioritization and selection of projects focuses on the analysis of project profitability. This is to evaluate the potential of the business model of the company. For this purpose, it is possible to use qualitative methods such as the Scoring Models.

Osterwalder and Pigneur (2010) report that Scoring Models are based and produce qualitative indexes. The use of these models requires defining the different evaluation criteria, such as profit, customer loyalty, market share, increased sales volume, employee satisfaction, social responsibility, environmental responsibility, innovation, internationalization and image in the market. For each of the defined criteria, the weight (namely importance) that each will have in the final evaluation will be assigned, with the final evaluation index being a weighted average. The qualitative scale may be from 1 to 5, with 1- very low; 2 - low; 3 - medium; 4 - high; 5 - Very high. On the other hand, it is necessary to define the criteria tables. Each of the criteria must be evaluated according to the qualitative scale defined and the criterion table, producing for each project a final score.

However, there are other analytical techniques that can be used in strategic planning, including for example SWOT analysis, PEST analysis or STEER analysis (Sociocultural, technological, economic, ecological and regulatory factors).

In synthesis, strategic planning should indicate which products to offer, which customers to serve, and in which markets to operate.

3.1.2.1 Strategic Innovation

Strategic innovation combines innovation, strategy and business models, thus an innovation at the level of the business models. In a constantly evolving economy, innovation is not limited to innovation in products and processes, it is also necessary social and environmental innovation and above all innovation in the business model itself.

Nowadays it is fundamental that new business ideas and new strategies emerge, that is, strategic innovation has been described as the fundamental reconstruction of business models and the reformulation of existing markets, changing somewhat the rules and the usual nature of the competition (Schlegelmilch et al. 2003).

3.1.2.1.1 Means of Strategic Innovation

According to Calia et al. (2007) a business model is “a statement of how a company will profit and sustain its profit stream over time”. According to Afonso et al. (2012), strategic innovation means designing new business models that seek to reach new customers, supported in new products or services, or new ways of doing business. A facilitator of

strategic innovation has been the development and diffusion of information and communication technologies.

Therefore, it is possible to say that *EDP* to innovate strategically passes essentially by the renovation of its business models and not only by the incremental improvement in terms of products and processes.

Markides (2006) argues that technology is extremely important for strategic innovation. This author also defends that over the last few years the emergence and development of information and communication technologies (ICT) has reduced transaction costs and accelerated the exploration of innovative solutions in various industries. Therefore, the viability of certain business models and the company's entire strategy are dependent on the functional state of the technology – not only the one that is available to the manufacturing line, but also the information and communication technologies that contribute to the efficiency of the business model.

The overall strategy that an organization designs must consider all the important factors related to strategic planning to achieve a competitive position. Morris et al. (2005) claimed that the following questions should be considered:

- (1) How does the company create value (value proposition)?
- (2) For whom will the company create value (markets, customers and consumers)?
- (3) What is the internal source (strength) that confers (competitive) advantage to the company?
- (4) How will the company position itself in the market (strategy)?
- (5) How will the company generate revenues?
- (6) What are the objectives and expectations of the entrepreneur or entrepreneur(s)?

Or in other words, to whom? what? and how?

New needs of current or future customers (who) or dissatisfaction may represent or indicate a new product or service (what) and new forms of promotion, production, delivery or distribution of goods and/or services (existing or new) may result in a new business model (how?) (Hamel & Prahalad 1991).

Strategic innovation in business models can result in new products and new ways of delivering products to the customer; that is represents new or different benefits to the

customer or products and services that have been adapted to meet the needs and expectations of specific segments of new consumers (Afonso & Vieira, 2012). However, disruptive strategic innovation par excellence is one that results in new and innovative business models.

In a company where technology is the basis of the business, the innovative matrix will tend to withstand technological aspects. In a company where innovation is supported by a new “what”, it is expect something different to convince the customer. In companies looking to satisfy a new “who”, the opportunity may arise in a new segment of consumers looking for products the company can offer.

3.1.2.1.2 Barriers to Strategic Innovation

In addition to the most common obstacles related to innovation mentioned above, which arose mainly from technological, financial and human barriers, Markides (1998) distinguished that some resistance comes from within the company, highlighting four types of obstacles related to strategic innovation: inertia of success, uncertainty about what to change, uncertainty about new strategic positions and implementation challenges.

Inertia of success means that strategic innovators must often monitor their strategic innovation process with the purpose to detect early signs of problems. In this sense, new challenges must be developed to stimulate the organization and keep it active.

Uncertainty about what to change means that strategic innovators should avoid ever assuming their dominant thinking attitude, which often leaves new projects at an early stage. They need to compete so that they can question who their customers are and what they want, that is, institutionalize an attitude of questioning that allows them to know more concretely what customers would like to change, and thus not to be afraid of it.

Uncertainty about new strategic positions means that companies, at some point, do not know if the idea will go well or what competencies are essential so that the goals are to be achieved successfully. Strategic innovators must bet on the quality of the various processes and products, and allow the external market to decide winners and losers.

Implementation challenges mean that successful companies have specific organizational units to support strategic innovation and create a context that supports integration between different units within the enterprise. In managing the transition from the "old" to the

"new", the two systems can coexist, but gradually company allocates the necessary resources to the new, so that it grows to the detriment of the previous, that is, the change must be gradual but in the sense of setting the new model in full. For established companies, the challenge of organizational strategic innovation is the development of a culture that challenges current success by promoting experimentation. Strong leadership is essential to creating this culture. Markides (1998) defends that only companies struggling for self-renewal will be successful in the long run.

3.1.2.2 Resource-based view of the firm & Strategic Positioning

The literature on competitive strategy tends to emphasize the strategic positioning in terms of the choice between cost and differentiation and between restricted and comprehensive market (Porter 1980); the consideration of organizational resources is taken as a fundamental premise in these choices. It is the organization's position, based on its resources, that allows it to pursue a certain strategic positioning in an industry (Grant 2010).

An organization's position, based on its resources, can be defined as “the inventory of assets owned by it, through which it develops distinctive capabilities, which can (when used creatively) enable them to acquire competitive advantages and, consequently, the capital” (Penrose 1959). While the sources of organizational capabilities are resources, the sources of an organization's competitive advantage reside in its capabilities. (Bowman & Ambrosini 2000)

According to the RBV theory, organizations seek to acquire resources (and capabilities) that are valuable and difficult to imitate. This search for differentiation is based on a process of developing distinctive capabilities and capabilities that can be described through the interconnection of the following concepts: organizational routines, resources, capabilities, core competencies, potential strategic impact, path-dependency (or acquisition-dependency) and degree of specificity (Andreu 1993).

Routines are specific ways of doing something, which have been developed and learned by organizations, to the point that it has become almost automatic.

Resources include all assets (tangible and intangible) owned or controlled by the organization that enable it to design and implement strategies that improve its efficiency

and effectiveness (Daft 1983). These can be classified into 3 categories: physical, human and organizational capital resources. Physical capital resources include the technology used in an organization, the facilities and equipment it has, its geographical location and access to raw materials; human capital resources include the training, experience, intelligence, relationships, and individual views of an organization's workers. Organizational capital resources include the organization's formal structure, its planning, control and coordination systems, as well as the informal relationships existing between the different groups of the organization and between the organization and its environment (Barney 1991). Not all physical, human, and organizational capital resources are strategically relevant.

Organizational capacities can be understood as a set of combined resources and/or skills that are developed with the help of routines but can also contribute to the creation of these routines (Andreu 1993).

The core competencies (also called core capabilities) are capabilities that strategically differentiate the organization. A core competency (that is, a capability that has a potential strategic impact) has some characteristics of its own: it is valuable, rare, imperfectly imitable, and has no strategically equivalent substitutes (Barney 1991; Bowman & Ambrosini 2000).

A resource or core capability is said to be path-dependent (or acquisition-dependent) if the process through which the organization acquired it involved a significant degree of learning, implying changes in organizational knowledge, structure or culture (Andreu 1993). Core capabilities typically exhibit a higher degree of path-dependency than resources.

The degree of specificity of a resource or capability refers to inefficiency or ineffectiveness (of resource or capacity) when used for purposes other than those for which it was originally developed (Andreu 1993). The more specific the purpose of a component is, when it is utilised for other than originally intended, the more inefficient and ineffective will be the accomplishment of the task. For example, in case of *EDP*, a sales employee asked to install or fix an anomaly in the distribution of energy or energy consumption meter. Similar with path-dependency, core capabilities usually exhibit higher degrees of specificity than resources.

Andreu (1993) defended that when confronted with certain conditions in its competitive environment, the organization can identify gaps in its core competencies by initiating efforts to create new organizational routines or to acquire new learning skills. At a given point in time, the organization is characterized by the interrelated set of resources, capabilities, and organizational routines that it has at its disposal. Any of these components can have a potential strategic impact, both in their competitive context and in the mission of the organization.

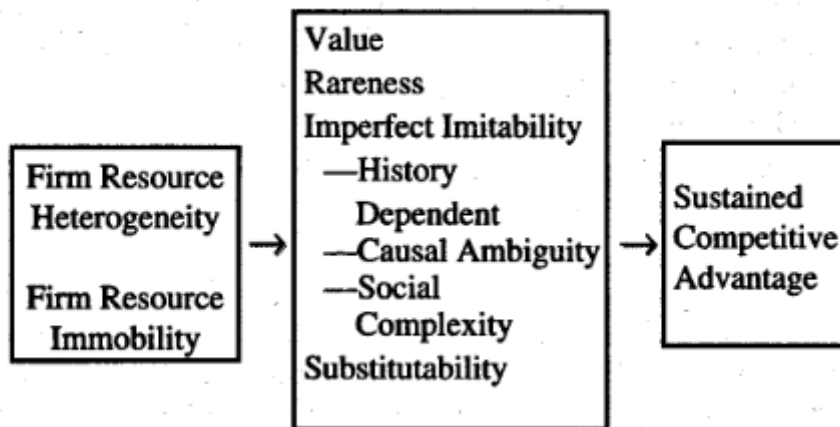


Figure 9. Resource-based view of sustained competitive advantage (Barney 1991: 112)

The RBV model can be summarized in figure 9. It shows the relations between the assumptions of heterogeneity and the immobility of resources and the attributes that the resources will have to possess to enable them to acquire a sustained competitive advantage (value, rarity, imperfect imitability and substitution). It is said that an organization has a sustained competitive advantage when it implements a value creation strategy that is not simultaneously implemented by any of its current or potential competitors and when they are unable to replicate the benefits of that strategy (Barney 1991).

The underlying premise of the resource-based view of competitive advantage is that organizations' resources are heterogeneous and immobile. When strategic resources are evenly distributed across several organizations and are mobile or easy to acquire, it is not generally expected that sustained competitive advantages can be obtained from the use thereof.

However, not all resources have the potential to contribute to sustained competitive advantage. Andreu (1993) Barney (1991) agree that in order to have this potential strategic impact, a resource must have four attributes:

- a) Be valuable – to exploit opportunities and/or neutralize external threats;
- b) Be rare among current and potential competitors;
- c) Be imperfectly imitable;
- d) Cannot have valuable strategic substitutes that are not rare or imitable.

If a given valuable resource is owned by multiple organizations, each one of them will have the ability to exploit the resource in the same way, thus implementing a common strategy that will not have any competitive advantage. Nonetheless, non-valuable and non-rare resources are important, especially in industries that are characterized by competitive parity conditions. Competitive parity conditions are situations in which none of the organizations competing in an industry obtains a competitive advantage (Barney, 1991).

Valuable and rare resources can only be sources of sustained competitive advantage if organizations that do not have them cannot obtain them. Organizational resources can be "imperfectly imitable" if at least one of three conditions are met:

- a) The organization's ability to obtain this resource depends on historical conditions;
- b) The link between an organization's resources and competitive advantage sustained is triggered by causal ambiguity;
- c) The resource that gives competitive advantage is socially complex.

The last requirement for an organizational resource to be a source of sustained competitive advantage is that there are no equivalent (substitute) valuable resources that are themselves non-rare or imitable. Two valuable resources are strategically equivalent when both can be exploited separately to implement the same strategy. Although it is not possible for one organization to imitate the resources of another exactly, it may be able to find a similar resource (substitute) that allows to conceive and implement the strategy of the organization that has acquired a competitive advantage.

To sum up, having as irrefutable the chaos that currently affects the competitive environment that involves all organizations, the only way to survive will be to deal with change (reacting to change, anticipating it or even leading it). Organizations that are able to launch new products or change - in any way - the structure of the industry where they compete (ultimately leading the change) will be stronger; if they can only react to change (or anticipate it), organizations will have less chances of competitive success. Strategic positioning as defended by Porter (2011) attempts to achieve sustainable competitive advantage by keeping core unique capabilities (valuable) and by performing different activities than competitors or by performing similar activities in different ways.

3.1.3 Business Model

In any company strategy, there is a core base, business models. Osterwalder A. and Pigneur Y. (2010) argued the business model represents the way an organization creates, delivers, and captures value, that is, it defines how a company strategy delivers value to customers. The process of designing the business model is part of the definition of the strategy and aims essentially to obtain more profits. Over the years business models have become increasingly sophisticated because it should keep abreast of technological advances, increased competition and increasing consumer demand.

Business managers should try to detect which business models are likely to become important for the development of the industry and should also focus on alliance management skills, namely to participate in the creation of new networks and coalitions to ensure the capture of value (Sabatier et al, 2012).

Osterwalder A. and Pigneur Y. (2010) mentioned that there are several types of business models, for example, *bricks-and-clicks* or *bait & hook*.

Bricks-and-clicks is a business model in which the company complements an offline presence (bricks) with an online channel (clicks). For example, when in a chain of stores the user can order the products online, but the order can be collected at a local store.

On the other hand, the model of *bait & hook* is one of the best-known business model, it is to offer a base product at a low cost, where the organization may incur losses (the "bait") and obtain the revenues from the business with associated products or services (the "hook").

As there are several different business conceptualizations, Osterwalder and Pigneur (2010) propose an approach to companies to design the business model - the Business Model Canvas. When it is discussed business models, it is important to ensure that all involved use a common language, which simultaneously facilitates understanding and is not simplistic. The Canvas is a tool that seeks to address these points (Figure 10).



Figure 10. Business Model Canvas (Osterwalder A. and Pigneur Y., 2010).

This model is presented through a canvas, which is presented in two parts: the left side (efficiency block) and the right side (block of values) - that is the model parallels the human brain. This conceptualization covers the four main areas of a business: Customers, Offer (product or services), Infrastructure and Finance, and is presented through 9 blocks that seek to demonstrate the business logic inherent in an organization.

When divided into blocks, the Business Model Canvas presents the fundamental elements that make up a business model, with the great objective of extracting value propositions that maximize the results of the project. This model is a very effective tool because from the value proposition describes, on the one hand, the customer segments, the distribution channels, the relationship with the customers, the revenue stream, and secondly, the key resources, the key activities, the key partnerships and the cost structure.

When it comes to referring value propositions, the value proposition can be quantitative (for instance, price, speed of delivery) or qualitative (for example, design). These are elements that contribute to the creation of customer value, such as performance, customization, price, risk reduction and accessibility, among others.

Key activity can go through the production of certain products, solve problems or even work on a platform/network. Key resources can be physical, intellectual, human, or financial. Key partners can come across four types of partnerships, such as strategic alliances with competitors, strategic alliances with non-competitors, joint ventures, and customer relationships.

Ways to generate revenue streams include the sale of goods, end-use, loan, licensing and advertising. There are various types of customer segments like mass market, niche market, segmented and diversified. The distribution channels go through five distinct phases: knowledge, evaluation, purchase, delivery and after-sales, respectively.

Thus, the cost structure has as main classes the cost driven and the value driven having the characteristics fixed costs, variables, economies of scale and scope.

Therefore, the Business Model Canvas can consist of a single framework that reveals itself as a strategic tool that contributes significantly and rapidly to the construction of new products, services or even business models (Osterwalder & Pigneur 2010).

The study in question will focus on two key areas of the value proposition canvas that will be discussed later. This canvas will be used, because this study focus on the key areas that were more affected by the market liberalization, such as, value proposition and customer segments.

3.1.3.1 Market segmentation and variables

There is a common definition between different authors when talking about market segmentation. For example, Kotler and Armstrong (2016: 75) explain market segmentation as “dividing a market into distinct groups of buyers who have different needs, characteristics, or behaviours, and who might require separate products or marketing programs”. Kotler and Armstrong (2016: 75) also mention that every market has segments and that is of extreme importance for companies to understand the needs of each individual market segment. For instance, Johnson et al. (2008: 77) describe market segment as “a group of customers who have similar needs that are different from customer needs in other parts of the market.”

Customers’ needs may differ for different reasons or factors. (Johnson et al. 2008.) In the Figure 11, it is possible to see some of the factors mentioned by Johnson et al. (2008: 77).

These authors also indicated some reasons for market segmentation at organizational markets level. However, in this paper the focus is on consumer markets.

Type of Factor	Consumer markets
Characteristics of people	Age, sex, race
	Income
	Family size
	Life-cycle stage
	Location
	Lifestyle
Purchase/use situation	Size of purchase
	Brand loyalty
	Purpose of use
	Purchasing behaviour
	Importance of purchase
	Choice criteria
Users' needs and preferences for product characteristics	Product similarity
	Price preference
	Brand preferences
	Desired features
	Quality

Figure 11. Adapted from “Some bases of market segmentation” (Johnson et al. 2008: 77.).

Johnson et al. (2008:77) explain that in theory “any of these factors could be used to identify market segments”, yet, in practice these authors mention that it is vital to “consider which bases of segmentation are the most important ones in any market” (2008: 77). On the other hand, Kotler and Armstrong (2016: 75) explain that variables of market segments may vary based on geographic, demographic, psychographic, and behavioural factors.

Demographic Factors

Kotler and Armstrong (2016: 224) argue that demographic factors are the most important variables for any company when segmenting customer groups. These authors defend their argument by mentioning two reasons, first is that “consumer’s needs, wants, and usage rates often vary closely with demographic variables” and second reason is that “demographic variables are easier to measure than most other types of variables” (2016: 224). These demographic variables consist of dividing the market into groups based on

such as age, gender family size, income, occupation, education, religion, ethnicity and generation. (Kotler & Armstrong, 2016: 224.)

Geographic Factors

Kotler and Armstrong (2016: 223) outline that a company can choose in how many geographical areas it wants to operate, but it must take into consideration the different needs and wants of each geographical location. Geographic segmentation is made according geographic criteria's – nations, states, regions, countries, cities, and languages, among others. (Kotler & Armstrong, 2016: 223-224.)

Psychographic Factors

The concept of psychographic segmentation can be defined as “dividing a market into different segments based on social class, lifestyle, or personality characteristics” (Kotler & Armstrong, 2016: 226). Individuals in the same demographic segment can have varied psychographic characteristics. (2016: 226.)

Behavioural Factors

Kotler and Armstrong (2016: 228) explain that segments can be divided as well as based on consumer knowledge, attitudes, uses, or responses to a product, which they define it as behavioural segmentation.

3.1.3.2 Value Proposition Canvas

The Value Proposition Canvas is a strategy development tool that explores more deeply two of the different core blocks of the Business Model Canvas, which are customer segments and value proposition. (Osterwalder & Pigneur 2010; 2014.)

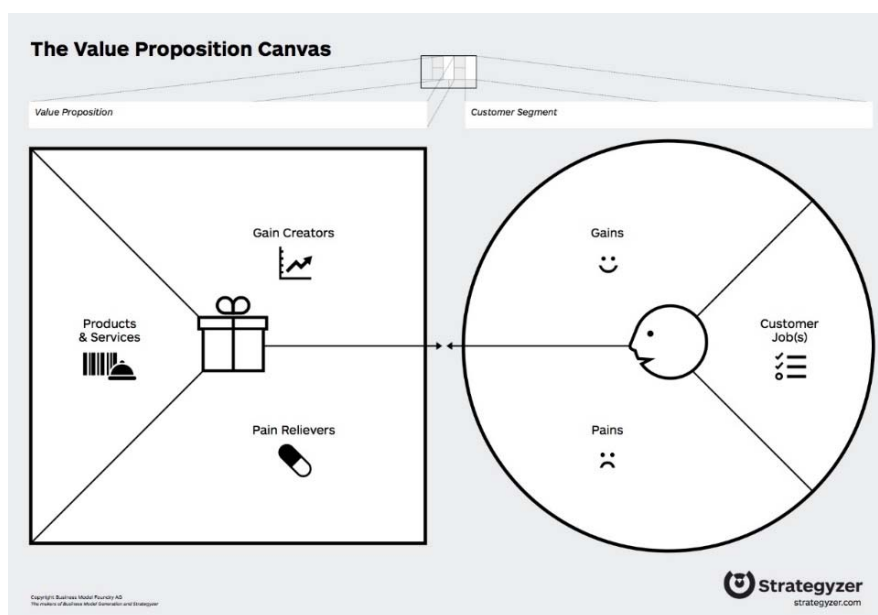


Figure 12. Value Proposition Canvas (Osterwalder and Pigneur, 2010; 2014).

Value Proposition Canvas (Figure 12) helps a company to understand the client’s world and how the product or service answers to the needs of the niche. This tool helps to confirm whether the ideal solution is delivered to the customers in order to solve the problem that they are experiencing. Osterwalder and Pigneur (2010; 2014) also define this canvas as a “strategic management tool to design, test, build, and manage products and services and that fully integrates with the Business Model Canvas”.

3.1.3.2.1 Customer Segment block

On the customer segment block from the Value Proposition Canvas, Osterwalder and Pigneur (2014) describes it as customer segment profile or where it is possible to observe everything about customers’ characteristics that are present in the market. This block is separated into three sub-divisions, which are:

- Customer jobs – jobs or important tasks that the customers are trying to perform or complete in their work or their life, or even needs that they are trying to satisfy. Osterwalder and Pigneur (2014) admit that jobs can have a functional, social or emotional intent. Some jobs might be crucial or might be insignificant to the customer;
- Pains – outlines the negative aspects that the customers hate or would like to avoid, before or during the task that they are trying to accomplish, this could be

undesired costs, negative emotions, obstacles or risks. Osterwalder and Pigneur (2014) mention in their work that some customer pain might be severe or light;

- Gains – this sub-division describes the positive outcomes and benefits which the customer would like to have, expect, desire or would be surprised by. This gains could be as functional utilities, social gains, positive emotions or cost savings. Gains vary, for example, some outcomes or benefits might be more relevant to some customers than others.

3.1.3.2.2 Value Proposition block

Value proposition is a business or marketing statement that summarizes why a consumer should buy a product, use a service or features if web related. This statement should convince a potential consumer that one particular product or service will add more value or better solve a problem than other similar offerings. Osterwalder and Pigneur (2014) describe this value proposition map as where it is designed to address or answer the customer most important jobs, pains and gains. This map, like customer segment, it is composed by three sub-divisions:

- Products & services – Osterwalder and Pigneur (2014) explain this sub-division as bundle of products or services that value proposition is built around. Same way than in customer segments, this subdivision tends to answer to functional, social or emotional jobs that describe the customer jobs. The authors also emphasize that these products and services are not able to create value by themselves, only in association with the customer segment, or in other words, products or services only create value if they answer the needs of the customer.
- Pain relievers – Osterwalder and Pigneur (2014) describe these pain relievers as a way that the company intends to alleviate customer pains with their products or services. These pain relievers can be aimed to reduce or eliminate the pain of the customer before, during, or after he/she has their task completed.
- Gain creators – Describes the positive outcomes or benefits the products or services create for customers.

3.1.3.3 Relation between Customer Segments and Value Proposition

Value proposition block tends to answer to the customer segments' sub-divisions described above. When a company has answered to the sub-divisions of customer segments, company has achieved a fit. Osterwalder and Pigneur (2014) describe fit as a link between what customer needs and what company offers. However, in practice, authors admit that the fit is hard to find and maintain. This link exists when the company addresses or answers to the important jobs, eases pain and creates gains that customers are interested in. Customers can have different pains and gains desired, however company must focus on the most important ones, since it is impossible to answer them all.

Osterwalder and Pigneur (2014) defend that fit occurs in three stages, first stage is called problem-solution fit, second stage is called product-market fit and finally third stage is called business model fit. These authors define problem-solution fit when a company as identified on paper relevant customer jobs, pains and gains and believes that can answer them with their value proposition map. (Osterwalder & Pigneur, 2014: 48-60.) Product-market fit is explained as when customers positively react to company' value proposition and gets traction in the market. (Osterwalder & Pigneur, 2014: 48-60.) Finally, the third stage business model fit is when the company' value proposition is scalable and profitable. (Osterwalder & Pigneur, 2014: 48-60.)

3.1.4 Business Model Innovation

Authors like Osterwalder and Pigneur (2010) affirm the importance of Business Model innovation, although they emphasize that this should hardly be considered as recent, since when the founders of the Diners Club introduced the credit card in 1950, they were practice at the level of the business model. The same was true for Xerox when it introduced photocopier leasing and pay per copy in 1959 (2010: 1-15). The innovation of the business model results in the creation of value for companies, consumers and society from new forms and business logic. In practice, it is about replacing outdated models. For example, Skype has brought cost-effective calling rates and free calls between devices equipped with Skype through an innovative business model. Nowadays, it is considered the world's largest operator of international voice traffic (2010: 1-15).

Finally, for Chesbrough (2003), Business Model Innovation is an important and up till now very difficult factor due to the conflict and tension between the established business

model for the existing technology and the one that will need to be adopted for conveniently explore the emerging technology (disruptive). Companies must adopt an effective attitude towards the experimentation of the business model. Some modelling experiments will fail, but this will allow the company to understand new approaches, within acceptable limits of loss. With discovery-oriented planning, companies can model uncertainties and obtain new data and financial projections in their experiences. Organizations should identify the internal leaders to change the business model to oversee the results of these processes and provide a better new business model for the company. The culture of the organization must find ways to embrace the new model while maintaining the effectiveness of the current business model until the new one is ready to take over completely. Only by doing this help companies can escape the "trap" of their previous business models and relaunch growth and profits. Also for Frenz and Lambert (2012), business model innovation shows combinations of changes in business management and strategy, including new sales and new distribution methods, which can be considered as non-technological innovation.

3.1.4.1 Value Innovation

As mentioned previously, an innovation is imperative for organizations that seek to achieve and maintain market positioning, however, competition challenges arise and consumers demand from companies a new meaning for innovation (Hübler & Pereira 2005).

As for Andres et al. (2008), whenever one speaks of innovation, the idea comes to mind that it is intrinsically linked to technology, but it is not. The innovation may be linked to the strategic movements, called by Kim and Mauborgne of value innovation, which add great leaps in value, both for the organization and for the customers, which makes the consumers have another perception of the products, services and deliveries offered. Value innovation seeks another direction for innovation, it places the same emphasis on innovation and value at the same time, since both have the same importance. High growth organizations pay little attention to reaching or overcoming their competitors; they seek to make competition irrelevant through the strategic logic of Value Innovation (Kim & Mauborgne 1997).

For many, when talking about innovation, the idea of innovation is directly associated with being something that involves technology. The sense of value innovation is much broader.

Value innovation gives equal emphasis to value and innovation. Value without innovation tends to focus on the creation of value on an experimental scale, something that increases value but is not enough to stand out in the market. Valueless innovation tends to be driven by technology, fostering pioneering or futurisms that may lie beyond what buyers are willing to accept and buy (Kim & Mauborgne 2005: 13). Value innovation is a new way of thinking about the execution of the strategy, which results in the creation of a new market space and a break with competition (Kim & Mauborgne 2005: 13). It is very common for organizations to opt for strategies that end up giving value to their clients; they choose to gain leadership through differentiation or low cost. For Kim and Maugborne (2005), to create blue oceans, namely, to create new markets and create non-competitive environments, it is necessary to pursue differentiation and low cost at the same time.

The implementation of this strategy can be seen in those organizations that are market leaders and are far from their competitors, making them find it difficult to copy their business models. Most of the time, these rivals end up just copying some of their value attributes. To be able to implement the blue ocean strategy, it is necessary to use some analytical tools and models to monitor and make the appropriate decisions to implement value innovation, such as strategy canvas, the Eliminate-Reduce-Raise-Create Grid, and the Four Actions Framework.

In this context, some organizations thrive by leveraging opportunities, while others see their profit margins dwindling despite the efforts to keep up with current competition practices. Some companies go into irreversible decline, while others grow exponentially generating wealth and prosperity for society.

3.1.4.1.1 Value Curve & Blue Ocean Strategy

Value curve, also called a strategic profile (Rabetino 2013.), is a basic component of the strategy canvas, and can be illustrated through graphic (Figure 13) that captures a company's relative performance across the key competitive factors of an industry including price. (Rabetino 2013: 46; Kim & Mauborgne 1997; 2005: 25-27.)

The Value Curve is a powerful tool in the creation of new market spaces (Kim & Mauborgne 1999). As a tool, the Value Curve allows managers to visualize the differences of the attributes proposed by the market and the characteristics coming from the value evaluation matrix. At this point it is possible to perceive those characteristics that are important to the most important customer of the value chain (Aiman-Smith et al. 2005).

It is worth emphasizing here that another interesting exercise to be done to search for value innovation would be the exercise of visualizing the organization's current strategy, which would highlight the characteristics of value that the organization uses contrasted with the attributes of the competition and those that can be created by the organization. This exercise challenges the middle and upper management of organizations to create a great breakthrough in value for their business. The great contribution of use of the tools mentioned earlier, lies in the fact that they end up explaining how organizations can reach the blue ocean scenario through the evaluation of these attributes. But for this to happen, it is necessary for the organization to have a culture organizational structure based on Knowledge Management, since the implementation of value innovation is not an easy task. In a study carried out by Carvalho et al. (2009), it was possible to verify that the organization object of the case study, found difficulty in eliminating attributes regularly offered by the market and creating attributes not yet offered by the market in which it was inserted.

Such scenario forces the professionals involved in this mission to generate innovation of value, enter with the mind of a beginner, and forget everything they know about the rules, practices, and traditions in the industry and use such tools (Kim & Mauborgne 1997).

The use of these tools allows a great intellectual and creative exercise, allowing its users to think differently and to question old and consecrated ways to idealize and execute the strategies linked to the business.

A unique and exceptional value curve has focus, divergence as well as a compelling tagline. (Kim & Mauborgne 2005: 37.) Kim and Mauborgne (2005: 37-38) consider that a company has focus if its efforts are not across all the key competitive factors of competition; company has divergence if looking across alternatives and not benchmarking competitors (2005: 37.); and finally, a company has compelling tagline if

its strategic profile is clear. (2005:37.) Without these qualities, a company's strategy will likely be muddled, undifferentiated, and hard to communicate with a high cost structure (Kim & Mauborgne 2005: 37).

Strategy canvas (Figure 13) is a diagnostic and an action framework for building a compelling blue ocean strategy (Kim & Mauborgne 2005: 27).

Blue ocean strategy is when a company creates uncontested market space, making the competition irrelevant by creating and capturing new demand. (Kim & Mauborgne 2005.) Different authors mention two different ways to create a blue ocean strategy. One way is to revalue the key competing factors on the curve, for example decide to invest on production to achieve lower prices in comparison with competitors. Other way is by adding a new key competing factor in the value curve, something that the competitors do not have or offer to the consumer. (Kim & Mauborgne 2005.)

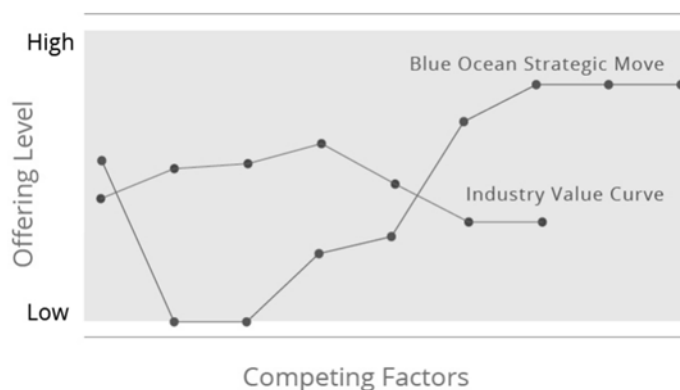


Figure 13. Strategy Canvas (Kim & Mauborgne 2016).

Strategy canvas is organized into two axes. Horizontal axis (Competing Factors) which capture the factors where the industry competes and is investing, in addition with what are the competitors investing. (Kim & Mauborgne 2005: 25.) Vertical axis shows the offering level that buyers receive across all these key competing factors, ranges from low to high (Kim & Mauborgne 2005: 27).

Kim and Mauborgne (2005: 83) claim that drawing strategy canvas is not always easy. Additionally, defining what are the key competing features or elements that define the product or service is difficult. (2005: 83.) Another struggle mentioned by Kim and Mauborgne is that assessing to what level the company and its competitors offer the various competitive factors is difficult and the reason for this is that managers normally

recognize only few competing factors level of the competitors depending what are their responsibilities (Kim & Mauborgne 2005: 83).

3.2 Role of customers' perceptions

Robbins (2009, 104-130) defines perception as the process by which an individual selects, organizes, and interprets information to give meaning to the world. The way an individual perceives things around himself is very variable according to his past experiences, beliefs, attitudes, values and personalities. As he gains greater knowledge and experience, his internal cognitive structure as acquires greater knowledge and experience, his internal cognitive structure is also changing. Perception will also vary according to the needs of individuals.

A family still on regulated market of the electricity sector may be more attentive and notice more intensively the commercials of energy providers on liberalized market until their need has been satisfied. A buyer who is in the information gathering phase in the buying process will notice the commercials more of the types of products or services that they are interested in buying.

Knowing how consumers perceive the products of companies has been the subject of concern of many marketing managers (Kotler et al. 2009). Knowing the characteristics of the segment and main values and attitudes prevailing in the chosen segment, it is possible to adapt promotional strategies in a way that reaches the target consumers and that the product is properly perceived.

From the customer's point of view, the consequences of the consumption of an offer are not limited to the performance of the practice itself, expanding to other domains of life, revealing a larger and more significant nature of the value generated, namely at the level of performance of other roles and other dimensions such as physical and mental balance and savings. These consequences reveal functional and emotional aspects. Finally, in their determination of value, clients reveal significant personal and emotional life goals in terms of the well-being, satisfaction, recognition, and emotions that underlie the feelings and emotional assessments attributed to the offer and their preference in competition.

3.3 Framework of the study

As a framework for this study a figure based on literature is presented below. Figure 14 compares *EDP*'s structure working in a monopolistic market and *EDP*'s structure in liberalized market.

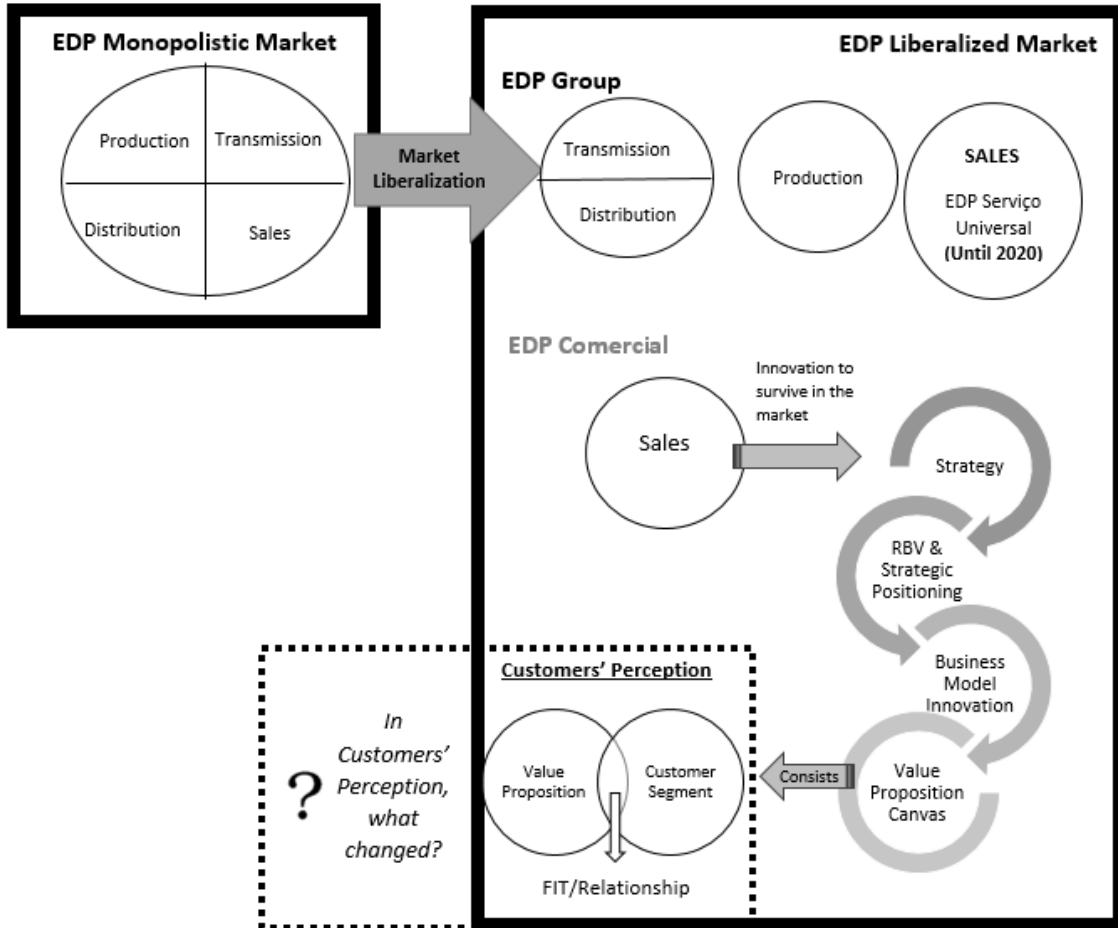


Figure 14. Framework of study.

As it can be seen, after the market liberalization *EDP* separated into two business units, which are called as *EDP Group* and *EDP Comercial*. *EDP* in monopolistic market had sales department, where sales were generalised, not having preoccupation with customers' needs and it was seen as an equal department compared with production, transmission and distribution. However, after the start of the process of liberalization of the market, some major changes occurred. On the right side of the framework, *EDP* in liberalized market is shown. To establish fairness on the market, *EDP* was forced to change its organizational structure by ERSE as mentioned before in chapter 2. Therefore, sales on the liberalized market were separated from *EDP Group*'s departments into its

own legal business unit, which is represented as *EDP Comercial (EDP SC)*, leaving the *EDP Group* with departments of production, transmission and distribution as another entity. However, it is still possible to stay on regulated market electricity supplier until 2020, it was legalized the existence of *EDP Serviço Universal* for clients that still have not chosen their supplier on the liberalized market.

In the scope of the liberalization of the Portuguese Electricity sector and its regulations, *EDP Comercial* was created. With this changes on the structure of the company and market, there must be inevitably a space for innovation starting with its strategy and sequential areas that are supporting and interlinked, such as, strategic repositioning, with resource-based view, business model innovation and consequently value proposition innovation. The new value proposition canvas information was analysed in terms of what changed in customers' perception.

The objective of this research is to analyse in customer perception the value proposition canvas in use by *EDP Comercial* with the purpose of attracting customers in a liberalized market and from the regulated market, which is shown in the picture by value proposition and customer segment. The intersection of value proposition and customer segment result in an optimal fit for *EDP Comercial* case.

4 Methodology

4.1 Research design

Being the goal of this thesis to understand the changes that occurred on the value proposition canvas of an ex-monopolistic company due to market liberalization, it is possible to assume that the most suitable way to identify these changes is by using descripto-explanatory studies. Descriptive research is defined as a study design that enables an “accurate profile of persons, events or situations” (Robson 2002: 59). Descriptive research can be an extension of exploratory research, or as in this study, an extension of explanatory research. When doing this sort of research, it is important to have a clear picture of the phenomena and the environment before the collection of the data. In this study, the clear picture of the phenomena and the environment is described in the chapter 2. Additionally, when this research has the goal of explaining changes occurred on the strategic repositioning of the company by using description, in this case changes at value proposition, it is known as descripto-explanatory studies. (Saunders et al. 2009: 140.)

4.2 Research strategy & Data collection

In this thesis, a single case study was implemented, because there is no available comparison in Portugal for this unique kind of case. Case study can be defined as “a strategy for doing research which involves an empirical investigation of a particular contemporary phenomenon within its real-life context using multiple sources of evidence” (Robson 2002: 178). Single case study may be allowed in this topic because of its uniqueness and the lack of research on the topic as mentioned before. Saunders et al. (2009: 146) emphasized the importance of explaining the actual case when using single case study (Chapter 2).

Even though, this study has in analyze a single company, it is important to emphasize that the data collection technique used for this research was qualitative semi-structured interviews to customers and secondary data available online through journals, articles and company webpage in the direction of obtaining the information that answers the research question of this thesis. Qualitative can be defined “predominantly as a synonym for any data collection technique (such as an interview) or data analysis procedure (such as categorizing data) that generates or use non-numerical data” (Saunders et al. 2009: 151).

Semi-structured interviews are a data collection technique that follow a theme, in this case, changes on value proposition canvas, and uses questions that may vary from interview to interview, these questions can vary in order or existence depending on the flow of the conversation. (Saunders et al. 2009: 320.)

With sudden unavailability of *EDP Comercial*, the new target group of these semi-structured interviews are families that are clients of the company in case, research question was adapted into families' perception of changes in the strategy and value proposition of *EDP Comercial*. Subsequently, the data gathered during these semi-structured interviews are expected to reveal “what” changes have these clients felt or noticed related to the value proposition canvas and “how” does it affect, but perhaps with the addition information of “why” did it change, linking it with the chapter 3.

Families chosen were selected by experience in liberalized market, interest on seeking information of potential suppliers for energy providers and availability to participate by long-distance interviews. Interviewees 1 - 3, 5, 6 and 8 were in liberalized market at time of interview, interviewee 7 had two houses one was in liberalized market, other still on regulated market. Interviewee 4 was on regulated market at the time of interview.

4.3 Data Analysis

In this research, a deductive approach was utilized, which means existing theory was used to shape the approach to the research process and to aspects of data analysis. (Saunders 2009: 489)

As mentioned in previous topic, the primary data was collected by semi-structured interviews. The interviews were recorded and initial notes were taken to provide a constant analysis during the process of data analysis and afterwards shortly transcript.

The data collected was analyzed with categorization techniques, to support interpretation of the data, these categories were developed from the literature review, being then considered deriving categories. Saunders (2009: 492) defines deriving categories as categories that are derived from theoretical framework. Whilst going through the data, simple coding was used, meaning making notes to proceed with the categorization.

These semi-structured interviews had five questions with some having sub-questions that can be seen at Appendix 8.6. Each question was linked to different but connected themes

of the literature review of thesis and categorized as such. The categories and sub-categories are:

- **Energy Solution** – This theme has as purpose to help to understand what is an Energy solution in customer perception, what do these customers search from suppliers or basic needs to be satisfied;
- **Customer Jobs & differences within EDP** – Intention to identify jobs and important needs that customers are trying to satisfy;
- **Market alternatives** – To understand what are the customer perceptions of supplier alternatives;
 - *Customer Pains* – A sub-theme of market alternatives, customer pains is one of the sub-divisions of customer block from value proposition canvas defended by Osterwalder and Pigneur (2014), this question aims to facilitate the understanding of problems of *EDP Comercial* and within the market;
 - *Pain relievers* – Parallel to previous sub-theme, pain relivers is a sub-division of value proposition block. In this question answers, it is expected to provide information of solutions already provided by *EDP Comercial* if it is the case and solutions to some market general problems in customers' eyes.
- **Gain creators & Customer Gain** – This question was planned to understand the reasons of *EDP Comercial'* success after the results of the study of the Portuguese Electricity Sector and its value chain;
 - *EDP distinctiveness?* – Connected with blue ocean and resource-based view of the firm literature and earlier question, this question was meant to understand what makes *EDP Comercial* unique and successful.
- **Customer relationship and feedback** – How much does *EDP Comercial* values customer relationship and its feedback.

After analysis of interviewees' answers, it was possible to combine the keywords related to each one of the value proposition canvas blocks and sub-blocks. This combination of keywords allowed the design of the new value proposition of *EDP Comercial* in customer perception. In addition to the value proposition canvas it was possible to create a Value Curve to understand value proposition in a graphic matter with comparison with two main competitors and *EDP Serviço Universal* that is still on regulated market. In addition to previous literature themes, and to link with the research question of this thesis, the main concern of companies presented on the liberalized electricity sector is that it is imperative to answer to the new demands of competitiveness, with essential requirements such as quality, flexibility, diversification and innovation, for that reason it was compared *EDP Serviço Universal* and *EDP Comercial*.

Secondary data available online through journals, articles and company webpage was used to support and confirm the findings of the primary data, as well as, providing additional information for the categories.

4.4 Reliability and validity

In methodical literature, the reliability of the research methods is usually dealt with in the concepts of validity and reliability and, on this basis, the evaluation of the reliability of the thesis is started by first examining these two concepts.

Validity means evaluating whether the study has ultimately investigated what has been promised. Reliability is used to evaluate the repeatability of the research results. (Saunders et al. 2009: 156-157; Golafshani 2003)

The validity of the thesis can be considered good because the thesis corresponds to the problem of research defined at the beginning of the thesis. The reliability of the thesis is supported by the unambiguous, step-by-step explanation of the thesis analysis process and the theoretical framework. To increase the internal validity (Zohrabi 2013: 258), after the analysis of the interviews the results were returned to the participants, member checks. This increases the internal validity, since the participants could confirm that the investigator's interpretations actually reflect their experiences, ideas and feelings. In this way, the plausibility and truthfulness of the information can be recognized and supported (Zohrabi 2013: 258).

Over time, validity will become weaker when the webpages for which the material was acquired are likely to change or disappear, and the placement of the search material through the search engine will change among the search result results. (Riege 2003: 81)

Although qualitative research has an associated dose of subjectivity, the researcher must be able to support their interpretation in the data and share the evidence through description of methodology, analysis and interpretation (Auerbach & Silverstein 2003). The interpretation was then supported by empirical evidence, namely through the presentation of excerpts of text, images and triangulation of data that represent different perspectives of participants and phenomena, thus providing a deeper insight into reality(s). With this performance, it is believed that it is possible to provide the reader and other researchers with evidence to help them understand how the interpretation has been developed and the results achieved and, if wished, can also perform their own interpretation.

The research process has carefully followed the course of the methods through source literature. Research questions have been attempted to express as unequivocally as possible. The accuracy of the study may be reduced by the fact that the processing and analysis of the material was done manually. On the other hand, this can improve the results, as the analytical software may also have adverse effects on the research process. (Riege 2003: 81-82.) The precision of the study and therefore the certainty are also limited by the inexperience and the strictly limited time to complete the thesis.

5 Findings

After analysis of the responses from eight interviewees, it was possible to combine with previous review of the relevant literature.

5.1 Energy Solution

Related to value proposition canvas and sub-divisions of products & services it was pursued what are in the interviewees opinion an energy solution and what do they search from suppliers.

“In general, the concept of solution whatever the situation may be is to find something, a strategy, a tool, set of instruments that allows to solve a problem” (Voluntary participant 3) Linked to the topic voluntary participant 1 answers that *“as an energy solution I want to have my basic goods, I want to have the electricity and gas supply, and whenever I have a problem things will be resolved quickly... For example, if I have an electricity supply problem, I want to have a company that has the ability to solve this problem quickly, in a timely manner. At the invoicing level, all of them work in the same way...”* Voluntary participants 4 and 8 similar to other participants agrees that without this service of economic nature or SIEG it is *“not possible to survive fully”*.

5.2 Customer Jobs & differences within *EDP* at regulated and liberalized market

It is possible to mention that to these interviewees' customer jobs, a sub-division of customer segment block, having energy is a crucial need that companies must satisfy. In addition to this crucial need, it was important for some interviewees the option of having gas and energy from the same supplier, which was not available on regulated market. Additionally, interviewees when asked what were their expectations of *EDP* at liberalized market with *EDP Comercial* answer was common, variety and flexible package options, more contact choices for information or technical support, simpler and more informative and colourful invoice and better customer service (Voluntary participants 1-3 & 5-8).

EDP Comercial' value proposition on the liberalized market when compared to regulated market has the difference that there is 4 different energy packages (*EDP Comercial* 2017a), for example, package of gas and energy is now offered with choices of cost of energy consumption during different times of the day or days packages, as well as, sixteen

different support package (*EDP Comercial* 2017b), for example “*Pacote Funciona*” which is a technical assistance package up to € 600 per year in repairs (travel, labour and 25% of the value of the parts) by paying a minimum monthly fee. (*EDP Comercial* 2017c; & Interviewees 2-4).

Interviewees 2 and 3 consider that *EDP Comercial* gives “*more value to customers, not just a number*” when compared to monopolized market. Interviewees 5-7 defend that prices of *EDP Comercial* are similar, if not the same as competitors’ prices on liberalized market.

5.3 Market alternatives

When evaluating alternative energy suppliers, interviewee 2 believed that “*EDP Comercial creates, others run after*”, in addition interviewee 3 had confidence that *EDP Comercial* is pioneer and practices marketing in a more aggressive manner. Interviewee 3 agrees that there are more alternatives on market, but there is lack of interest and convenience by families to research about them, localization of alternative supplier’s offices, “*easier on big cities...*”, “*...without internet there is no real information on tv where to find offices or what to do*”, “*... EDP has more aggressive webpage, more colourful, more alive...*”.

Interviewee 8 argued that the being national company is a deal breaker and had no interest on searching information about other suppliers, and “*... I have no computer at home or understand anything about it, only know what people say or see in the news...*”

Interviewee 1 defends that alternative suppliers of energy have low technical support and offers are not interesting on long-term. This comment was later confirmed by interview 2 results by client experience “*I was client earlier of Galp and later GoldEnergy, ... got issues and technical support was bad, long time waiting... was a whole weekend without energy... and in the end, they were much more expensive than EDP Comercial, so I went back to EDP Comercial... and I won’t change anymore!*”. Interviewees 5 and 8 mentioned that *EDP Comercial* has slightly lower price when compared to competitors, is a well-known brand, national, safe and trustable and “*lazy to search information about other suppliers*”, confirming then interviewee 3’ opinion.

Though, interviewees 4, 5 and 8 admit that had no information about alternative suppliers on market. Interviewees 4 and 5 mentioned that when contacted by these the commercial sellers were too aggressive so preferred to hang up the call. Interviewee 5 changed to *EDP Comercial* after receiving aggressive calls from alternative suppliers.

Interviewees also argued that *EDP Comercial* has already a structured sales organization, such as offices located in important areas, and lack of offices of competitors. One of interviewees admits that there was lack of offices on the country side, “...you rarely see an office that is not *EDP*, I searched days before I manage to find the one I needed from an alternative supplier, *YLCE*...”.

5.3.1 Customer pains

Continuing with previous sub-chapter, it is possible to connect to one of the sub-divisions of customer block from value proposition canvas defended by Osterwalder and Pigneur (2014), pains. Interviewees mentioned aggressive customer support from alternative suppliers from the liberalized market. On the other hand, interviewee 1,2 and 4 to 7 all agreed that customer support by *EDP* was always friendly and fast problem solving. In exception, from this research, interviewee 3 reported lack of responsibility, transparency about one of their services, *Pacote Funciona*. This voluntary participant argued that technicians were not professional and ended breaking interviewee’ home energy box. *EDP Comercial* refused to take responsibility from further costs and problems. Furthermore, other general problems on Portuguese Energy market were mentioned during research, such as:

- ease of information, based mainly online, aged country and low knowledge in computer usage, where “54% of 25–64 years old still have not completed more than lower secondary education – whereas the EU average is 23%.” (Sievert S., Neubecker N. & Klingholz R. 2017);
- Unobtrusive contracting methods of technical assistance services;
- Lack of clarity in the clauses of the contract, unreadable small letters;
- Transfer of responsibility from one company to another (*EDP Distribuição* and *EDP Comercial*);

- Laws and market rules interpretation by companies (for example, Audio-visual taxation law);
- Expensive – high-price than on regulated market and various non-related to the service costs; (Eurostat 2017)
- Recurring billing issues;
- Service quality and transparency;
- ERSE transparency;
- Gas installation;
- Energy suppliers office location;
- Energy VAT (23%) to energy consumption cost plus 6% to other non-related energy consumption, for example audio-visual contribution.

In addition to the problems mentioned earlier, interviewee 7 spoke about the invoice where there is a graphic missing that regulated market still has and believes it is important to continue to have, “*I think that in EDP Comercial the invoice is very beautiful from a graphic point of view, but it does not give us the view of the development of consumption, of our consumption over the months. And EDP once had a chart showing this.*”. Along with earlier problems interviewees 1 and 5 defended that *EDP Comercial* has lower price by kilowatt consumption when compared to other suppliers on the market. These interviewees argued that a production company *EDP Produção* should not participate on liberalized market through *EDP Comercial*, that there is lack of transparency between these two companies.

5.3.2 Pain relievers

Related to pain relievers of value proposition block and with customer pains previously sub-chapter 5.4. These pain relievers can be aimed to reduce or eliminate the pain of the customer before, during, or after he/she has their task completed. (Osterwalder & Pigneur, 2014) Interviewees were asked what do they think can be a solution to few of the problems mentioned, not just market in general problems but also *EDP Comercial*' side.

Interviewee 1, 3 and 4 defend that information sharing about market could be solved by more door-to-door contact to clarify families misunderstands, explain the advantages of changing to liberalized market, which could mean in extra investments in informative campaigns made by companies. Even though interviewees mention that *EDP Comercial* webpage is clear, simple, informative and colourful, they feel that is necessary more personal contact than just online based.

Solution related to high prices by kilowatt consumption interviewees agreed that there should be transparency of ERSE since prices have been growing since the market open to competition, price of 0.1562 cents per kilowatt in second half of 2007 increased to 0.2298 cents on second half of 2016 for household consumers in Portugal with all taxes and levies included. These average prices are higher when compared to average in European Union-28 of 0.2054 cents. (Eurostat 2017) However, it is important to emphasize that without all taxes and levies consumption price does not differ much between second half of 2007 and second half of 2016, respectively 0.1206 and 0.1211 cents per kilowatt. (Eurostat, 2017) The reason for such a difference between 2007 and 2016 when analysing average prices with all taxes and levies included was the changes in VAT for energy consumption set by Government in 2011, increase from 6% to 23%. (Dinheiro Vivo 2011)

Due to this increase interviewees defend that a price and VAT ceiling set by European Union could solve these issues. Investopedia (2017) explain price ceiling as the maximum price a seller is allowed to charge for a product or service (Investopedia 2017).

Related to service and sales contact quality problem interviewees all agreed that could just be improved by more and better training. Interviewee 7 said that in case of *EDP (Comercial & Serviço Universal)* should listen more the client, “*there is search to keep the client, however, afterwards client is just a number, there is too much passivity on the part of the company*”.

5.4 Gains creators & customer gain

This sub-chapter summons what interviewees see as reasons of success from *EDP Comercial* when compared with alternative suppliers on the liberalized market which can be connected to gain creators and customer gains.

Interviewee 1 defended that some suppliers have more success than others due to contacting the customer quickly, “*less informed families’ resistant to change to other company that is not EDP*”. Additionally, interviewee 3-8 mentioned the aged country and low knowledge in computer usage. Interviewee 4 complement that families know the brand and trust it, “*it is safe to go for the known one when dealing with SIEG and reluctant to change the provider*”. According to interviewee 7 personal observation, other suppliers “*have weak marketing campaigns’ ...aggressive sales personal...*” and “*...lack of general market knowledge.*”. On the other hand, “*EDP is stronger and fast creating packages and marketing them well...*” (Interviewee 7).

Gain creators of *EDP Comercial* in interviewees point of view was “*customer relationship management*” (Interviewee 7), known and national company and historical brand (all interviewees).

As customer gains, it is possible to summarize interviewees answers as search for experienced and stable company, national, high quality and fast customer sales and support.

5.4.1 *EDP* distinctiveness?

Interviewees when asked if there is something that *EDP Comercial* offers that is unique, the answer was trust and national company. Interviewees 6 and 7 mentioned “*energia solar*” package and “*EDP re:dy*” packages, “*base, solar, a/c, carro eléctrico, exterior*”¹⁶ and “*aquecimento*” (*EDP Comercial* 2017b). After analyse of competitors offers, it is possible to defend that there is a blue ocean strategy. (September 2017)

As mentioned earlier, blue ocean strategy is when a company creates uncontested market space, making the competition irrelevant by creating and capturing new demand. (Kim & Mauborgne 2005.) *EDP Comercial* in this case is creating a blue ocean strategy by providing unique packages, which means new competing factors in the value curve or as written by Kim & Mauborgne (2005.) something that the competitors do not have or offer to the consumer, Figure 15.

Additionally, there was interviewees answers that showed and prove the lack of marketing by alternative suppliers, which will be discussed on chapter 5.6.2.

5.5 Customer relationship and feedback

Interviewees considered the relationship individual when selling contracts to liberalized market, however afterwards is general call centre contact with friendly staff.

Interviewees feel that client has low influence *EDP Comercial*' strategies, for example interviewee 7 "...directly from the customer the company does not seem interested..."

According to interviewee 3, *EDP Comercial* should see client as an important factor to the business, "...companies are made by customers...". Nevertheless, interviewee 3 admits and explains that is also her and other families fault, "*customers accept the current situation, accommodative client, passive Portuguese culture style...* [interviewee laughs] ...suggestions or rare questionnaires, who has patience, interest or time on doing them? [interviewee laughs]"

5.6 *EDP Comercial* Value Proposition Canvas

After analysing the information obtained through interviews and online information it was possible to add information to the framework of this study illustrated earlier as Figure 15 in customers' perception.

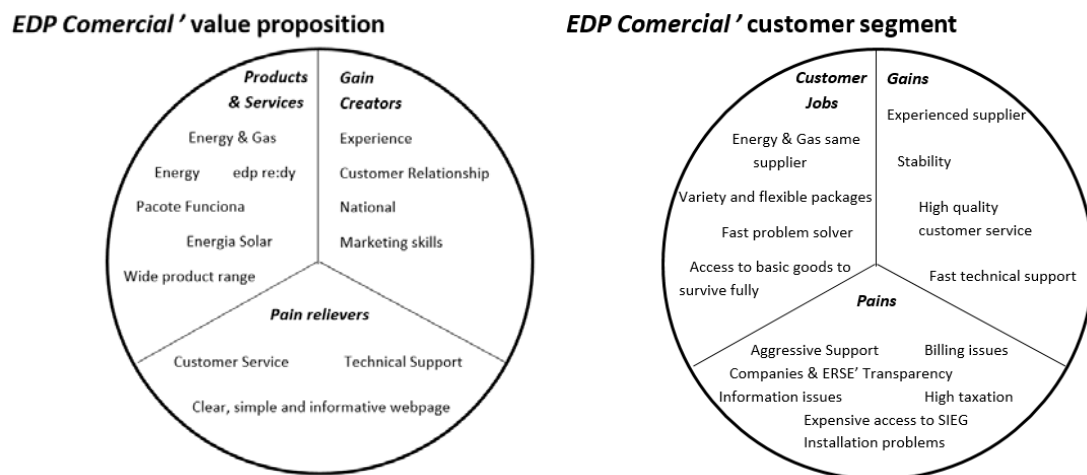


Figure 15. *EDP Comercial*' value proposition canvas, interview results and online information based.

As mentioned on chapter 3.1.3.3, value proposition map tends to answer to the customer segment sub-divisions. As defended by Osterwalder and Pigneur (2014) when a company manages to answer to these sub-division, it achieves a fit. In case of *EDP Comercial* value proposition it was found that it does answers some of the requirements of the customer,

as we can see on Figure 16. The symbol ✓ means that company answers to requirements or needs of customer segment. On the other hand, ✗ symbol represents what company doesn't not answer or satisfy.

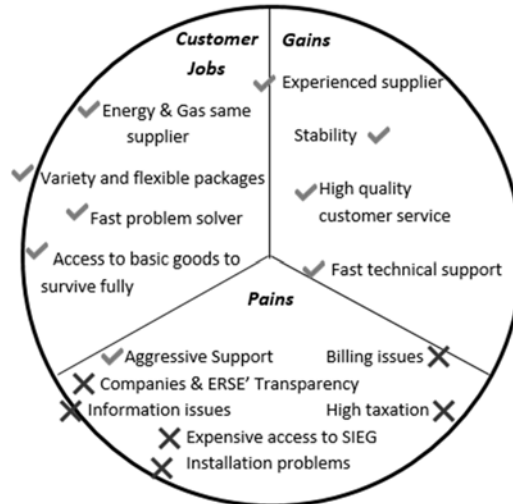


Figure 16. FIT/Relationship results.

In this study, it is possible to confirm two stages of fit, problem-solution fit and product-market fit since the interviewees were customers of *EDP Comercial*. However, it was unfortunately not possible to obtain information from the company in analyse of the third stage business model fit, which is described by Osterwalder and Pigneur (2014: 48-60) as when the company' value proposition is scalable and profitable.

5.6.1 Value Curve

Similar to previous topic, after analysis of interviewees answers and information available on internet (example *Loja Luz*⁷) it was possible to create a value curve in a way to understand value proposition in a graphic matter and comparison with two main competitors and regulated market represented, Figure 17.

GALP Energia is the second most important company in the free electricity market and the first in natural gas. Of Portuguese origin, but currently present in 13 countries.

Endesa is among the three companies with the largest number of customers in the free market in Portugal and is the main supplier for industrial customers.

⁷Loja Luz selectra information webpages <https://lojaluz.com>

EDP Serviço Universal is a supplier of last resort who has kept their strategy as same as when held the monopoly of the commercialization of electricity until the opening of the free market in 2006.

The main factors of competition on the Portuguese electricity market defended by voluntary participants were: energy price, package offers, customer service, marketing, technical support and information sharing. Information sharing and marketing are one of the factors of competing since at time of interviews, interviewees felt and mentioned what was unique in their eyes of *EDP Comercial* offers, however, with deep analyse of the market it proves not to be unique, but just not promoted or acknowledged.

Importance values given by the company in customer eyes were set between 0 to 4, being 0 the less value given and 4 the most importance value to the company. For example, prices even though were quite similar in interviewees opinion there was slightly differences, *EDP Comercial* being the cheapest, *Endesa* after and *GALP Energia* the most expensive, however clients thought it was still considered expensive, so it was not possible to give maximum importance value.

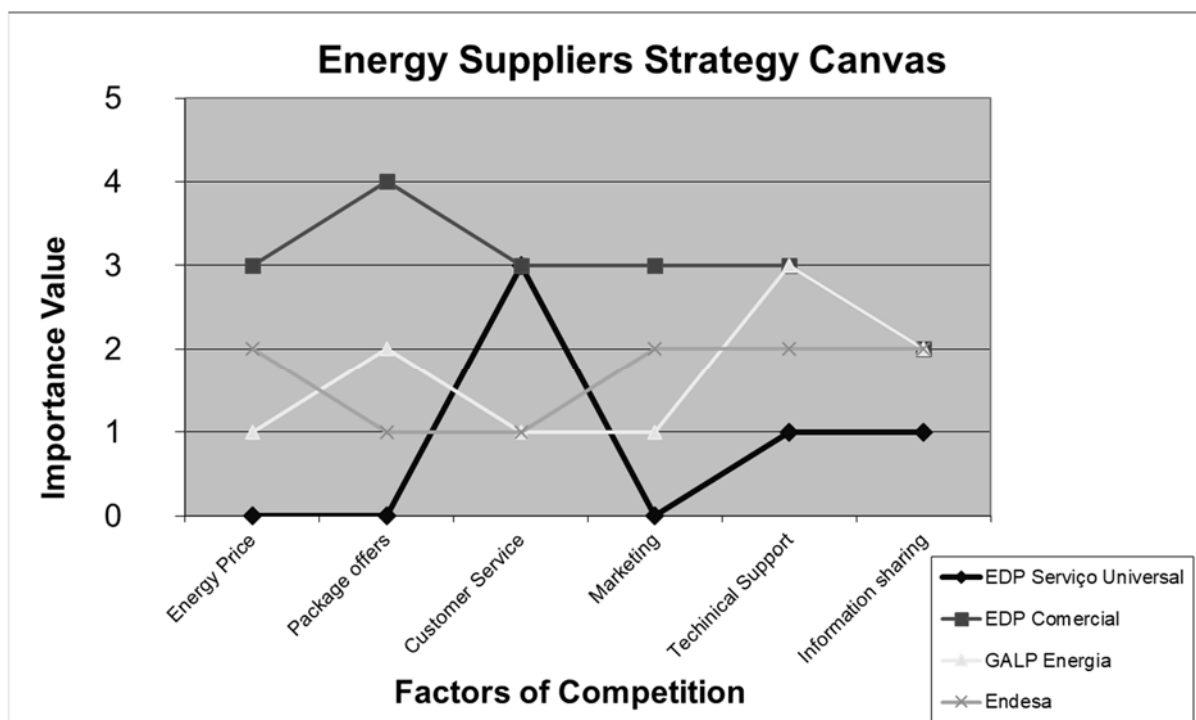


Figure 17. Comparison of *EDP Comercial* value curve with main competitors.

Relating with sub-chapter 5.1.1, *EDP Comercial* is unique on offering *energia solar* packages and *EDP re:dy* packages, as the Figure 15 shows, *EDP Comercial* has higher

range of options of service packages than its main competitors. This can be interpreted as blue ocean strategy of *EDP Comercial*, since it is offering something unique for the customers.

In terms of technical support, there is a similarity between *EDP Comercial* and *GALP Energia*, during interview with voluntary participant 1 it was argued that these two companies share technical support in different segments of the market, *EDP Distribuição* gives technical support to energy related problems and *GALP* to gas related issues.

5.6.2 Comparison of *EDP* and *EDP Comercial*

As mentioned earlier in sub-chapters 2.1.1.1 and 3.1, the main concern of companies presented on the liberalized electricity sector is that it is imperative to answer to the new demands of competitiveness, with essential requirements such as quality, flexibility, diversification and innovation. It was possible to confirm by interviews and online information that previously *EDP* was selling just energy, not optional packages and it was a standard offer. These connects to the research question of this thesis.

Interviewees when asked what were their expectations of *EDP Comercial*, as mentioned earlier, the answers were common as wide product range, flexibility, better customer service and technical support, less power failures and simpler and more informative invoices.

After investigating these interviews and online information available through social media, newspapers and company reports it is possible to confirm that the new requirements of customers, explained on chapter 5 and competition forced *EDP* to innovate its value proposition configuration to be able to survive on this new competitive market. However, an interesting implication that was perhaps a factor to change interviewees considered as having no influence on choosing an Energy supplier, price.

Interviewees considered prices higher than when on regulated market, which are described on sub-chapter 5.4.1 and prices differences between suppliers on the market being minimal.

6 Conclusion & Discussion

The final chapter of the report links the findings with literature and answers to research question of this thesis:

- *In customers' perception, what variations occurred on the value proposition configuration of a monopolist after a market liberalization?*

As well as, practical implications, limitations and suggestions for future research.

6.1 Discussion of Findings & Conclusion

The investment in strategic innovation is a factor that cannot be ignored, being that it is not only product, process and technological innovation that is important for companies. By innovating their business model, *EDP Comercial* could adapt to the market and the demands of consumers.

Although there is no consensus regarding a definition for a business model, several authors agree that a business model relates the organization's various sources of income, the resources used to obtain those revenues, and the relationship between customers, suppliers and other stakeholders in the business. An innovative business model is the reinvention or discovery of a different business model supported by new products, new markets or new ways of doing business.

Strategic innovation takes on the role of being responsible for the emergence of new business ideas and new strategies, as well as the redefinition of existing markets, altering in a certain way the usual nature of the competition. Strategic innovation translates into the creation of new business models that aim to attract new customers through the creation of new products/services or new ways of marketing them.

Considering the chaos that currently affects the competitive environment of *EDP Comercial*, we can agree with Brown and Eisenhardt (1998), which argue that the only way to survive will be to deal with change (reacting to change, anticipating it or even leading it). Organizations that can launch new products or change - in any way - the structure of the industry where they compete (ultimately leading the change) will be stronger; if they can only react to change (or anticipate it), organizations will have less chances of competitive success.

Some interviewees defended the importance of history of the brand, brand heritage, which can be related to what RBV defends. That the ability of an organization to acquire and exploit some resources depends on its spatial and temporal characteristics. Organizations that do not have (and need) resources dependent on time and space, cannot obtain them at other times than indicated - these resources are said to be imperfectly imitable. Regarding the case of *EDP*, the organization obtains valuable and rare resources because of its historical path, and is exploiting them as competitive advantage. An organization with a unique and valuable organizational culture that has emerged in the early years of its history could have a competitive advantage (because of this imperfectly imitable resource) on competitors founded in another historical period, where different values and beliefs dominate. The last reason organizational resources can be imperfectly imitative is that these can be complex social phenomena (Barney, 1991). When sustained competitive advantages are based on such phenomena, the ability of other organizations to imitate such resources is significantly restricted. Organizational resources that can be socially complex include interpersonal relationships among managers, organizational culture or the reputation of an organization between suppliers and customers. During the analyse of interviews it was mentioned the good reputation of *EDP* and the trust in the brand, making it possible to say that company has three competitive advantages in terms of RBV theory, history, experience and reputation.

By analysing online sources, it was possible to prove the use by *EDP Comercial* of these competitive advantages with the slogan of “40 years. Always present. Always future.”, 40 years of experience and history, present from the beginning of Portuguese Electricity sector and environmentally sustainable in long-term. In addition to this, *EDP Comercial* positions and describes itself as global energy company, a leader in value creation, innovation and sustainability.

Related with earlier paragraph is, other important bases of this thesis, customers' perception. It was surprising the lack of interest of some interviewees in analysing the different options in the market. These interviewees did not feel the need to search for other options because of the price being similar between different suppliers and consequently the preference in staying with a supplier that is known, experienced, trusted and national. Which links with the theory defended by Kotler et al. (2009), between others, the consequences of the consumption of an offer are not limited to the performance of the practice itself, expanding to other domains of life, revealing a larger and more

significant nature of the value generated, namely at the level of performance of other roles and other dimensions such as physical and mental balance and savings.

It is very common for organizations to opt for strategies that end up giving value to their clients; they choose to gain leadership through differentiation or low cost. For Kim and Maugborne (2005), to create blue oceans, it is necessary to pursue differentiation and low cost at the same time, however, as mentioned at findings, the cost was similar between all of the suppliers at the time of the interviews. Differentiation was the strategy opted by *EDP Comercial* to create value to their clients and afterwards market leadership.

Differentiation strategy of *EDP Comercial* is being achieved by adding, in addition to capabilities already mentioned, a new key competing factor, something that the competitors do not have or offer to the consumer, unique packages, “*energia solar*” package and “*EDP re:dy*” packages, “*base, solar, a/c, carro eléctrico, exterior*” and “*aquecimento*” (*EDP Comercial 2017b*).

Conclusion

To conclude, innovation was imperative for *EDP Group* to survive to market liberalization and to keep its leadership. Answering to the research question of this study it is possible to explain that main variations occurred on the value proposition in customers’ perception was the wide offer of product range, flexibility, better customer service and technical support, less power failures and simpler and more informative invoices.

In addition, with the help of the interviews it was noticed that the organizations should look to the future, adapting whenever necessary to the demands and volatility of the market. As such, the resources and capabilities of organizations will have to be permanently up to the market to ensure the sustainability of the organization.

After the analysis, it became clear that an organization by having a consistent set of resources, strong and able to meet the demands of the market, manages to stand out from its competitors and thus enables it to perform well. As noted by Newbert (2007), valuable and rare resources are related to competitive advantage and this in turn is related to the performance of the organization.

The results also showed that having influential skills, both experience and knowledge, has a great impact on the performance of the organization in customers perception. In this way, this idea confirms that organizations that possess and exploit valuable and rare resources and capabilities can achieve competitive advantage (Barney, 1986) In addition to this, it can be said that one of the interesting key findings in this study was that economic values, such as price, were not considered as a major influential factor by the customers when choosing energy supplier, but brand heritage values were perceived as more meaningful.

The market is constantly changing and until the transition from regulated to liberalized market is complete (2020) it will keep changing, this was recognized by the interviewees. Thus, there is no possibility of avoiding market volatility and thus, these changes have repercussions on organizational performance. Thus, organizational performance is influenced by the market situation as such, performance and competitive advantage are influenced by market structure (Bourgeois & Astley 1979). The importance of the organization' need for a change in strategy was clear, which changes to a new design of a value creation strategy, aiming at a change in the resources and capacities used.

All the interviewees showed the new complex needs that *EDP Comercial* must satisfy to keep its leadership. Which connects to strategy, business model and value innovation mentioned earlier, innovation was proved to be a basic need to market survivability.

According to the results, this innovation arises from the need to follow the market and not be left behind by its competitors and due to the new requirements of the market regulator, ERSE, demands and needs of consumers. This innovation is reflected in the products and services offered by *EDP Comercial*, in the infrastructure of the organization, and in the process of customer support. Thus, value innovation has proved to be a process of continuous improvement.

6.2 Limitations

Even though this Master's thesis answered to the research questions, limitations and unexpected situations occurred during it.

At first, thesis was prepared to interview middle management of *EDP Comercial* to research the question from the point of view of the company in the middle of liberalized

market change. However, the company decided to not participate and due to time limit, the point of view was turned to customers of *EDP Comercial* and literature review fixed accordingly.

The study of customers point of view and lack of information of the interviewees of alternative suppliers may have effects on the results obtained, as well as, limit sample size, not representing near 1% of the customers existent on liberalized market and risk of generalization results.

Other limitation found during the research was the ongoing changes on the electricity market, it will enter in its full phase in 2020, multiple changes on market rules, new laws created the need of updating the information often, making the study slower.

The precision of the study and therefore the certainty are also limited by the inexperience and the strictly limited time to complete the thesis.

6.3 Practical Implications

The results of this thesis can be used by *EDP Comercial* to develop their value proposition canvas to better answer or satisfy the needs, requirements or solve problems of present or possible future customers. Through identifying the various elements of the subdivisions of value proposition canvas, the research provides important information on the kind of concrete issues to which companies should considered.

These various elements can also provide business management with ideas and new perspectives on the various opportunities the company should make use of pain relievers, for example, more information sharing through person-to-person contact.

For alternative suppliers that are not *EDP Comercial* this study provides information of the effects of low amount of offices on big cities and on country side.

6.4 Suggestions for Future Research

There are several suggestions for future research to enhance the findings on this thesis. One option would be customer behaviour linked with knowing the brand and its history, as well as, the lack of information acknowledged by the families and how a company could improve it.

Second suggestion for future research, would be comparison of Portuguese electricity market liberalization with other countries that already concluded the liberalization, for example, comparison with Spanish market.

As third suggestion, supplement the findings of this research with direct information from *EDP Comercial* value proposition canvas or bigger sample of families answering the semi-structured interview with the purpose of results not being generalized or speculated.

List of References

- Ababneh, M. (2016). *Structural Inertia, Social Media and Organizational Change*. College of Business, Bowie State University. Vol. 6, No. 1. ISSN 2162-4860.
- Afonso, P. & Vieira, F. (2012). *Strategic innovation through innovate services and business models supported in electronic platforms*. II Conferência Internacional de Design, Engenharia e Gestão para a inovação Florianópolis, SC, Brasil. Minho University. [online] Available from: <https://repositorium.sdum.uminho.pt/bitstream/1822/36631/1/STRATEGIC%20INNOVATION%20ELECTRONIC%20PLATFORMS_26july2012.pdf> [Accessed on 17 November 2017]
- Aiman-Smith, L., Goodrich, N., Roberts, D., & Scinta, J. (2005). *Assessing your organization's potential for value innovation*. Research Technology Management. Vol. 48, Issue 2: 35-42. ISSN: 08956308
- Amaral, Luís Mira (2008). *A liberalização do mercado energético* [online] Available from: <[http://www.relop.org/eventos/Documents/Confer%C3%Aancia%20dedicada%20ao%20tema%20%E2%80%9CRegula%C3%A7%C3%A3o%20de%20Energia%20nos%20Pa%C3%ADses%20de%20L%C3%ADngua%20Oficial%20Portuguesa%E2%80%9D/MiraAmaral290508\[1\].pdf](http://www.relop.org/eventos/Documents/Confer%C3%Aancia%20dedicada%20ao%20tema%20%E2%80%9CRegula%C3%A7%C3%A3o%20de%20Energia%20nos%20Pa%C3%ADses%20de%20L%C3%ADngua%20Oficial%20Portuguesa%E2%80%9D/MiraAmaral290508[1].pdf)> [Accessed on 22 January 2015]
- Andres A.A.O., Machado C.C. & Boas A.A.V. (2008). *A estratégia do Oceano Azul criando inovações de valor para tornar a concorrência irrelevante: as dez principais inovações brasileiras da última década*. IV Congresso Nacional de Excelência em gestão. [online] Available from: <<http://www.inovarse.org/filebrowser/download/8969>> [Accessed on 17 November 2017]
- Andreu, R. (1993). *A Resource-Based View of Information Systems: a proposal for a resource based theory of IS and an agenda for research*. Research Paper, IESE – University of Navarra (Barcelona). [online] Available from: <<http://www.iese.edu/research/pdfs/DI-0241-E.pdf>> [Accessed on 19 November 2017]

- Auerbach, C.F & Silverstein L.B. (2003). *Qualitative data: an introduction to coding and analysis*. New York University Press, New York. ISBN: 9780814706954.
- Barnett, W.P. & Carroll, G.R. (1995). Modelling internal organizational change. *Annual Review of Sociology*, Vol. 21, 217-236.
<https://doi.org/10.1146/annurev.so.21.080195.001245>
- Barney, J. B. (1991). Firm Resources and Sustained Competitive Advantage. *Journal of Management*. Vol 17. Issue 1: 99–120.
- Bourgeois R. D. & Astley W. G. (1979). A strategic model of organizational conduct and performance. *International Studies of Management and Organization*. Vol. 9. Issue 3:40-66. <https://doi.org/10.1080/00208825.1979.11656271>
- Bourne, B. (2015). Phenomenological Study of Generational Response to Organizational Change. *Journal of Managerial Issues*. Vol. 27 Number (1 – 4), 141-159
- Bowman, C. & Ambrosini, V. (2000). Value Creation Versus Value Capture: Towards a Coherent Definition of Value in Strategy. *British Journal of Management*. Vol. 11. Issue 1: 1–15. <https://doi.org/10.1111/1467-8551.00147>
- Brown, S.L. & Eisenhardt, K.M. (1998). *Competing on the edge – Strategy as a Structured Chaos*. Boston, Mass : Harvard Business School Press. ISBN: 0 87584 754 4
- BPI (2011). *O Sector Eléctrico em Portugal Continental*. Contributo para discussão. Portugal: Banco BPI, S.A. [online] Available from: http://rep.bancobpi.pt/RepMultimedia/getMultimedia.asp?channel=Multimedia%20-%20Banco%20BPI%20-%20Not%EDcias&content=20110331_ApresSectorElectrico> [Accessed on 22 January 2015]
- Bradley, S. P. & Nolan, R. L. (1998). *Sense and Respond: Capturing Value in the Network Era*. Boston: Harvard Business School Press.

- BusinessDictionary.com. (2017). *Monopoly*. WebFinance, Inc. [online] Available from: <<http://www.businessdictionary.com/definition/monopoly.html>> [Accessed on 11 March 2017]
- Calia, R. C., Guerrini, F. M. & Moura, G. L. (2007). Innovation networks: From technological development to business model reconfiguration. *Technovation*. Vol. 27. Issue 8: 426-432, ISSN 0166-4972. <https://doi.org/10.1016/j.technovation.2006.08.003>.
- Cameron K.S. & Quinn R. (1999). *Diagnosing and changing organizational culture: based on the competing values framework*. Addison-Wesley Publishing. ISBN 10: 0201338718; ISBN 13: 9780201338713.
- Carvalho R. M. et al. (2009). *A obtenção de uma nova curva de valor através do modelo das quatro ações de Kim e Mauborgne*. Cultura organizacional, cultura tecnológica y de innovación en la empresa. [online] Available from: <<http://pg.utfpr.edu.br/dirppg/ppgep/ebook/2009/CONGRESSOS/Internacionais/Altec%202009/10.pdf>> [Accessed on 18 November 2017]
- CEEGA - Centro de Economia Ecológica e Gestão do Ambiente (2002). *Estudo sobre sector eléctrico e ambiente*. 3º relatório: Política de ambiente e o sector eléctrico. [online] Available from: <<http://www.erse.pt/pt/desempenhoambiental/rotulagemEnergia/documentacao/Documents/SectorEl%C3%A9ctricoAmbiente1Relat%C3%B3rio.pdf>> [Accessed on 5 February 2016]
- CES (2006). *Os serviços de interesse económico geral (Parte I): Parecer de Iniciativa*. Conselho Económico e Social [online] Available from: <http://www.ces.pt/download/92/Parecer_SIEG_I.pdf> [Accessed on 16 January 2015]
- Chesbrough. H. (2003). *Open Innovation: The New Imperative for Creating and Profiting from Technology*, *Harvard Business School Press*. ISBN: 9781578518371.
- Church, J. & Ware, R. (2000). *Industrial Organization: A Strategic Approach*. Boston: Irwin/McGraw-Hill. [online] Available from:

<http://works.bepress.com/cgi/viewcontent.cgi?article=1022&context=jeffrey_curch> [Accessed on 21 January 2015] ISBN 0-256-20571-X.

Crossan, M, Dusya V. & Nanjad, L. (2008). Transcendent leadership: Strategic leadership in dynamic environments. *The Leadership Quarterly*, Vol. 19, 569-581. <https://doi.org/10.1016/j.leaqua.2008.07.008>.

Cruz, Braga (2008). *A liberalização do sector de energia, o MIBEL (Mercado Ibérico de Electricidade) e o OMIP (Operador do Mercado Ibérico Português – pólo português)*. Infoeuropa. [online] Available from: <https://infoeuropa.euroid.pt/opac/?func=service&doc_library=CIE01&doc_number=000040873&line_number=0001&func_code=WEB-BRIEF&service_type=MEDIA> [Accessed on 20 January 2015]

Coulson-Thomas, Colin (1994). *Business Process Re-engineering: Myth & Reality*. London: Kogan Page Limited.

Daft, R. (1983). *Organization theory and design*. New York: West. ISBN: 0-314-69645-8.

Deco Proteste (2016). *Electricidade e gás: qual a melhor tarifa para o meu perfil? – Perguntas frequentes* [online] Available from: <<http://www.deco.proteste.pt/casa/eletricidade-gas/simule-e-poupe/eletricidade-gas-melhor-tarifa?ssAction=Result&sortedColumn=Total&page=1>> [Accessed on 24 April 2015]

Deco Proteste (2017a). *O (ob)escuro processo da mudança de comercializador de energia* [online] Available from: <<https://www.deco.proteste.pt/institucionalemedia/acoes/acoes-em-curso/mudanca-de-comercializador>> [Accessed on 24 June 2017]

Deco Proteste (2017b). *Electricidade: as 10 grandes dúvidas dos consumidores* [online] Available from: <<https://www.deco.proteste.pt/casa-energia/eletricidade-gas/dossies/eletricidade-as-10-grandes-duvidas-dos-consumidores/10-erse-para-que-serve>> [Accessed on 24 June 2017]

- DGEG (2013). *Relatório de Monitorização da Segurança de Abastecimento do Sistema Elétrico Nacional 2013-2030* [online] Available from: <<http://www.dgeg.pt/>> [Accessed on 1 April 2016]
- Dinheiro vivo (2011). *Subida do IVA na energia para 23% penaliza duplamente empresas.* [online] Available from: <<https://www.dinheirovivo.pt/economia/subida-do-iva-na-energia-para-23-penaliza-duplamente-empresas/>> [Accessed on 24 September 2017]
- Diário da República. Decree-Law #97/2002 of 12 April (2002).
- Diário da República. Decree-Law #29/2006 of 15 February (2006).
- Diário da República. Decree-Law #139/2007 of 27 April (2007).
- Drucker, P.F. (1954). *The Practice of Management*. New York: Harper & Row. ISBN 10: 0060110953; ISBN 13: 9780060110956
- Drucker, P.F. (2008). *Management: Tasks, Responsibilities, Practices. Revised Edition*. HarperCollins e-books. [online] Available from: <<http://youth-portal.com/wp-content/uploads/2014/10/Peter-F-Drucker-Management-Rev-Ed.pdf>> [Accessed on 20 October 2016]
- EDP (2005). *Relatório de Contas 2005*. Grupo EDP, Caderno Financeiro: EDP Energia de Portugal, S.A.
- EDP (2008). *Rumo à Sustentabilidade 2007*. Revista EDP ON energia sem limites de Janeiro de 2008, nº6.
- EDP (2009a). *Manual de Organização. EDP Energias de Portugal, S.A.* [online] Available from: <<http://www.EDPannualreport.EDP.pt/pt/EDP/organizacao-dos-negocios>> [Accessed on 20 February 2015]
- EDP (2011). *Relatório e Contas 2011*. EDP Energias de Portugal, S.A. [online] Available from: <<https://www.EDPannualreport.EDP.pt/2011/pt/>> [Accessed on 14 August 2016]

- EDP (2015). *Relatório e Contas 2015*. EDP Energias de Portugal, S.A. [online] Available from: <<https://www.EDPannualreport.EDP.pt/pt>> [Accessed on 15 August 2016]
- EDP Comercial (2017a). *Planos de energia*. [online] Available from: <<https://energia.EDP.pt/particulares/planos-de-energia>> [Accessed on 20 September 2017]
- EDP Comercial (2017b). *Serviço para a sua casa*. [online] Available from: <<https://energia.EDP.pt/particulares/servicos-EDP/>> [Accessed on 20 September 2017]
- EDP Comercial (2017c). *Funciona. Segurança e assistência para a sua casa*. [online] Available from: <<https://energia.EDP.pt/particulares/servicos/funciona/>> [Accessed on 20 September 2017]
- Eiras, C. (2009). *Cumprimento de Critérios de SIEG: Electricidade em Portugal*. Coimbra: FEUC.
- European Commission (2003). *Directive 2003/54/EC of the European Parliament and of the Council of 26 June 2003 concerning common rules for the internal market in electricity and repealing Directive 96/92/EC*. [online] Available from: <http://eur-lex.europa.eu/resource.html?uri=cellar:caeb5f68-61fd-4ea8-b3b5-00e692b1013c.0004.02/DOC_1&format=PDF> [Accessed on 20 January 2015]
- ERSE¹ (2014). *Liberalização do Sector*. [online] Available from: <<http://www.erse.pt/pt/electricidade/liberalizacaodosector/Paginas/default.aspx>> [Accessed on 29 April 2014]
- ERSE² (2014). *Como são calculadas as tarifas de electricidade*. [online] Available from: <<http://www.erse.pt/consumidor/electricidade/querosabermais/comosaocalculadasastarifasdeelectricidade/Paginas/default.aspx>> [Accessed on 5 June 2014]
- ERSE³ (2015). *Produtores em Regime Ordinário* [online] Available from: <<http://www.erse.pt/pt/electricidade/agentesdosector/produtores/Paginas/default.aspx>> [Accessed on 10 April 2016]

- ERSE (2017). *Comercializadores para Clientes domésticos* [online] Available from: <<http://www.erse.pt/pt/electricidade/agentesdosector/comercializadores/Paginas/Clientesnaodomicos.aspx>> [Accessed on 2 October 2017]
- Eurostat (2017). *Electricity prices for household consumers - bi-annual data (from 2007 onwards)*. [online] Available from: <<http://appsso.eurostat.ec.europa.eu/nui/submitViewTableAction.do>> [Accessed on 23 September 2017]
- Fay, D. & Luhrmann, H. (2004). Current themes in organizational change. *European Journal of Work and Organizational Psychology*, Vol. 13 Issue 2, 113-119. <http://dx.doi.org/10.1080/13594320444000029>
- Ferreira, Paula Varandas et al. (2007). *An overview of the Portuguese electricity market*, Minho: Elsevier. 1-19. ISSN 0301-4215. <http://hdl.handle.net/1822/5492>
- Frenz, M. & R. Lambert (2012). *Mixed Modes of Innovation: An Empiric Approach to Capturing Firms' Innovation Behaviour*. OECD Science, Technology and Industry Working Papers. No. 2012/06, OECD Publishing, Paris. <http://dx.doi.org.proxy.uwasa.fi/10.1787/5k8x610bp3bp-en>
- Golafshani N. (2003). *Understanding Reliability and Validity in Qualitative Research*. The Qualitative Report, 8(4), 597-606. <http://nsuworks.nova.edu/tqr/vol8/iss4/6>
- Grant, R. M. (2010). *Contemporary strategy analysis*. 7th Edition. John Wiley & Sons Ltd. ISBN: 978-0-470-74710-0
- Hamel, G., & Prahalad, C. K. (1991). Corporate Imagination and Expeditionary Marketing. *Harvard Business Review*. Vol. 69. Issue 4: 81-92. ISSN: 0017-8012
- Hammer M. & Champy J. (1994). *Reengenharia*. São Paulo: Editora Campus. ISBN: 9788570018489
- Hannan M. T. & Freeman J. (1984). Structural inertia and organizational change. *American Sociological Review*, Vol. 49, 149-164. <http://dx.doi.org/10.2307/2095567>

- Huber G.P. & Glick W.H. (Eds.). (1993). *Organizational change and redesign: Ideas and insights for improving performance*. New York: Oxford University Press. ISBN-10: 0195101154. ISBN-13: 978-0195101157.
- Hurn B.J. (2012). Management of Change in a Multinational Company. *Industrial and Commercial Training*, Vol. 44. Issue 1: 41-46.
<https://doi.org/10.1108/00197851211193417>
- Hübler E.A. & Pereira M.F. (2005). *O design como inovação na perspectiva emergente das experiências de consumo*. XXV Encontro Nac. de Eng. de Produção – Porto Alegre, RS, Brasil. [online] Available from:
<http://www.abepro.org.br/biblioteca/enegep2005_enegep0705_0854.pdf>
[Accessed on 18 November 2017]
- Investopedia (2017). *Price Ceiling*. [online] Available from:
<<http://www.investopedia.com/terms/p/price-ceiling.asp#ixzz4uAWctpn5>>
[Accessed on 24 September 2017]
- Investopedia (2017). *Natural Monopoly*. [online] Available from:
<http://www.investopedia.com/terms/n/natural_monopoly.asp> [Accessed on 5 November 2017]
- Itami, Hiroyuki & Nishino, Kazumi. (2010). Killing Two Birds with One Stone. *Long Range Planning*. Vol. 43. Issue 3: 364–369.
<https://doi.org/10.1016/j.lrp.2009.07.007>.
- Johnson, G. et al. (2008). *Exploring Corporate Strategy*. 8th Edition. Harlow: Prentice Hall. ISBN-13: 978-0273711919. ISBN-10: 0273711911.
- Kim, W.C. & Mauborgne, R. (1997). Value Innovation: The Strategic Logic of High Growth. *Harvard Business Review*. Vol. 75. Issue 1: 103-112.
- Kim, W.C. & Mauborgne, R. (1999). Creating New Market Space. *Harvard Business Review*. Vol. 77. Issue 1: 83-93.

- Kim, W.C. & Mauborgne, R. (2005). *Blue Ocean Strategy: how to create uncontested market space and make the competition irrelevant*. Boston, Massachusetts: Harvard Business School Press.
- Kim, W.C. & Mauborgne, R. (2016). *Blue Ocean Strategy: Blue Ocean Strategy Tools*. [online] Available from: <<https://www.blueoceanstrategy.com/tools/strategy-canvas/>> [Accessed on 17 March 2017]
- Kotler, P. & Keller, K. L. (2009) *Marketing Management*. 13th Edition. New Jersey: Pearson Education. ISBN-13: 978-0136009986
- Kotler, P. & Armstrong, G. (2016). *Principles of Marketing*. 16th Edition. Harlow: Pearson Education. ISBN-13: 9780133795028
- Katz D., et al. (1978). *Psicologia Social das Organizações*. 2^a Edition. São Paulo: Editora Atlas.
- Kovács, Ilona et al. (1991). *Introduction of Anthropocentric Automated Systems in Portugal: problems and trends*. *APS Research Papers, CEC/FAST*, Vol. 16. 260. Bruxelles: CEC.
- Kovács, Ilona (1993). *Sistemas Antropocêntricos de Produção*. *SOCIUS Working Paper*, n. ° 6/93. Lisboa: UTL.
- Kovács, I.; F., Carvalho J.M. & Santos, M. J. (1994). *Mudança Tecnológica e Organizacional: análise de tendências na indústria*. *SOCIUS Working Papers*, n. ° 2/94. Lisboa: UTL.
- Kovács, Ilona et al. (1998a). *Novos Modelos de Produção*. Oeiras: Celta Editora [online] Available from: <<https://www.google.fi/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&cad=rja&uact=8&sqi=2&ved=0ahUKEwjG7bXz49jQAhWEKCwKHSLRAMEQFgggMAE&url=http%3A%2F%2Ffiles.grhiscsp-turmab.webnode.pt%2F200000080-0be750ce18%2FTexto%252011%2520Kovacs%2520Novos%2520modelos%2520de%2520producao.pdf&usg=AFQjCNEKuD7tCkRgaSyqxgiQGkaAEuU5zQ&sig2=Plz-gz8AvKZdSZ97m8WySg&bvm=bv.139782543,d.bGg>> [Accessed on 13 August 2016]

- Kovács, Ilona et al. (1998b). *Sistemas Antropocêntricos de Produção. Uma alternativa para a Europa?*, in *Novos Modelos de Produção*. Oeiras: Celta Editora, pp. 93-114.
- Markides, C. (1998). Strategic Innovation in Established Companies. *Sloan Management Review*, Vol. 39 Issue 3: 31-42. ISSN: 0019-848X
- Markides, C. (2006). Disruptive Innovation: In Need of Better Theory. *Journal of Product Innovation Management*. Vol. 23. Issue 1: 19-25.
<https://doi.org/10.1111/j.1540-5885.2005.00177.x>
- Marques, Rui (2005). *Regulação de Serviços Públicos*. Lisboa: Edições Sílabo. ISBN: 9789726183808
- Martinet, A.C. et al. (1989). *A Empresa num Mundo em Mudança*, Edições Silabo, Lisboa.
- Mathews, B. & Linski, C.M. (2016). Shifting the paradigm: reevaluating resistance to organizational change. *Journal of Organizational Change Management*, Vol. 29 Issue 6, 963-972. <https://doi.org/10.1108/JOCM-03-2016-0058>
- MEI (2008). *Infraestruturas e Acessibilidades – Electricidade: O Sector Eléctrico*. AICEP Portugal Global. [online] Available from: <http://www.portugalglobal.pt/PT/InvestirPortugal/PorquePortugal/Documents/O%20sector%20electrico.pdf>.> [Accessed on 10 February 2016]
- Morris M. et al. (2005). The entrepreneur's business model: toward a unified perspective. *Journal of Business Research*. Vol. 58. Issue 6: 726-735. ISSN 0148-2963. <https://doi.org/10.1016/j.jbusres.2003.11.001>.
- Miles R. & Snow C., (1978). Organizational strategy, structure, and process. *Academy of Management Review*, Vol. 3 Issue 3, 546-563. <https://doi.org/10.2307/257544>
- Morris, Daniel C. & Brandon J. (1993). *Re-Engineering Your Business*. New York: McGraw-Hill. ISBN-10: 0070431787. ISBN-13: 978-0070431782

- Neves J., et al. (1996). *Clima Organizacional, Cultura Organizacional e Gestão de Recursos Humanos: Portugal no Contexto de Outros Países*. Tese de Douturamento. Lisboa: ISCTE.
- Neves J., et al. (2011). *Manual de Psicossociologia das Organizações*. Amadora: Escolar Editora. [online] Available from: http://baes.sdum.uminho.pt/handle/1822.1/69?mode=simple&submit_simple=Mostrar+registo+em+formato+simples [Accessed on 10 November 2016]
- Newbert, S. L. (2007). Empirical research on the resource-based view of the firm: an assessment and suggestions for future research. *Strategic Management Journal*. Vol. 28. Issue 2: 121–146. doi:10.1002/smj.573
- Oliveira, R.M. (2010). *Framework de Business Intelligence para o sector eléctrico Português*. Departamento das Ciências e Tecnologias da Informação. Lisboa: Instituto Universitário de Lisboa.
- Osterwalder A. and Pigneur Y. (2010). *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. Hoboken, New Jersey: John Wiley & Sons, Inc. ISBN-10: 0470876417. ISBN-13: 9780470876411
- Osterwalder A. and Pigneur Y. (2014). *Value Proposition Design*. Hoboken, New Jersey: John Wiley & Sons, Inc. ISBN: 978-1-118-96805-5
- Penrose, E. T. (1959). *The Theory of Growth of the Firm*. John Wiley, New York.
- Pinto, M.I.C.P. (2001). *A study on the deregulation of the electricity sector and the implications for the Portuguese Market*. Instituto Superior Técnico: Engenharia e Gestão de Tecnologia. Lisboa: Universidade Técnica de Lisboa.
- Poole, M. S. & Van de Ven, A.H. (2004). *Handbook of organizational change and innovation*. New York: Oxford University Press. ISBN: 9781602569867
- Porter, M. E. (1980). *Competitive Strategy: Techniques for Analysing Industries and Competitors*. New York: Free Press. (Republished with a new introduction, 1998.)
- Porter M. (1996). *What is strategy?*. Harvard Business Review 74 no. 6 (November-December 1996): 61–78.

- Porter, M. (2001). *Strategy and the Internet*. Harvard Business Review, March, 62-78
- Rabetino, Rodrigo (2013). *Lecture 04.11.2013: Basics of Strategy*. University of Vaasa: JOHT3003
- Riege, A.M. (2003). Validity and reliability tests in case study research: A literature review with “hands-on” applications for each research phase. *Qualitative Market Research: An International Journal*, Vol. 6 Issue: 2, pp. 75-86, <https://doi.org.proxy.uwasa.fi/10.1108/13522750310470055>
- Robbins, S. P. (2009). *Fundamentos do comportamento organizacional*. 8ª Ed. São Paulo: Pearson Prentice Hall. ISBN: 9788576050025
- Robert, M. (2004). *Strategic Thinking Pure & simple*: The ultimate and only long-term competitive advantage. 45-55. McGraw-Hill Education. ISBN: 0071462244
- Robson, C. (2002) *Real World Research*. 2nd Edition. Oxford: Blackwell. ISBN: 0631213058
- Ryan, P., Moroney, M., Geoghegan, W., & Cunningham, J. (2007). A Framework for a Strategic Repositioning Strategy: A Case Study of Bulmers Original Cider. *Irish Journal Of Management*, Vol 28(1), 81-102. <http://hdl.handle.net/10379/2382>
- Sabatier V. Craig-Kennard A. & Mangematin V. (2012). When technological discontinuities and disruptive business models challenge dominant industry logics: Insights from the drugs industry. *Technological Forecasting and Social Change*. Journal Elsevier. Vol 79, Issue 5: 1-14, ISSN 0040-1625, <https://doi.org/10.1016/j.techfore.2011.12.007>
- Saebi T., Lasse L. & Nicolai J. F. (2017). What Drives Business Model Adaptation? The Impact of Opportunities, Threats and Strategic Orientation, *In Long Range Planning*, Vol 50, Issue 5: 567-581, ISSN 0024-6301, <https://doi.org/10.1016/j.lrp.2016.06.006>.
- Santana, João (2003). *A concorrência no sector eléctrico*. IST/UTL, Lisboa, pp.1. [online] Available from: <<http://in3.dem.ist.utl.pt/master/04energy/pres3b.pdf>> [Accessed on 6 October 2014]

- Santos, Vítor (2012). *A Regulação do Sector Energético*. FEUC, ERSE. [online] Available from: http://www.uc.pt/efs/docs/SES_2012/VitorSantos_ERSE_mai2012 [Accessed on 20 January 2015]
- Santos, Vítor (2008). *Regulação do Sector Eléctrico em Portugal*. III Seminário Internacional do Sector de Energia Eléctrica. ERSE. [online] Available from: <http://slideplayer.com.br/slide/365457/> [Accessed on 1 February 2015]
- Saunders, M., P. Lewis & A. Thornhill (2009). *Research Methods for Business Students*. 5th Edition. Harlow: Prentice Hall. ISBN 978-0-273-71686-0
- Schein, E. (1987). *Process Consultation, Lessons for managers and consultants*. Volume 2. Addison-Wesley Publishing Company. ISBN: 0201067447 / 9780201067446.
- Schlegelmilch B., Diamantopoulos A. & Kreuz P. (2003). Strategic innovation: the construct, its drivers and its strategic outcomes. *Strategic Innovation Journal of Strategic Marketing*, Vol. 11 Issue 2: 117–132. <http://dx.doi.org/10.1080/0965254032000102948>
- Schwarz, G.M. & Shulman, A.D. (2007). *The patterning of limited structural change*. *Journal of Organizational Change Management*, Vol. 20 Issue 6, 829-846. <https://doi.org/10.1108/09534810710831046>
- Sievert S., Neubecker N. & Klingholz R. (2017). *Europe's Demographic Future. Where the Regions Are Heading after a Decade of Crises*. Berlin Institute for Population and Development. Berlin [online] Available from: https://www.berlin-institut.org/fileadmin/user_upload/Europas_demografische_Zukunft_2017/Europa_engl_online.pdf [Accessed on 21 September 2017]
- Silva, P. (2007). *O Sector da Energia Eléctrica na União Europeia: evolução e perspectivas*. Coimbra: Imprensa da Universidade de Coimbra. [online] Available from: <https://books.google.fi/books?id=phZB80O5CY8C&printsec=frontcover&hl=pt-PT#v=onepage&q&f=false> [Accessed on 21 January 2015]

- Slack N., Chambers, S. & Johnston R. (2004). *Operations Management*. 4th Edition. Harlow: Pearson Education. ISBN: 978-0-273-77628-4
- Soares, M. & Isabel R. T. (2006). *A liberalização do sector eléctrico e a Ciência Económica: o que a evidência empírica demonstra*. [online] Available from: <http://www.ie.ufrj.br/datacenterie/pdfs/seminarios/pesquisa/texto06_02_15.pdf> [Accessed on 22 January 2015]
- Solomon M. et al. (2006). *Consumer behaviour: A European perspective*. 3rd Edition, New York: Prentice Hall Europe. ISBN-13: 978-0273-68752-2, ISBN-10: 0-273-68752-2.
- Teece David J. (2010). Business Models, Business Strategy and Innovation, *In Long Range Planning*, Volume 43, Issues 2–3: 172-194. ISSN 0024-6301, <https://doi.org/10.1016/j.lrp.2009.07.003>.
- Tosi, H.L. et al. (1982). *Management*. New York: John Wiley & Sons.
- Turner, C. (2003). Issues and Challenges in Strategic Repositioning: The Case of Cable and Wireless. *Strategic Change*. Vol. 12, 251–257. <http://dx.doi.org/10.1002/jsc.640>
- Vala, Jorge et. al. (1995). *Psicologia Social das Organizações: estudo em empresas portuguesas*. Oeiras: Celta. ISBN 972-8027-33-8
- Vasconcelos, Jorge (2013). *Liberalização da electricidade atrasada devido à falta de concorrência*. [online] Available from: <http://correiodoribatejo.com/jorge-vasconcelos-liberalizacao-da-electricidade-atrasada-devido-a-falta-de-concorrenca/#.WERRu_196Uk> [Accessed on 22 March 2016]
- Worstell, Tim (2013). *Which Should We Have: Public Utilities Or Regulated Private Monopolies?* Forbes tech [online] Available from: <<https://www.forbes.com/sites/timworstell/2013/03/24/which-should-we-have-public-utilities-or-regulated-private-monopolies/#4a10d7724263>> [Accessed on 5 November 2017]

Zohrabi, M. (2013). Mixed Method Research: Instruments, Validity, Reliability and Reporting Findings. *Theory and Practice in Language Studies*, Vol. 3, 254-262.
<http://dx.doi.org/10.4304/tpls.3.2.254-262>

Appendix

APPENDIX 1: Business structure *EDP* - Energias de Portugal

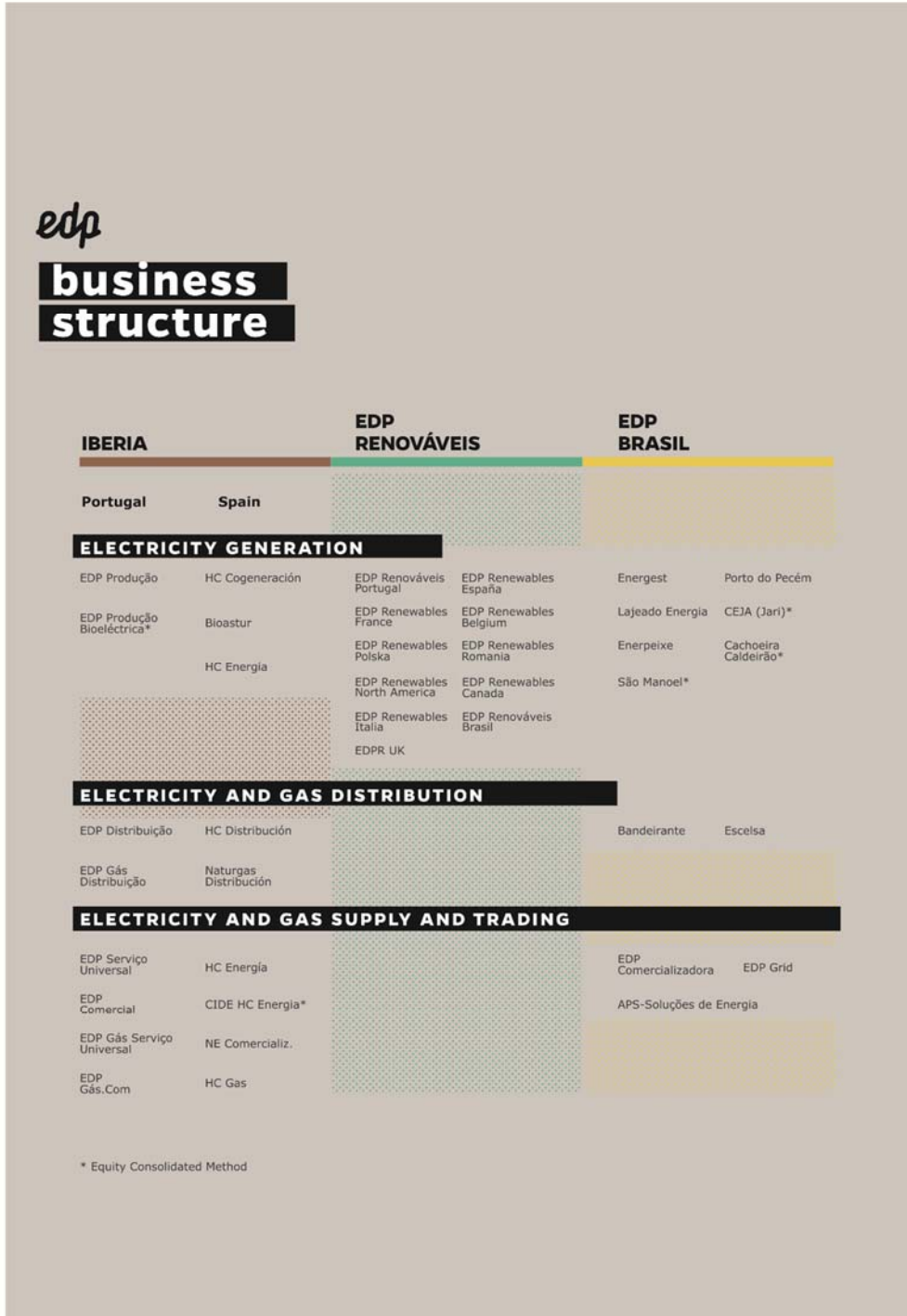


Figure 18. Business structure *EDP* - Energias de Portugal (Relatório e contas 2015).

APPENDIX 2: Organizational chart EDP - Energias de Portugal

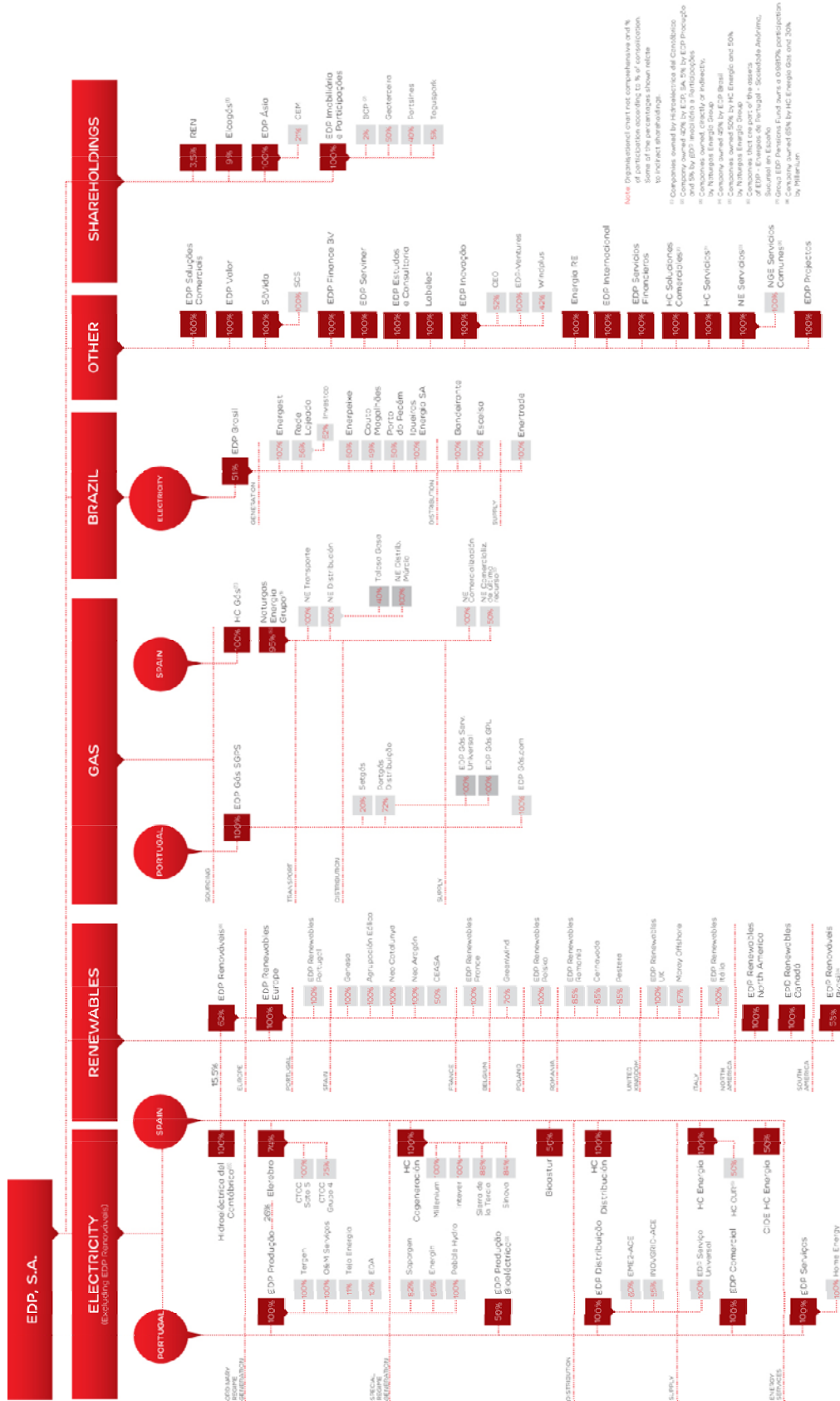


Figure 19. Organizational chart EDP - Energias de Portugal (Relatório e contas 2011).

APPENDIX 3: Portugal Continental



Madeira



Açores



Portugal Continental



APPENDIX 4: Main Sales Companies of the Portuguese Electricity Sector (ERSE 2017)

- *EDP* Comercial - Comercialização de Energia, SA
- Galp Power S.A.
- Endesa – Endesa Energia Sucursal Portugal
- Coopérnico - Cooperativa de Desenvolvimento Sustentável, CRL
- Elusa Comercialização de Eletricidade
- Elygas Power, S.L.
- Enat – Energias Naturais, Lda.
- ENFORCESCO, SA (YLCE)
- GOLD ENERGY – Comercializadora de Energia, S.A.
- HEN - Serviços Energéticos, Lda.
- Iberdrola Clientes Portugal, Unipessoal, Lda.
- Jafplus Energia
- Logica Energy
- LUZBOA - Comercialização de Energia, Lda.
- LUSIADAENERGIA, S.A.
- PH Energia, Lda.
- Rolear - Automatizações, Estudos e Representações, S.A.
- Union Fenosa Comercial, S.L. – Suc. Em Portugal

APPENDIX 5: Gross electricity production in Portugal: by total and by type from 2000 to 2014



Produção bruta de energia eléctrica: total e por tipo de produção de energia eléctrica

GWh (Gigawatt-hora)

Anos	Produção bruta de energia eléctrica					
	Total	Eólica	Geotérmica	Hídrica	Térmica	Fotovoltaica
2000	43 764	168	80	11 715	31 800	1
2001	46 509	256	105	14 375	31 772	1
2002	46 107	362	96	8 257	37 390	2
2003	46 852	496	90	16 054	30 209	3
2004	45 105	816	84	10 147	34 055	3
2005	46 575	1 773	71	5 118	39 610	3
2006	49 041	2 925	85	11 467	34 559	5
2007	47 253	4 037	201	10 449	32 542	24
2008	45 969	5 757	192	7 298	32 681	41
2009	50 207	7 577	184	9 009	33 277	160
2010	54 093	9 182	197	16 547	27 953	214
2011	52 465	9 162	210	12 114	30 697	282
2012	46 613	10 260	146	6 659	29 155	393
2013	51 672	12 015	197	14 868	24 113	479
2014	52 802	12 111	205	16 412	23 446	627

Produção bruta de energia eléctrica: total e por tipo de produção de energia eléctrica

Fontes de Dados: DGE/MAOTE

Fonte: PORDATA

Última actualização: 2016-01-04

Simbologia

⊥ Quebra de série
... Confidencial
// Não aplicável
- Ausência de valor

Pro Valor provisório
x Valor não disponível
f Valor previsto
Rv Valor revisto

Pre Valor preliminar
e Dado inferior a metade do módulo da unidade utilizada
§ Dado com coeficiente de variação elevado
(R) Dados rectificadados pela entidade responsável

Dados obtidos em www.pordata.pt a 01-05-2016

APPENDIX 6: Semi-Structured Interview Questions

Interview introduction

The study aims to analyse the change of *EDP* itself with the change from Monopoly to Free Market and the effects they had on the relationship between *EDP* and consumers / customers. Which means that the practical part (semi-structured interviews) revolves around the customer's perspective of this change in the Energy Market and relationship with *EDP*. The still being in the "old" *EDP* is positive for the study, since it will contrast with those already in the new *EDP* (Commercial Solutions).

The interview would have to be by Skype call, since I need to record as official proof that the interview was conducted and for further analysis.

Interview Questions

1. In your opinion describe energy solution? What do you search as Energy solution to your home?

Between 2006 and beginning of 2013 a change occurred in Portugal among energy providers due to the complete transition from a monopolized to a free market. The free market allows unrestricted competition in the electricity and gas sectors, enabling the appearance of several energy traders, and wider selection of choice for consumers. The liberalization of the electricity market in Portugal has been planned since 2000 and will enter in its full phase on 2020, with the gradual extinction of regulated tariffs for all consumers. (ERSE, 2017.)

2. Before market liberalization, there was just one option of energy supplier, *EDP*. What are your expectations from new *EDP* Soluções Comerciais now?

- 2.1. How do you evaluate their offers?

3. How do you evaluate alternative energy suppliers, such as Galp, Endesa, Iberdrola, and others?

- 3.1. What, in your opinion, are the current problems in delivering the solution? Problems encountered in before and after the purchase or completion of the contract, barriers. Problems you feel as a customer?

- 3.2. In your opinion, what could be done to solve these problems?
4. Why do you think some energy suppliers are more successful than others?
 - 4.1. In your opinion, is there something that *EDP Soluções Comerciais* offers that when compared to competitors is unique?
5. What role you as a customer have in the development of a solution? (Customer feedback option?)

Conclude the interview by asking if the voluntary participant is interested in adding any other comments.

Thank you very much for your time.