Statement of Authenticity:

"I declare that this dissertation is the result of my own independent investigation and does not contain any acknowledged work from any other sources".

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Abstract

Near the mature stage Greek mobile telecommunications industry is shifting its strategic focus away from only attracting new customers, towards retaining existing customers through the promotion of customer loyalty. This paper attempts to examine the relationship between service quality, customer satisfaction, switching costs and customer loyalty in the Greek mobile telecommunications industry.

The purpose is to identify factors related to customer loyalty which is a key necessity for the maintenance of a brand's life in the long term. To achieve this aim we seek in which dimensions of service quality lead to customer satisfaction and whether customer satisfaction has a positive effect on customer loyalty. In this context the direct role of switching costs, which measured as a multi-dimensional factor contains financial, procedural and psychological costs, also examined, as a critical variable that positive influence customer loyalty.

The relationship among these four constructs analysed through the review of the literature to date and three hypotheses were developed.

In this study a quantitative survey has been used as data collection method. The data set covered 205 mobile phone users in Greece. We test hypotheses using correlation and regression analysis. The results confirm the positive relationship between service quality dimensions and customer satisfaction as well as the significant positive relationship between customer satisfaction and customer loyalty. The findings of this study also show that to some extent switching costs directly affect customer loyalty. Therefore, it plays a crucial role in winning customer loyalty.

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Chapter 1. Introduction

1.1 Introduction to the issue

Within an increasing competitive market every company has potential risk of losing their customers. By offering more satisfactory services, delivering faster products and services or just become a little cheaper on prices, competitors can steal your customers. So, the critical question that arises is on how to survive the fierce competition, achieve competitive advantages and continuously grow the market share. In the last years many researchers interested about the above subjects that appeared to become the most important thing in today business.

According to numerous empirical studies, the results have been found out that it is more profitable to retain customers than to acquire new ones (Hogan et al., 2003; Mittal and Lassar, 1998). Reichheld and Sasser (1990) claimed that a 5% improvement in customer retention can cause an increase in profitability between 25% and 85% in terms of net present value, depending upon the industry. Observations like these become critical especially for business acting in mature markets. As market growth slows or as markets become more competitive, firms are more likely to attempt to maintain and increase their market share by focus on retaining current customers. Overall, the increased profit from loyalty comes from reduced marketing costs, increased sales and reduced operational costs. Loyal customers are less likely to switch because of price and they make more purchases than similar non-loyal customers. Long-term customers also tend to recommend the business to others. (Reichheld and Sasser, 1990; Reichheld and Teal, 1996). Thus, the challenge is how to retain existing customers by winning their loyalty.

In order to answer the abovementioned question we must search into customer satisfaction. According to many researchers one of the main ingredients of success in the market place is customer satisfaction (Fornell, 1992; Gerpott et al., 2001). Previous examinations have been discovered that customer satisfaction is the main step so as customer loyalty be created. In order to offer more satisfaction to their customers companies have to understand their needs and make every

effort to provide services in an effective and efficient manner (Harris and Harrington, 2000).

Consequently, service quality is an important aspect for customer satisfaction and furthermore for customer loyalty (Cronin and Taylor, 1992; Hallowell, 1996). Therefore, business organizations should measure regularly and evaluate the quality of services so as to ensure that certain standards are maintained or improved over the years. Measurement of service quality, could be adopted by companies to gain a competitive advantage over others and thus increase profitability.

However the linear relationship service quality – satisfaction – customer loyalty is not always capable to interpret why customers terminate the relationship and choose to switch service provider. Several studies that examined the factors affecting customer loyalty usually set the focus on customer satisfaction and on switching barrier (Dick and Basu, 1994; Lee et al., 2001). There also suggested that the impact of switching costs in the relationship between satisfaction and loyalty is affected by market structure (Jones and Sasser, 1995). In line with the theory, we examine switching costs that appeared in the particular business sector and their relationship with customer loyalty.

This study seeks to investigate the above concepts into the Greek mobile telecommunications industry and analyze customers' perceptions about mobile service providers. There are three main competitors who compete in the same technological base and none of these operators hold a market share over 50%. Thus, this market can be considered reasonably competitive. Mobile telecommunications market in Greece, according to experts' and analysts' forecasts, gets into the mature stage. In this phase, when the number of subscribers starts to decelerate, creating and securing new customers is not only difficult but also costly in terms of marketing. Therefore, it is becoming an industry-wide belief that the best core marketing strategy for the future is trying to retain existing customers by enhancing customer loyalty. As Gerpott et al. (2001, p. 249) remark: "in telecommunication services, it is frequently pointed out that once customers have been acquired and connected to the telecommunication network of a particular operator, their long-term relations with the focal operator

are of greater importance to the success of the company in competitive markets than they are in other industry sectors".

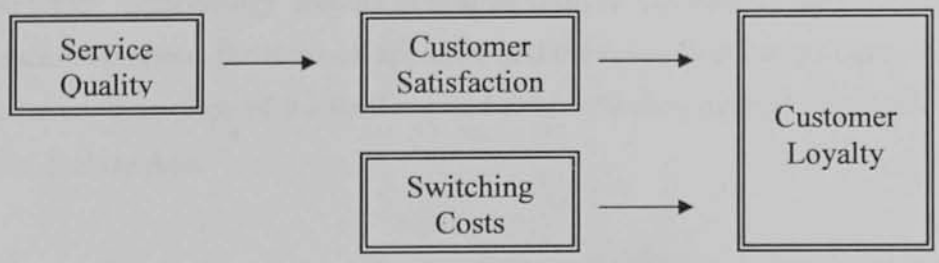
1.2 Aim and objectives of the research

The aforementioned reasons drive the need to identify factors related to customer loyalty and the relationship that exists between them. Through analyzing customer loyalty, satisfaction and service quality, we try to figure out the relationship among these three constructs in conjunction with the existing switching costs and their role on customer loyalty. It is examined whether or not service quality is essential to creating customer satisfaction, whether satisfaction can increase customer loyalty and the impact of switching costs on customer loyalty.

Each one of these factors should be investigated. It is important to understand how customers make their decisions and prefer a service provider instead of another as well as how and why they keep repurchase behavior with it and appear loyalty. It is clear that understanding and focusing on customer behavior helping companies to learn from their customers and provide more friendly, accurate and satisfactory services. In a managerial and more practical view, it is vital for managers to identify specific actions that can increase customer retention and profitability in the long run. Thus, it is required that they have to take a better understanding of the relationship among service quality, satisfaction, loyalty and switching costs.

The aim of this study is to test whether or not the theoretical framework applies into the Greek mobile telecommunication industry. The beneath theoretical model appears the relationship between the investigated concepts (Figure 1).

Figure 1. Theoretical model



The research questions can be addressed from the research purpose which is to identify the factors creating customer satisfaction and loyalty and to present the relationship between service quality, satisfaction, switching costs and loyalty in the Greek mobile telecommunications market. The rational is to understand better the reasons that make customers stay with a firm and to uncover useful information for managers so as to create a competitive advantage for companies.
More detailed:

1) Is there any relationship between service quality and customer satisfaction?
2) Is there any relationship between customer satisfaction and customer loyalty?
3) Is there any relationship between switching costs and customer loyalty?

1.3 The structure of the dissertation

The current study divided into six chapters. Chapter one is an introduction to the investigated concepts where in a general theoretical framework presents the aim and objectives of the research as well as the arrangement of this dissertation.

Chapter two includes a review of the existing academic literature and the development of the research hypotheses. This part separated into five sections where each concept being analyzed: customer loyalty, customer satisfaction, service quality, switching costs as well as the link between them.

Afterwards, in chapter three there are background information about the mobile telecommunications industry, the development and the market share of the three mobile service providers in Greece.

Research methodology appears in chapter four. In this part initially presented the research purpose, the research approach and the research strategy. Then, there is a detailed description of the implemented data collection method in order to gather and analyze data.

Chapter five is about data analysis and findings which ended with the testing of hypotheses and the discussion.

Conclusion of the complete research, included implications and limitations as well as suggestions for further study and reflections of learning appear in the last chapter.

Chapter 2. Literature review

Marketing scholars have long been interested in identifying determinants of customer loyalty. Hence an amount of studies have been contacted on the subject over the past several decades. The more recent which identified drivers of customer loyalty has gained center stage in the marketing literature. The antecedents of customer loyalty have been widely studied in the case of service companies. Results of most of the published studies reveal positive influences of the perception of service quality on customer satisfaction and a positive impact of satisfaction on customer loyalty. The effect of switching costs on loyalty also examined by several researchers and many of them confirm a main effect on loyalty.

In this chapter we discuss the concepts of customer loyalty, customer satisfaction, service quality and switching costs as well as the relationship between them based on the existing literature.

2.1 Customer Loyalty

2.1.1 Definition and measurement of customer loyalty

Traditionally, customer loyalty has been defined as a behavioral measure. These measures include: proportion of purchase, probability of purchase, probability of product repurchase, purchase frequency, purchase sequence and multiple aspects of purchase behavior. The frequent assumption is that loyalty translates into an unspecified number of repeat purchases from the same supplier over a specified period (Egan, 2004). By defining loyalty based only on repurchase behaviour doesn't provide a holistic view of this complex concept and drive theorists to suggest alternative and more comprehensive definitions.

Dick and Basu (1994) argue that loyalty is determined by the strength of the relationship between relative attitude and repeat patronage, and that it has both attitudinal and behavioural elements. They also propose four conditions related to loyalty: loyalty, latent loyalty, spurious loyalty and no loyalty.

- *Loyalty* signifies a favorable correspondence between relative attitude and repeat patronage.
- *Latent loyalty* is associated with high relative attitude, but low repeat patronage.
- *Spurious loyalty* represents a low relative attitude, with high repeat patronage.
- *No loyalty* is associated with a low relative attitude, combined with low repeat patronage.

Oliver (1997, p.392) states that loyalty is "a deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, despite situational influences and marketing efforts having the potential to cause switching behavior" progresses in four phases, with each phase representing a greater degree of loyalty.

- *Cognitive loyalty* - customer's perception that one brand is preferable to its alternatives. Loyalty at this stage is driven by functional characteristics and consumers' commitment may not be very strong. Consumers may switch during this stage when faced with noncompetitive performance.
- *Affective loyalty* – the consumer developing a liking for the brand based on increasing satisfaction that he/she experienced from the usage.
- *Conative loyalty* – the consumer holds a "commitment to buy". This stage is illustrated by repurchase intentions and via actions like recommending the brand to others.
- *Action loyalty* – exhibiting consistent repurchase behaviour.

Likewise, more recently "loyalty has been described as a customer's willingness to continue patronizing and preferably exclusive basis and recommending the firm's products to friends and associate" (Lovelock and Wirtz, 2004, p. 352).

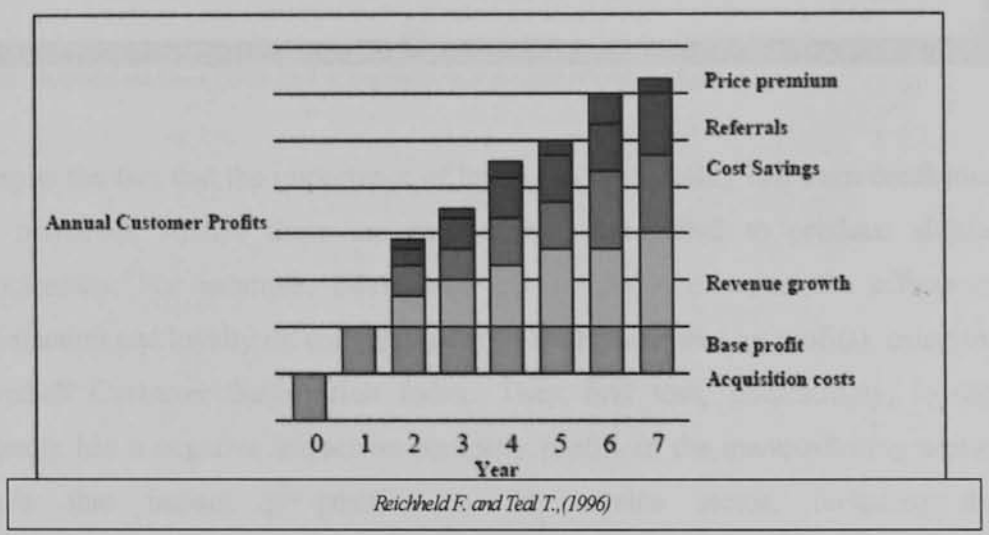
Although there are so many different definitions about customer loyalty, there seems to be two basic approaches. The behavioural approach and the attitudinal approach. As it mentioned before, a definition of loyalty in behavioural terms, usually based on the number of purchases and measured by monitoring the frequency of such purchases and brand switches, when a definition of loyalty in attitudinal terms assume customer loyalty from psychological involvement,

preference, and a sense of goodwill towards a particular product or service. Attitudinal approaches focused mainly on brand recommendations, resistance to superior products, repurchase intention and willingness to pay a price premium (Bitner and Zeithaml, 2003; Cronin and Taylor, 1992). Consequently, customers can be considered loyal to their network telecommunication provider if, in addition to repeatedly purchasing the company's services, they also hold positive attitude on it.

2.1.2 The benefits of customer loyalty

An interesting and fundamental question for companies is why should customer loyalty be an objective. Reichheld and Teal (1996) verifies the effects of loyal customers on company's profit from six different aspects. Figure 2.1 illustrates the effect of loyalty customers on company's profit.

Figure 2.1 The effect of loyal customers on company's profit



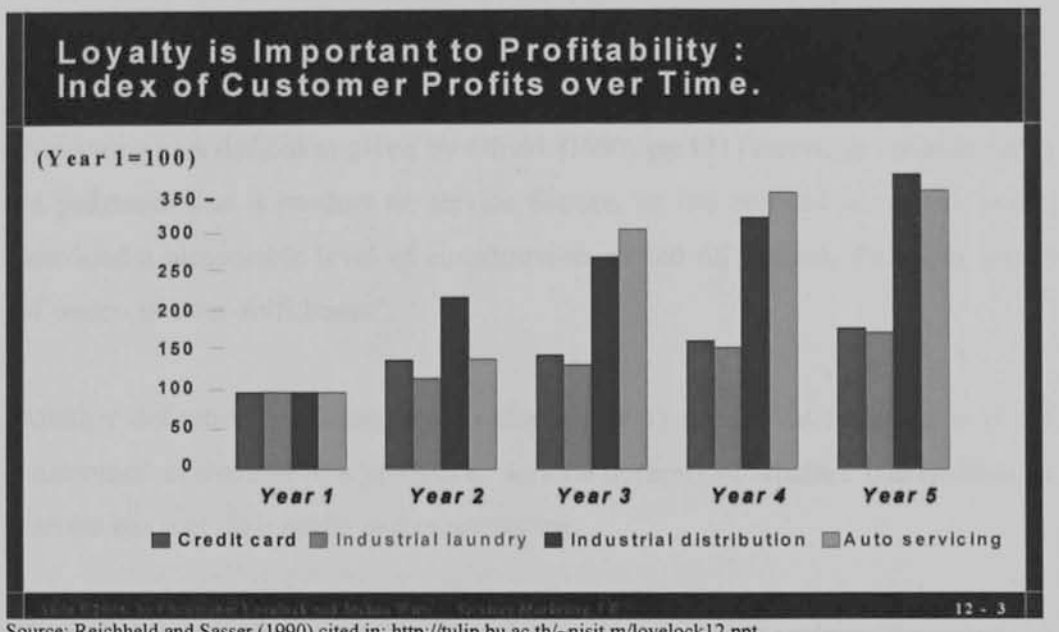
Source: Adopted from Reichheld and Teal (1996)

Reichheld and Teal (1996) suggests that a lifecycle profit pattern for old, loyal customers is higher than for new customers due to accelerating spending over time, reduced operating costs, positive referrals and less price-sensitiveness. As company's relationship with a customer lengthens, the profits rise.

Furthermore, Reichheld and Sasser (1990) analyzed the actual profit per customer in various service business and categorized by the number of years that a

customer had been with the company. It is graphically demonstrated in Figure 2.2. We can see the increasing level of profits over the years for the companies in four industries. In this research industrial distribution and auto servicing companies seems to have the larger profit from their loyal customers.

Figure 2.2 The effect of loyalty on profitability over time



Source: Reichheld and Sasser (1990) cited in: http://tulip.bu.ac.th/~nisit.m/lovelock12.ppt

Despite the fact that the importance of loyalty to profitability had been confirmed by numerous studies there are some cases that failed to produce similar conclusions. For example, Edvardsson et al. (2000) examine the effects of satisfaction and loyalty on company performance (measured by profits), using the Swedish Customer Satisfaction Index. They find that, interestingly, loyalty actually has a negative impact on company profits in the manufacturing sector, while that impact is positive in the service sector, including the telecommunications industry. In order to build true loyalty it is essential to ensure that customers are satisfied with services they consider important. Therefore, the next section focuses on customer satisfaction.

2.2 Customer Satisfaction

2.2.1 Definition of customer satisfaction

Customer satisfaction has long been a subject of research in consumer psychology. It is however a subjective concept as illustrated from different definitions. There are numerous of explanations of customer satisfaction in literature.

According to a definition given by Oliver (1997, pp.131) customer satisfaction is "a judgment that a product or service feature, or the product or service itself, provided a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment".

Another definition by Bitner and Zeithaml (2003) stated that satisfaction is the customers' evaluation of a product or service in terms of whether that product or service has met their needs and expectations.

There is general agreement that "satisfaction is a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations" (Kotler, 2003, pp.36).

Hence, it is clear that the definitions come from customers' point of view and in order to create customer satisfaction somebody should dig into the customers' needs and wants. Customers set up a hierarchy of needs, wants and values based on empirical data, opinions, word of mouth references and previous experiences with services. They use the information to make purchasing decisions. So, customer satisfaction is believed to result from a comparison of what did happen in a service experience with what customers believed or predicted was going to happen (Lovelock and Wirtz, 2004).

2.2.2 Measurement of customer satisfaction

Customer satisfaction defined and measured as either a single-item scale (Bloemer et al., 1998; Cronin and Taylor, 1992) or as a multi-item construct

assessing the satisfaction for each component of the service (Anderson and Srinivasan, 2003; Fornell, 1992). For example, Cronin and Taylor (1992) measured customer satisfaction as a one-item scale that asks for the customers' overall feeling towards an organization when Anderson and Srinivasan (2003) used a 6-item scale based on Oliver (1980) to measure customer satisfaction in the context of electronic commerce. In their longitudinal study, LaBarbera and Mazursky (1983) made the remark that the use of multi-item scale for evaluating satisfaction does not increase reliability over time, but leads to poor response rate and artificial answers by respondents.

Customer satisfaction has been seen here as an overall judgment about how far expectations with regard to a service have been fulfilled in use situations. This qualitative perception is in turn based on evaluative perceptions by the customer with regard to features or value drivers (Gerpott et al., 2001). Consequently, in order to better understanding how to increase customer satisfaction it is essential to clarify service quality concept and define its measurements.

2.3 Service Quality

2.3.1 Definition of service quality

Definitions of service quality hold that this is the result of an evaluation process where customers compare their expectations about a service with their perception of the service to be received (Gronroos, 1984; Parasuraman et al., 1985).

According to Oliver (1997, pp.163) "quality is a consumer-generated comparative judgment since individuals have no implicit sense of quality unless a standard of comparison is provided."

Obviously, these definitions indicate a link with customer satisfaction. Customer satisfaction and perceived service quality are closely related constructs and many practitioners and theorists used them interchangeably. These are both concerned how customers experience a company. Customer satisfaction is valuable because it can lead to repeat business and thus profitability. Additionally, customer

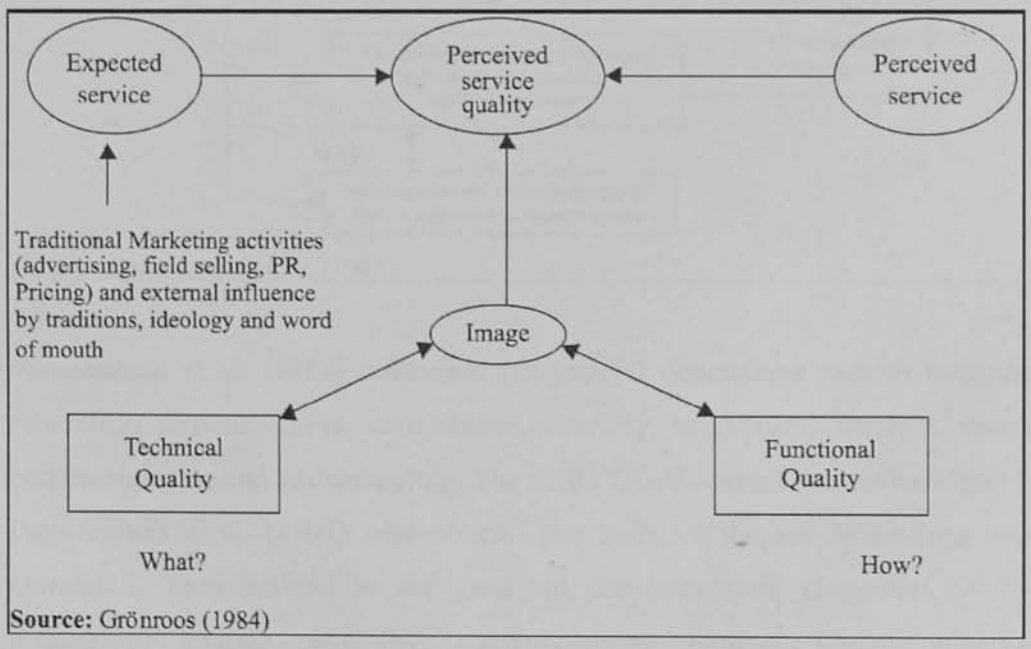
satisfaction is essential to the long-term success of a company help keeping customers loyal. In turn, service quality, as a tactic, could be adopted by companies to gain a competitive advantage over other. The purpose of evaluating service quality and employing conceptual models in service quality is to enable management to identify quality problems or customer expectations and thus help in planning of a quality improvement program. Consecutively, it is improving the efficiency, profitability and overall performance of the company. Some models and measurements of service quality widely applied on service industries including telecommunications sector are presented below.

2.3.2 Models and measurement of service quality

During the past few decades service quality has become a major area of attention to practitioners, managers and researchers due to its strong impact on business performance, customer satisfaction, customer loyalty and profitability (Cronin and Taylor, 1992; Hallowell, 1996).

Gronroos (1984) identified three components of service quality, namely: technical quality, functional quality and image (Figure 2.3).

Figure 2.3 Technical and functional quality model

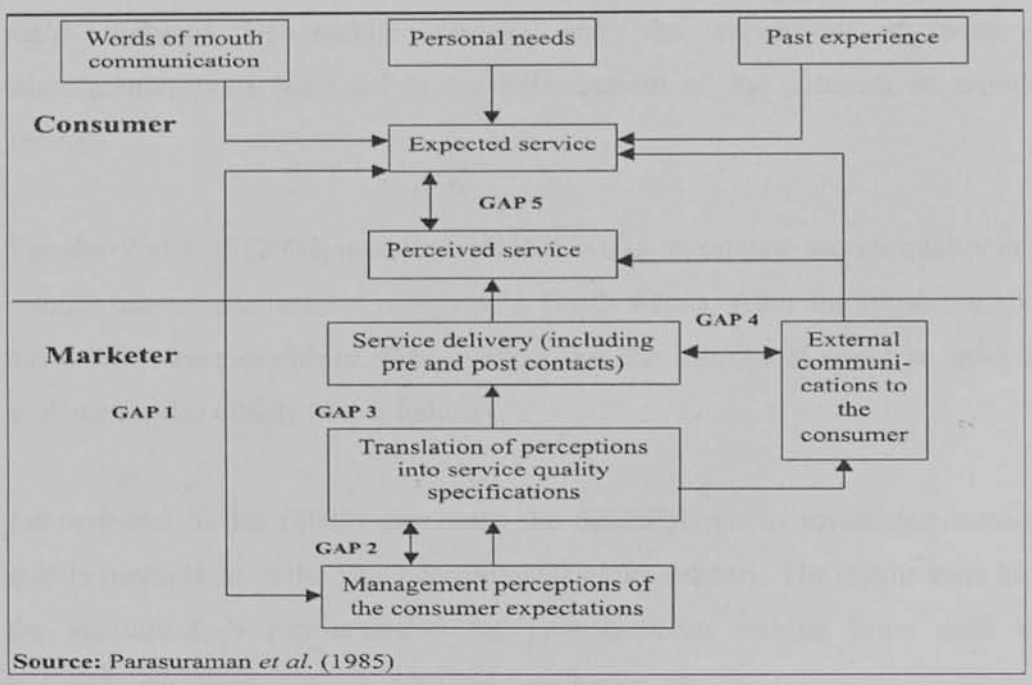


Source: Grönroos (1984)

Technical quality is the quality of what the consumer actually receives as a result of his/her interaction with the service firm and is important to him/her and to his/her evaluation of the quality of service. *Functional quality* is how he/she gets the technical outcome. This is important to him and to his/her views of service he/she has received. *Image* is very important to service firms and this can be expected to built up mainly by technical and functional quality of service including the other factors (tradition, ideology, word of mouth, pricing and public relations).

Parasuraman et al. (1985) proposed that service quality is a function of the differences between expectation and performance along the quality dimensions. They developed a service quality model based on gap analysis (Figure 2.4).

Figure 2.4 GAP model



Source: Parasuraman *et al.* (1985)

Parasuraman et al. (1988) developed ten general dimensions named- tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communications and understanding. The SERVQUAL model was revised later by Parasuraman et al. (1991) who noticed that some of the ten dimensions were correlated. They refined it and finalized the instrument composed of five dimensions include reliability, responsiveness, assurance (communication, competence, credibility, courtesy, and security), empathy, and tangibles.

Cronin and Taylor (1992) investigated and measured service quality and its relationship with consumer satisfaction and purchase intentions. They compared computed difference scores with perception to conclude that perceptions only are better predictor of service quality. They argued on the framework of Parasuraman et al. (1985), indicted that SERVQUAL confused satisfaction and attitude and developed a "performance only measurement" of service quality called SERVPERF. They stressed that service quality is a form of consumer attitude and the "performance only measure" of service quality is an enhanced means of measuring service quality. In particular, they preserved that "performance" instead of "performance-expectation" determines service quality.

The interest for measurement service quality in mobile services increased due to the development of mobile technology and the spread of mobile devices. The rapid diffusion of mobile devices and the expansion of wireless telecommunications have led to the enhancement of the potential of mobile services.

Van-der-Wal et al. (2002) used the SERVQUAL to investigate service quality in a cellular telecommunications company in South Africa. After the reliability and the validity were examined, they confirm that the instrument could be used to evaluate service quality in that industry.

Johnson and Sirikit (2002) also used the SERVQUAL to investigate service quality perceptions in the Thai telecommunications industry. The results were that the instrument is recommended for process-driven service firms such as telecommunications, banking, retailing, health care, etc.

According to Aydin and Ozer (2005) in the mobile telecommunications sector, the base services are coverage of calling area, value-added services, customer support services, the suppliers' services of the operator and services in campaigns.

Similarly, in earlier studies on mobile telecommunication services, service quality has been measured by call quality, pricing structure, mobile devices, value-added

services, convenience in procedures, and customer support (Gerpott et al., 2001; Kim et al., 2004; Lee et al., 2001).

Lim et al., (2006) investigated determinants of satisfaction and loyalty decisions in the use of mobile services. They identified five distinct dimensions of mobile service quality and their direct and indirect effects on economic value, emotional value on loyalty intention through satisfaction. In particular, each dimension of mobile service quality appeared to have different effects on perceived economic value, emotional value, and on the level of satisfaction.

Choi et al. (2007) evaluated the quality of service in mobile business based on fuzzy set theory and suggested six dimensions for quality of mobile services based on dimensions proposed on four previous studies which contacted on mobile industry as well (Table 2.1).

Table 2.1 Comparison of suggested dimensions with previous research

Dimensions for Quality of Mobile service		Dimensions on Previous Research			
		Lee et al. (2001)	Kim et al (2004)	Lim et al (2006)	Wang and Liao (2007)
1	Network	core services	call quality	Network quality	
2	Device		mobile device		
3	Contents	value added services	value-added services	data service	Content quality Appearance
4	Security			billing system	
5	Convenience		convenience in procedures		Ease of use
6	Customer support		customer support	customer service	Service quality
		Price	price structure	Price	

Source: Adopted from Choi et al. (2007)

It is difficult to evaluate the quality of mobile services like we do for traditional pure service areas. Based on the abovementioned researches, mainly on Choi et al. (2007), we partially implemented the suggested quality dimensions in the context of this study. More detailed, in this study services measured by network, value-added service, mobile device, customer service, billing system and pricing structure. Oppose to Choi et al. (2007), we adopt pricing structure as a quality

dimension since this study examine the factors influencing customer satisfaction, not purely evaluate mobile service quality itself. We believe that this multi-item, multi-dimension instrument can provide a good insight into various mobile services and measure adequately a wide range of mobile services characteristics. Additional criteria for choosing the suggested dimensions were the simplicity of the meaning of the used items and the number of items contained in each dimension so as not to discourage respondents to participate in the survey.
The applied dimensions and items presented thoroughly on chapter 4 when discussed measurements of each variable.

As it is implied earlier, in this research we underline the role of telecommunication companies as mobile service providers. Hence, perceived mobile service quality is the critical factor that creates satisfaction and drives business successful development. In chapter 2.4 the effect of service quality on satisfaction discussed more explicitly.

2.4 The inter-relationship between customer loyalty, customer satisfaction and service quality

2.4.1 Relationship between service quality and customer satisfaction

The relationship between customer satisfaction and service quality has received a good deal of attention in the literature. While both service quality and customer satisfaction have certain things in common, satisfaction is generally viewed as a broader concept than service quality, thus, perceived service quality is a component of customer satisfaction (Zeithaml and Bitner, 1996).

Anderson and Fornell (1994) indicate that the literature is not very clear about the distinction between quality and satisfaction. They assume that satisfaction is a "post consumption" experience which compares perceived quality with expected quality, whereas service quality refers to a global evaluation of a firm's service delivery system.

Rust and Oliver (1994) suggest that customer satisfaction or dissatisfaction is a "cognitive or affective reaction" that appeared as a response to a single or expanded set of service encounter.

In one of the empirical studies of this relationship, Iacobucci et al. (1995) concluded that the key difference between service quality and customer satisfaction is that quality relates to managerial delivery of the service while satisfaction reflects customers' experiences with that service. They argue that quality improvements that are not based on customer needs will not lead to improved customer satisfaction.

In several researches on service quality and customer satisfaction in the mobile telecommunications industry also depicted a positive relationship between these two constructs (Kim et al., 2004; Lee et al., 2001; Lim et al., 2006). As it is mentioned before, earlier studies examined the impact of each dimension of service quality on customer satisfaction. In this study we examine if there is a positive relationship between each dimension of service quality and customer satisfaction in order to accept or reject the proposed hypothesis.
So, the above review of the literature provided as the foundations to develop the first hypothesis of this research.

H.1: The higher the level of service quality the higher the level of customer satisfaction.

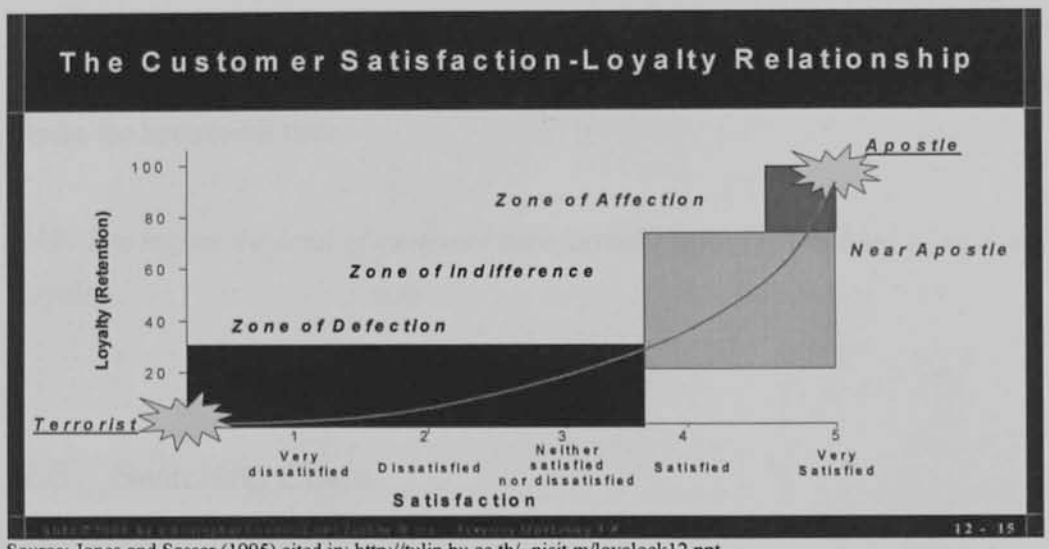
2.4.2 Relationship between customer satisfaction and customer loyalty

Customer satisfaction has traditionally been regarded as a fundamental determinant of long-term consumer behaviour. The more satisfied customers are the greater is their retention and their resistance to alternatives (Anderson and Sullivan, 1993). Fornell (1992) states that high customer satisfaction will result in increased loyalty for the firm and that customers will be less prone to approach from competition. Moreover, satisfaction enhances the positive word of mouth generated through customers (Reichheld and Sasser, 1990). According to Wirtz

(2003) the results of customer satisfaction are repeat purchase, positive word-of-mouth and thus customer loyalty, as well as increased long term profitability.

Jones and Sasser (1995) present a very intuitive classification of an individual's link between satisfaction and loyalty (Figure 2.5).

Figure 2.5 The customer satisfaction-loyalty relationship



Source: Jones and Sasser (1995) cited in: http://tulip.bu.ac.th/~nisit.m/lovelock12.ppt

Customers were classified into four different groups: loyalist/apostle (high satisfaction and high loyalty), defector/terrorist (low satisfaction and low loyalty), mercenary (high satisfaction and low loyalty), and hostage (low satisfaction and high loyalty).

The concepts of satisfaction, loyalty, and retention have been well-established in satisfaction models underlying the national satisfaction indices in several advanced countries. For example, a conceptual model of satisfaction and loyalty referred to as the Swedish Consumer Satisfaction Barometer (SCSB) originated in Sweden in 1989. This was followed by the introduction of the American Customer Satisfaction Index (ACSI) in 1994 (Fornell et al., 1996). These models gave rise to several other indices, such as the European Customer Satisfaction Index (ESCI) and to the conceptual model referred to as the European Performance Satisfaction Index (EPSI). Bruhn and Grund (2000) introduce and test the Swiss Index of Customer Satisfaction and mention moderators to the satisfaction - loyalty relationship. They find that in the telecommunication industry satisfaction explains close to 100% of loyalty.

In the mobile telecommunications services literature, satisfaction has emerged as a strong predictor of loyalty to wireless service providers (Gerpott et al., 2001; Kim and Yoon, 2004; Kim et al. 2004; Lee et al, 2001). For example, Gerpott et al. (2001) in the context of the German mobile cellular telecommunications market, Kim et al. (2004) in Korean, Lee et al. (2001) in France mention some prior theoretical arguments for a causal link between customer satisfaction and customer loyalty and find in their empirical work that satisfaction links into customer loyalty and retention. Based on the above theoretical framework we make the hypothesis that:

H.2: The higher the level of customer satisfaction the higher the level of customer loyalty.

2.5 Switching Costs

2.5.1 Definition and measurement of switching costs

Switching costs has been used in several fields like economics, psychology and employee relations and marketing. Switching barriers have been used as marketing strategies to make it costly for customers to leave the current organization and switch to another. Such barriers include search costs, transaction costs, learning costs, loyal customer discounts and emotional costs, availability and attractiveness of alternatives, service recovery and inertia (Fornell, 1992; White and Yanamandram, 2007). Generally, switching costs can be defined as the costs involved in changing from one service provider to another.

Klemperer (1987) proposed a typology which includes three different switching costs: learning costs, artificial or contractual costs and transaction costs. Nilssen (1992) followed Klemperer's typology, simplified it into two types: exogenous and endogenous switching costs, which emphasize where the switching costs come from. Burnham et al. (2003) developed a typology that identifies three types of switching costs, each containing multiple facets: procedural switching costs (consisting of economic risk costs, evaluation costs, learning costs, and set-up

costs), financial switching costs (consisting of benefit-loss costs and monetary-loss costs), and relational costs (consisting of the costs of sacrificing personal relationships brand relationship).

The above typologies provide a solid basis for subsequent studies. Aydin and Ozer (2005) in an implementation of a National Customer Satisfaction Index in the Turkish mobile telephone market proposed three types of switching costs namely financial cost (monetary costs and benefit-loss costs), psychological or uncertainty cost and procedural costs (search costs, learning costs and set-up costs). We adopt this instrument to measure switching costs in the Greek mobile telecommunications market excluding the sub-dimension of set-up cost which are not fit in the current context. This modification mainly occurs due to removal of barriers concerning number portability. Recently mobile companies allow customers to change from one operator to another and keep their previous handset without additional fee as well.

2.5.2 The effect of switching costs on customer loyalty

A number of scholars have conducted empirical studies on the direct and adjustment effect of switching costs on loyalty in consumer markets (Aydin and Ozer, 2005; Patterson and Smith, 2003), in business-to-business relationships (Heide and Weiss, 1995; Lam et al., 2004; Nielson, 1996; Yanamandram and White, 2006) as well as in employer-to-employee relationships (Weiss and Anderson, 1992). These researchers confirm, in different degree, the positive effect of switching costs on loyalty.

Supplementary, in an empirical study on five different service industries de Royter et al. (1998) focus on the role of switching costs as antecedent of three types of loyalty. They confirm the positive effect of switching costs on loyalty and underline that the findings from one industry cannot be generalized to other industries. In telecommunications industry researchers examined the role of switching costs on customer loyalty and validated a significant positive effect.

Lee et al. (2001) who contacted a research on mobile phone service in France have tested and confirmed the positive effect of switching barriers on customer

retention. That study found empirical support for the theory of moderating role of switching costs on satisfaction-loyalty link but only among the low spenders in their sample.

Additionally, in a research of the influence of satisfaction, trust and switching barriers on customer retention in a continuous purchasing setting (fixed line telephone in the UK) Ranaweera and Prabhu (2003) show that the main and the interaction effects of switching barriers on retention were highly significant.

More recent studies in the mobile telecommunications sector by Aydin et al. (2005) and Kim et al. (2004) in Turkey and Korea respectively, confirm the key role of switching costs on loyalty. Aydin et al. (2005) found that the effect of customer satisfaction on loyalty in customers is less when switching cost is perceived to be high rather than low. In other words, perceived switching cost reduces customers' sensitivity to the level of customer satisfaction. Kim et al. (2004) in their empirical causal model concluded that switching barrier, which consisted by switching costs (loss cost and move-in cost) and interpersonal relationships, have a direct and adjustment effect on customer satisfaction and customer loyalty. They validate that higher levels of the switching barrier are associated with higher levels of customer loyalty

Since switching costs act as a barrier to customers' switching, we argue that switching costs prevent customers to change service providers, and therefore increase customer loyalty.
Thus, we examine which types of switching costs have positive impact on loyalty and test the following hypothesis:

H.3: The higher the level of switching costs the higher the level of customer loyalty.

Chapter 3. An overview of the mobile telecommunications market

3.1 Introduction

Since last decade the telecommunications industry has turn into one of the main factor for the economic development of industrialized nations. This is the consequence of the huge technological development as well as of the increased number of companies and the intense competition that has developed. These factors, in turn, are the result of the removal of monopoly rights of public telecommunication networks (i.e. O.T.E in Greece).

The Greek mobile telecommunications market has been a strong performer over the last ten years and appeared as one of the most dynamic and profitable in Europe. This market continues to produce growth, despite penetration rate of more than 140%, with more than 15 million users. Accordingly, market leader Cosmote, as well as, Vodafone, Wind and its subsidiary Q-Telecom all reported large numbers of net additions in previous years results.

It is estimated that almost half of telephone calls worldwide are dialed by cellular phones. This is an indicator of the wide spread of mobile over fixed telecommunications and highlight the importance of research in this field. Hence, mobile telecommunications have clearly become a part of everyday life for individuals, business and the community. The rapid growth of mobile telecommunications worldwide caused not only by the technological innovations but also from the fierce competition both on fixed and mobile operators. Competition appears on prices, in advertisement as well as on factors such as loyalty programs and quality of services. Similar to other sectors of economy, telecommunications companies in Greece by implementing strategies and tactics are trying to gain competitive advantage, expand their market share and increase their profitability.

3.2 Historical overview and factors drive the growth of the industry

Mobile telecommunications networks started to operate globally from the decade of 1980, but the major expansion occurred on early '90 when there was introduced digital cellular networks. In Europe the development of digital European Global System for Mobile communications (GSM) drive to the significant growth of mobile telecommunications.

As far as concern Greece, mobile telecommunications firstly appeared in 1992 when after an open competition of bids made by the state, were given the first two licenses. These licenses for the creation and operation of national mobile telecommunications network GSM provided to Telestet (currently Wind) on August 1992 followed by Panafon (currently Vodafone). At that time OTE excluded from the competition due to a governmental regulation. Telestet started to operate at June 1993, when it was made the first mobile call in Greece, and Panafone on July of the same year. Cosmote, a member of OTE Group was the third player of the market licensed on January of 1998 and started operated on April 1998. Q-Telecoms the fourth mobile telecommunications provider implemented its commercial activity from June 2002 until January 2006 when it was acquisitioned by Wind. Therefore, at present there are three major mobile telecommunications companies in Greece: Wind, Vodafone and Cosmote.

Below there is presented the reasons for the rapid growth of this sector in Greece by taking a brief look on the wider external environment.

- The legal and political environment appeared to become more stable and simpler, enhancing investments and competition.
- When after 2001 Greece joined the Economic and Monetary Union (Eurozone) the more stable macroeconomic framework reduce interest rates and growth the employment.
- The increasing need for mobile telecommunications from individuals as well as from companies which enhanced by the limited time and the quick way of living. Here, we can also refer the social mimic as well as the feelings of uniqueness and personalization when holds a distinct personal mobile number and use special services.

▪ Over the time, technological innovations enhance the use of mobile services and linking mobile phones to other forms of technology particularly media and information technology.

3.3 Market share

Table 3.1 presents the total number of subscribers (both pre-paid and post-paid) of the three major mobile operators from 1998 to 2007 as well as the additional new subscribers over these years.

Table 3.1 Subscribers over years

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Cosmote	-	1.048.352	2.061.011	2.943.532	3.506.338	3.917.010	4.153.347	4.644.440	5.217.927	5.939.366
Vodafone	1.068.632	1.663.209	2.226.000	2.884.872	3.218.717	3.644.186	3.845.070	4.437.876	4.960.000	5.346.198
Wind	688.614	1.182.751	1.645.392	2.135.338	2.513.642	2.402.777	2.323.866	2.419.336	2.831.840	4.444.000
Q-Tel.	-	-	-	-	75.563	366.536	721.000	938.552	1.072.147	-
Total	1.757.246	3.894.312	5.932.403	7.963.742	9.314.260	10.330.509	11.043.283	12.440.204	14.081.914	15.729.564
New subscribers	-	2.137.066	2.038.091	2.031.339	1.350.518	1.016.249	712.774	1.396.920	1.641.710	1.647.650

Source: announcements of companies

From the above table we notice that none of the three operators hold a market share over 50% as far as concern the number of subscribers. Furthermore, according to the National Commission for Telecommunications and Post (NTCP or EETT as it prefers to be known - its Greek acronym), based on net profits, there isn't a dominant operator in Greek market.

Chart 3.1 Market share over years

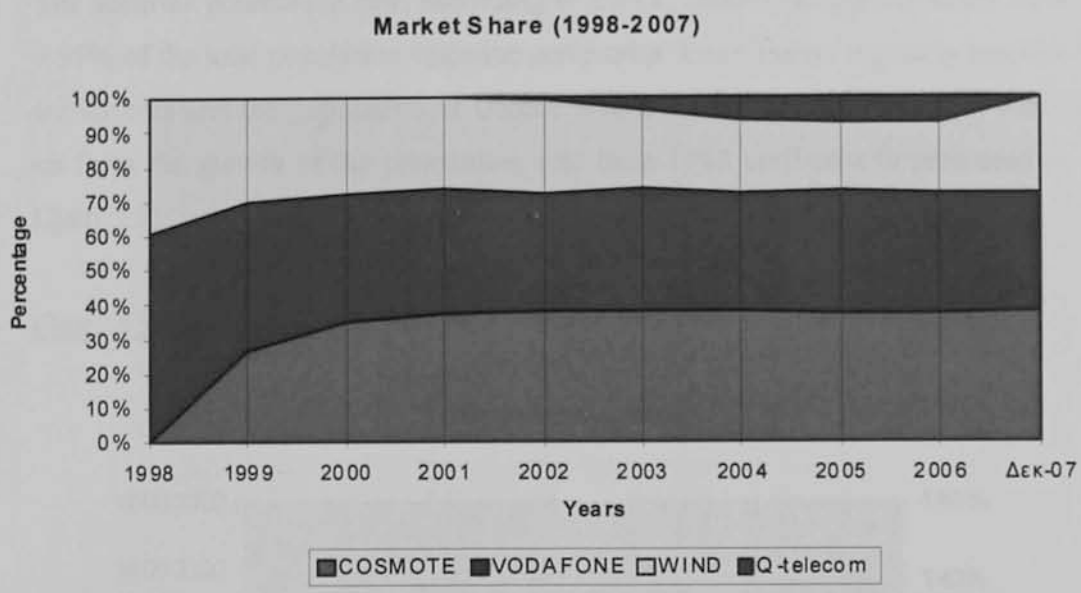
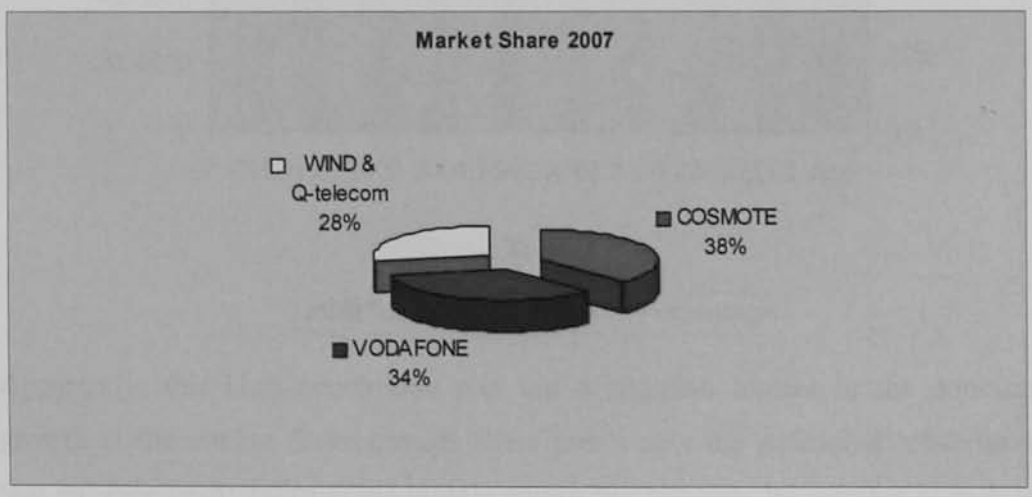


Chart 3.1 shows market share per company over the years. From the year 2007 and beyond, Wind and Q-telecom estimate together their market share due to operate under the same management. In chart 3.2 we can see the market share of the major operators at the end of the 2007 (Q3).

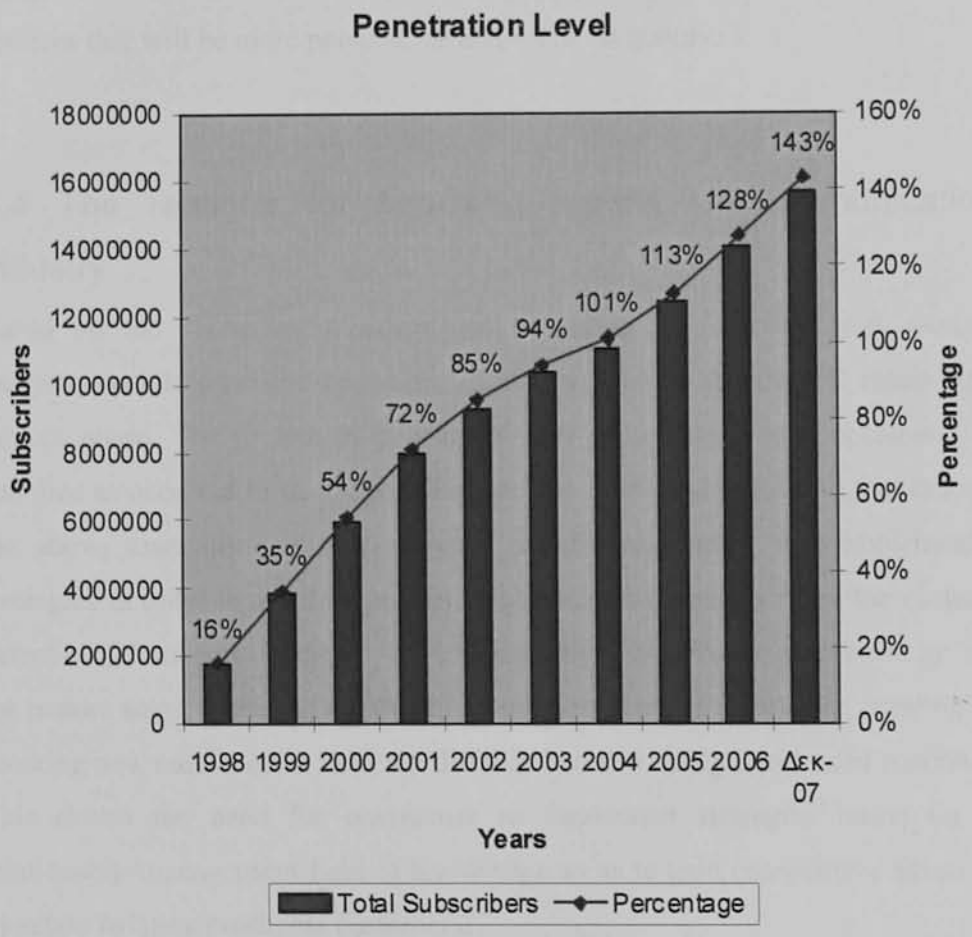
Chart 3.2 Market share



Today the total subscribers rise up to 15 million and the penetration rate on approximate 140% of the total population of the country. It means that a number of subscribers are holding more than one telephone number. This penetration rate is among the highest in world and makes some analysts to talk about "the Greek paradox" due to continuing growth. Although these statistics seems not to be

totally accurate as long as based on facts obtained by companies' announcements. The accurate penetration rate, according to EETT, should be approximately 85% – 95% of the total population since the companies doesn't erase regularly inactive subscribers and the population of Greece constantly increasing. However, based on facts the growth of the penetration rate from 1998 until now is presented in Chart 3.3.

Chart 3.3 Penetration level



Apparently, this high penetration rate has a negative impact in the constant growth of the market. Even though, there aren't only the additional subscribers that enhance profitability of the mobile companies but also the increase in mobile phone use. In Greece, according to Merrill Lynch, in the beginning of 2007 the average monthly mobile phone use is 188 minutes, near but still below the European (about 200 minutes/month) or USA average amount of 800 minutes per month. There is estimated that in Greece the Average Minute of Usage per month for each subscriber (AMOU) increasing 10% - 12% annually.

The Average Revenue Per Unit (APRU) is approximately 25 euros (an average of the three companies) which is about 8% -10 % lower compared with previous year results. This reduction is the consequence of EETT's policy for the reduction of fixed cost on mobile phones so as Greece been aligned with the European standards. Even though, currently a minute of mobile phone use in Greece is still more expensive compared to countries with the same Gross National Product (GNP) - about 12-15 eurocents/minute (ACCI, 2007). These loses for the companies, due to lower charges, can be overcomed by the expansion of the usage. This in turn can be achieved by providing added more sophisticated services that will be more personalize and focus on quality.

3.4 The reasons for choosing mobile telecommunications industry

Based on the above examination and according to forecasts from business analysts, mobile telecommunications market in Greece shortly will reach into a mature phase. The growth of penetration rate subsequently will decelerate and stabilize as occurred in developed markets. An additional indication that enforces the above assumption is that currently mobile companies start implementing strategies in order to attract customers from their competitors when the customer defection (churn-rate) come up to 30% annually < http://www.gsmforum.gr >. In the mature stage, when the number of subscribers starts to decelerate, creating and securing new customers is not only difficult but also costly in terms of marketing. This drives the need for companies to implement strategies based on the relationship-management field of knowledge so as to gain competitive advantage by retain existing profitable customers.

Greek mobile telecommunications market is an interesting research field since it's a relative young market. As a young market, except from the rapid growth in customers, characterized by the fact that the service category exchanged is new both for sellers and buyers. Operators had had any or little past experience as well as consumers that have not used other mobile services before. So, there is a lot of uncertainty in their relationships.

Another special feature that drives the need to examine the loyalty concept in the mobile telecommunications market is the continuous transaction that takes place over a long period of time. It can be seen from a customer's perspective that pre-pay or post-pay a fee for the promised services which might not meet expectations. Or else, from mobile telecommunications operators' view because continuing the relationship with a current subscriber in this type of transaction is more important than with transactions in purchase goods. The reason is that marginal income from the customer increases the longer the business relationship lasts (Gerpott et al., 2001).

Finally, in a continuous purchasing setting switching is more difficult than in the retail sector. It requires substantial energy, time and effort due to the presence of switching barriers and therefore the switching decision is made after consideration.

Chapter 4. Research Methodology

Chapter 4 presents the methodology that we followed in order to contact this research. Initially, the section refers to the general purpose and the research approach of the research and continue with the overall research strategy. Afterward, there included the sample selection method and data collection method and concludes with references on data analysis method. At the end of the chapter there also discussed validity and reliability issues as prerequisite of a well-designed questionnaire which can provide accurate information.

4.1 Research purpose

Research can be classified in terms of its purpose. According to Saunders et al. (2003) research most often classified as exploratory, descriptive and explanatory. When a problem is broad and not specifically defined, the researchers use exploratory research as a preliminary step. Exploratory research can be performed using a literature search, surveying certain people about their experiences, focus groups, and case studies Exploratory research may develop hypotheses, but it does not seek to test them (Yin, 1994).

The object of descriptive research is to represent an accurate profile of persons, events or situations (Robson, 1993). When conducting a management or business research, it seeks to describe users of a product or service, determine the proportion of the population that uses a product or service, or predict future demand for a product or service. In oppose to exploratory research, descriptive research should define questions, people surveyed, and the method of analysis before beginning data collection. In other words, the who, what, where, when, why, and how issues of the research should be defined. Such preparation allows one the opportunity to make any required changes before the process of data collection has begun (Saunders et al., 2003).

The study can be explanatory when the focus is on cause-effect relationships, explaining what causes produced what effects (Yin, 1994). Explanatory (or Causal) research seeks to find cause and affect relationships between variables. It

accomplishes this goal through laboratory and field experiments. The emphasis here is on studying a situation or a problem in order to explain the relationship between variables (Saunders et al., 2003).

Our research purpose and research questions reveal that this study is mainly descriptive and explanatory. As stated by Sauders et al. (2003, pp. 97) "Description in management and business research…should be thought of as means to an end rather than an end in itself ".

4.2 Research approach

Quantitative approach is one in which the researcher primarily uses post positivist claims for developing knowledge (i.e. cause and effect thinking, use of instrument and observation, and test of theories and hypotheses), employs strategies of inquiry such as experiments and surveys and collect data on preset instruments that provide statistical data (Creswell, 2003). Quantitative research is frequently referred to as hypothesis-testing research.

Qualitative research is multi method in focus, involving an interpretive, naturalistic approach to its subject. Yin (1994) states that qualitative methods are often related to case studies, where the aim is to receive systematic information and thus, obtain a deep understanding of the research problem. Qualitative research is softer, and explores why people act or think the way they do, and is most effective when it is 'open ended', as in focus groups or in-depth interviews.

Since the purpose is to understand the most important dimensions of customer loyalty from Greek customers' perspective and test the hypotheses that derived from the theory, quantitative approach is found to be more appropriate for this study.

4.3 Research strategy

Research strategy is a general plan of how you are going about answering the research questions you have set (Saunders et al., 2003). Yin (1994) pays attention in selecting strategy, when compares the case study with experiments, surveys, histories, and the analysis of archival information. Each strategy has advantages and disadvantages, depending on three conditions: 1) the type of research question, 2) the control an investigator has over actual behavioural events, and 3) the focus on contemporary as opposed to historical phenomena.

Table 4.1 Relevant situations for different research strategies

Strategy	Form of research questions	Requires control of Behavioral events?	Focuses on Contemporary events
Experiment	How, why?	Yes	Yes
Survey	Who, what, where, how many, how much?	No	Yes
Archival Analysis	Who, what, where, how many, how much?	No	Yes/No
History	How, why?	No	No
Case study	How, why?	No	yes

Source: adopted from Yin (1994)

The aim of this study is to collect the answers from a large scale of mobile telecommunications users (who), according to research questions (what), which must be answered mostly quantitative. So, we contacted survey strategy and supplementary use secondary data ascertained from the literature where it is necessary in order to clarify statements. A survey is a procedure used to collect primary data from individuals. The data sought can range from beliefs, opinions, attitudes and lifestyles to general background information on individuals such as gender, age, education and income as well as company characteristics like revenue and number of employees (Fowler, 2002)

4.4 Sample selection

For many research questions and objectives it will be impossible for researcher either to collect or to analyze all the data available due to the time, money and often access. The basic idea of sampling is that by selecting some of the elements in a population, researcher may draw conclusions about the entire population.

According to Saunders et al., (2003), sampling techniques can be divided into two types:

- Probability or representative sampling.
- Non-probability or judgmental sampling.

Probability sampling is most commonly associated with survey-based research where researcher needs to make assumptions from the sample about a population to answer the research questions or to meet the research objectives. In probability sampling, sampling elements are selected randomly and the probability of being selected is determinates a priory by the researcher. If done properly, probability sampling ensures that the sample is representative (Hair et al., 2003).

Non-probability sampling provides a range of alternative techniques based on researcher's subjective judgment. In non-probability sampling the selection of elements for the sample is not necessarily made with the aim of being statistically representative of the population. Researcher can uses subjective methods such as personal experience, convenience, and expert judgment to select the elements in the sample. According to Summuel et al. (2003) non-probability methods are the convenience sampling, the judgment sampling and the quota sampling.

In this research the sample has been selected from the population of Greece that uses mobile telecommunications services. The sample was selected by using judgment because the sample should be familiar with mobile telecommunications services and should have experience of using mobile telecommunications services. Besides, due to time constraints and to the nature of the research we collected information from the population who were conveniently available to provide it. In order to avoid bias the sample was extracted from various geographical territories (urban and rural) nearby and inside of three major Greek cities: Larissa and Thessaloniki and Athens.

Our research excludes the market for business customers who mainly use mobile communications services to earn income. Unlike residential customers, business users often do not themselves make the decision to sign or extend a mobile subscription contract. Therefore we must underline this distinction between the

processes used to retain business accounts and those used to retain residential customers. To reduce complexity, therefore, we restrict our analysis to the residential customer segment.

4.5 Data collection method

There are two major approaches to gather information about a situation, person, problem or phenomenon. Sometimes, required information is already available and only need to be extracted. However there are times when the information must be collected. Based upon these broad approaches to information gathering data are categorized as: secondary data and primary data. Secondary data are collected from secondary sources such as publications, personal records or past surveys when primary data are collected through observation, interviews or questionnaires (Hair et. al., 2003).

In this study a quantitative survey has been used as data collection method. This is a commonly used procedure to collect primary data from individuals. In current study a structured questionnaire which divided into three parts was contacted. More specific, a questionnaire was prepared to get idea about the customers' perceptions and beliefs about mobile services and companies in mobile telecommunication market as well as about the perceived costs that prevent customers to switch operator.

In this study we used an interviewer-administered questionnaire. This type of questionnaire usually has high response rate, it can include more complicated questions and is easier to route respondents (Saunders et al., 2003). A street interception personal interview was conducted in major traffic nodes and at the entrances of shopping centers. During the three-week fieldwork, a total of 205 usable questionnaires were collected and used for this study. The author approached 265 people. 246 of them were mobile telecommunications users. From them 217 accepted to answer the questionnaire. 210 of them have been used at least once a value-added mobile service and 205 finally answer the whole questionnaire correctly.

At the beginning of each interview, respondents were asked to consider the service provider that they were using. If they used multiple providers, they were asked to consider the one they used most often. They then filled in measures of service quality, customer satisfaction, switching costs, and customer loyalty. Finally at the end of the questionnaire thank the person for taking the time to complete the questionnaire (Appendix 1).

4.5.1 Questionnaire structure – measurement of variables

The questionnaire is divided into three parts. The 9 items used in the first and second part collected demographic data from the respondents and supplementary data for further analysis. The third part included 39 items and gathered data for the dimensions of service quality, customer satisfaction, customer loyalty and switching costs.

Service quality measured by 18 items on a 5-point Likert scale from "strongly disagree" to "strongly agree". Questions 1-18 were obtained by previous recent studies that contacted to measure quality dimension of mobile telecommunications services.

- Questions 1 and 2 measure the *network quality*. The clarity of voice and the area coverage are the items that according to Lim et al. (2006), Kim et al. (2004) and Lee et al. (2001) measure this factor. These authors based on previous studies and marketing experts developed items and scales that measure the quality of mobile telecommunications services.
- Questions 3 to 5 measure the quality of *value-added services*. The variety of value-added services, the easy of use and if these are up to data are the items which used by Kim et al. (2004) to measure this factor. As value-added services can be concerned intangible objects such as SMS and MMS, WAP, GPRS, music, news, games, ring tones, etc which provided through mobile services.
- Questions 6 to 8 measure the perceptions of customers as far as concern the quality, the variety and the design of the available *mobile devices*. These questions also adopted by Kim et al. (2004).
- Questions 9 to 12 measure *customer service* quality. This factor evaluate the quality that customer perceived while trying resolving specific problems with a mobile service. These four items adopted by Lim et al. (2006).

▪ Questions 13 to 15 measure the perceptions of consumers about pricing and price schedules. The dimension of *pricing structure* used by Kim et al. (2004). The reasonability of the prices, the variety of price schedules and the degree of freedom to choose price schedule are the items that measure this factor.

▪ Finally, based on Lim et al. (2006), questions 16 to18 measure *billing system*. We evaluate this dimension by using three items: provision of accurate billing, ease of understanding and resolving billing issues and quick resolution of billing issues.

Based on previous discussion in the literature review section we conclude that the concept of customer satisfaction could be defined as "the overall satisfaction after the actual use of the services". Accordingly, respondents were asked to scale their global level of satisfaction with their mobile phone company on a single-item 5-point Likert scale anchored by "very dissatisfied" to "very satisfied".

In the current questionnaire we use the customer loyalty scale applied by Aydin et al. (2005) in a study of the Turkish mobile telecommunications market. These authors, as they declared, based on previous studies mainly on Narayandas (1996, cited in Aydin et al., 2005) and developed a comprehensive scale included five items. Operational measures of customer loyalty in our study are repurchase intention, resistance to switching to competitor's product that is superior to the preferred vendor's product and willingness to recommend the preferred vendor's product to friends and associates. Hence, we measure loyalty based both in attitudinal and behavioural approaches trying to get a holistic view of customers' loyalty to mobile companies in Greece.

Based on Burnham et al. (2003), Aydin and Ozer (2005) proposed a further typology of switching costs. They categorize switching costs into 3 broad dimensions named financial costs, procedural costs and psychological costs which also contained 6 sub-dimensions (*Monetary cost*, *Benefit-loss cost*, *Uncertainty cost*, *Evaluation cost*, *Learning cost* and *Set-up cost*). Totally 17 items implemented to measure switching costs. As mentioned before, we adopt this instrument to measure switching costs in the Greek mobile telecommunications market excluding the sub-dimension of *Set-up cost* (2 items) which are not fit in the current context. So, the 2 items measured the perceived costs from setting up a

different telephone number in that study, are not applied in the Greek mobile telecommunication market and thus removed.

We measure switching costs with a third-order factor model containing 15 items divided on 5 dimensions:

- *Monetary cost* (4 items) Financial costs
- *Benefit-loss cost* (2 items)
- *Uncertainty cost* (3 items) Psychological costs
- *Evaluation cost* (3 items) Procedural costs
- *Learning cost* (3 items)

Financial switching costs can be thought of as a "sunk cost", which appears when customer changes his/her brand. In our study financial costs consisted of *Monetary costs* and *Benefit-loss costs*. Monetary costs measured by 4 items and Benefit-loss cost by 2 items.

Psychological costs include *Uncertainty cost* which measured by 3 items depicting the uncertainty and risk associated with switching to an unfamiliar brand.

Learning costs and *Evaluation costs* are measured by 3 items each. These costs primarily involve the expenditure of time and effort from customers' perspective in order to evaluate alternative brand and services and learn to use the mobile services of a new operator.

4.5.2 Questionnaire scale

Rating or scale questions are often used to collect opinion data. Items included in the third part of the questionnaire measured by a 5-point Likert-style rating scale of closed questions. This type of scale according to Saunders et al. (2003) commonly used when you ask the respondent how strongly they agree or disagree with a statement or series of statements, usually on a 4-point as up to 7-point rating scale. The advantages of closed questions are that they are quick to complete, select between alternatives and easily analyzed by the researcher. A

main disadvantage of this type of questions and of the questionnaire as an instrument is that the collecting data may not look in depth to the research problem (Saunders et al., 2003). As seen in the questionnaire the 5-point scale measured the performance, the confirmation or the satisfaction feeling and outcome from customer's perspective (Appendix 1).

4.6 Pilot test

The questionnaire was constructed based on research questions and frame of reference that discussed before. Afterward a pilot study was contacted. A pilot study is helpful technique in terms of identifying potential miscalculations. The purpose of the pilot test is to refine the questionnaire so that respondents will have no problems in answering the questions and there will be no problems in recording the data. Additionally, it is useful so as to test the questions' validity and the likely reliability of the data that will be collected. Pilot test also ensure us that the data collected will enable our investigative questions to be answered (Saunders et al., 2003).

The first questionnaire was developed and ten of these were tested on consumers of mobile telecommunications services. They were asked whether the questions made sense to them and whether were easy to understand. This pre-test was particularly useful because we could be able to spot mistakes and misunderstandings mainly concern the translation from English to Greek language. Subsequently, refining some questions and the improved questionnaire was developed.

4.7 Validity and reliability

In order to reducing the possibility of getting the answers wrong, attention need to be paid to two particular issues on research design: reliability and validity (Saunders et al., 2003).

4.7.1 Validity

Validity is concerned with whether the findings are really about what they appear to be about. Validity defined as the extent to which data collection methods accurately measure what they were intended to measure (Saunders et al., 2003). There are two major forms: external and internal validity. The external validity of research findings refers to the data's ability to be generalized across persons, settings and times. Internal validity is the ability of a research instrument to measure what is purposed to measure (Cooper and Schindler, 2003). In this study we take a number of steps that ensure the validity: Data has been collected from the reliable source - from respondents who are familiar and experienced of using mobile services. Survey questions and the questionnaire constructed based on literature review and frame of reference to ensure the validity of the results. Questionnaire has been pre-tested by the responded before starting the survey. Questionnaire was tested by at least ten persons both male and female in different age and education level. Data has been collected through three weeks; within this short period of time no major event has been changed with the related topic.

4.7.2 Reliability

According to Saunders et al. (2003), reliability refers to the degree to which data collection method will yield consistent findings, similar observations or conclusions reached by other researchers or there is transparency in how sense was made from the raw data. A measure is reliable to the degree that it supplies consistent results. Reliability is a necessary contributor to validity but is not a sufficient condition for validity. Reliability can be assed by the following questions (Easterby-Smith et al., 2002, p.53):

- Will the measures yield the same results on other occasions?
- Will similar observation be reached by other observers?
- Is there transparency in how sense was made from the raw data?

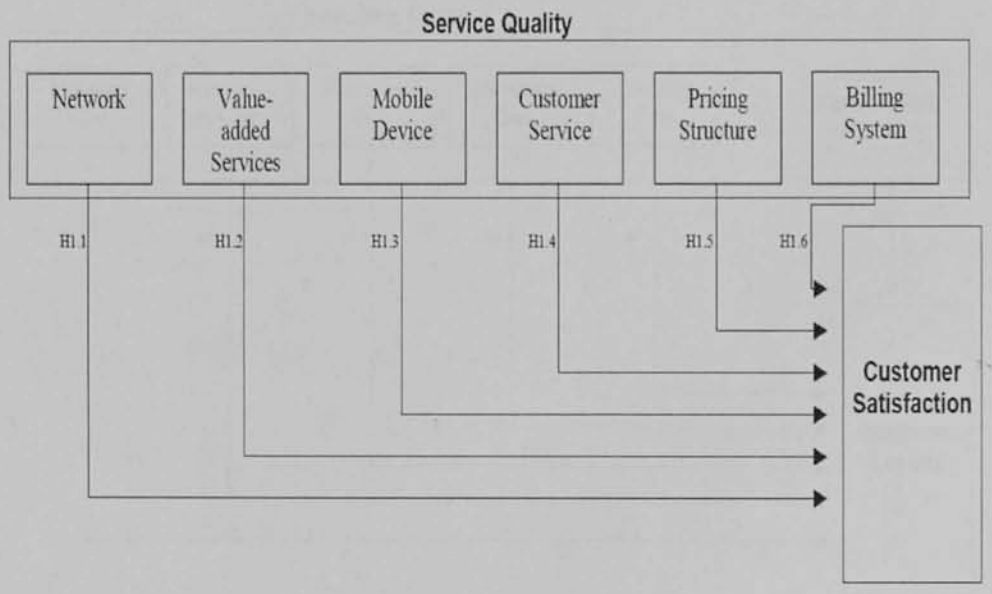
In this study in order to ensure the reliability a) Questionnaire was divided into three part so as to be explicable b) The theories that have been selected for the study was clearly described and research questions has been formulated based on previous research. Data has been collected based on the frame of reference that

was drawn from the discussed theories. c) Coefficient alpha (Cronbach's α), which measured the average of measurable items and its correlation, for the different constructs were above 0.7. Reliability statistics presented more detailed in the next chapter.

4.8 The developed hypothesis and the proposed models

Based on the discussed theory we formulated the hypotheses detailed below. Figure 4.2 and figure 4.3 presents the proposed models representing all the research hypotheses.

Figure 4.2 Proposed model A



H.1: The higher the level of service quality the higher the level of customer satisfaction.

H.1.1: The higher the level of network quality the higher the level of customer satisfaction.

H.1.2: The higher the level of value-added service the higher the level of customer satisfaction.

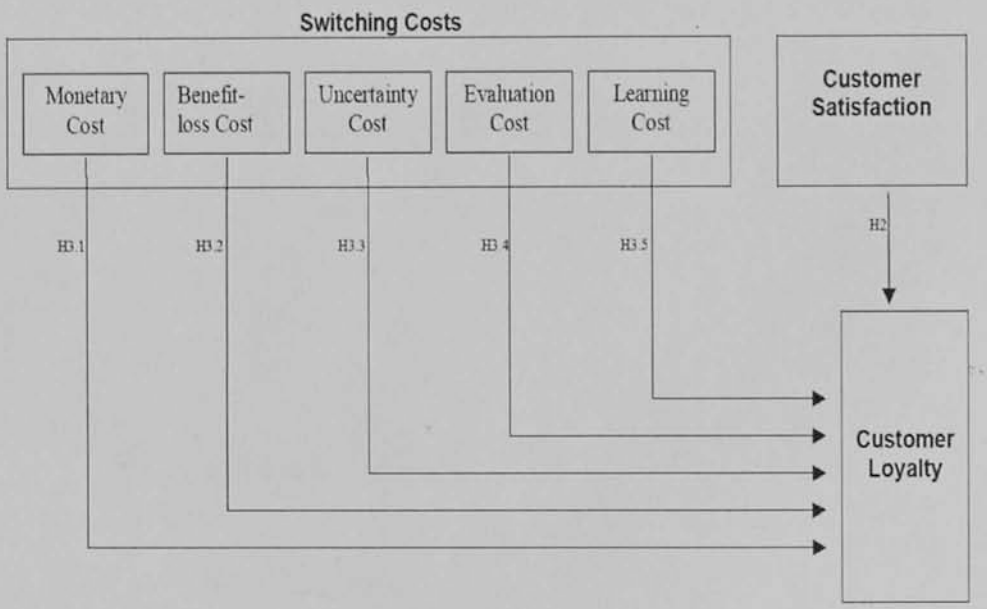
H.1.3: The higher the level of mobile device the higher the level of customer satisfaction.

H.1.4: The higher the level of customer service the higher the level of customer satisfaction.

H.1.5: The higher the level of pricing structure the higher the level of customer satisfaction.

H.1.6: The higher the level of billing system the higher the level of customer satisfaction.

Figure 4.3 Proposed model B



H.2: The higher the level of customer satisfaction the higher the level of customer loyalty.

H.3: The higher the level of switching costs the higher the level of customer loyalty.

H.3.1: The higher the level of monetary cost the higher the level of customer loyalty.

H.3.2: The higher the level of benefit-loss cost the higher the level of customer loyalty.

H.3.3: The higher the level of uncertainty cost the higher the level of customer loyalty.

H.3.4: The higher the level of evaluation cost the higher the level of customer loyalty.

H.3.5: The higher the level of learning cost the higher the level of customer loyalty.

Chapter 5. Research Analysis and Findings

In this chapter the results of the statistical analysis is provided. Initially, there is presented the demographic characteristics of the surveyed respondents. Then, the collected data analyzed and the results of the statistical analysis presented. Finally, there tested the research hypotheses and the findings discussed.

5.1 Descriptive analysis

5.1.1 Demographics - respondents' profile

In the questionnaire we asked from the consumers some general information, especially demographic characteristics and additional information about their consumption and actual behavior with their current mobile service provider. Demographic characteristics of the respondents presented in table 5.1.

Table 5.1 Demographic characteristics

Characteristics		Frequency	Valid Percent
Sex	Male	111	54,1
	Female	94	45,9
Age (Years)	Less than 24	48	23,4
	25-34	78	38
	35-44	44	21,5
	45-54	22	10,7
	More than 55	13	6,3
Education	Primary School	14	6,8
	Secondary School	69	33,7
	University or TEI	102	49,8
	Postgraduate	20	9,8
Monthly Income (Euro)	Less than 800	64	31,2
	801-1500	90	43,9
	1501-2500	38	18,5
	More than 2501	13	6,3

Total n = 205

According to the above table, a main observation is that the sample is not representative of the Greek population. Our sample contains more male (54,1%)

than female (45,9%), when more than half (58,6%) of them present higher education levels (Appendix 2).

The beneath table 5.2 includes respondents' characteristics concerning the type of mobile package they use, the preferred mobile company, the levels of monthly expenses, how long they were use their mobile telecommunications provider and how many times they were changed their mobile device during the use of the particular operator (Appendix 2). We must remark that the sample doesn't represent the exact percentage of the penetration rate of each of the three mobile companies in Greek population. Even the sample contains more respondent from Cosmote than Vodafone and more from Vodafone than Wind according to current situation, the variation in customer base between them, as seen in chapter 3, was less than appeared in our sample.

Table 5.2 Additional respondents' characteristics

Characteristics		Frequency	Valid Percent
Package	Pre-paid	54	26,3
	Contract	151	73,7
Firm	Cosmote	86	42
	Vodafone	70	34,1
	Wind	49	23,9
Monthly Expenses (Euro)	Less than 15	26	12,7
	16-30	47	22,9
	31-45	40	19,5
	46-60	44	21,5
	61-75	30	14,6
	More than 76	18	8,8
Length of use (Months)	Less than 12	36	17,6
	13-24	44	21,5
	25-36	41	20
	37-48	49	32,9
	More than 49	35	17,1
Change device	0 times	22	10,7
	One time	48	23,4
	Two times	49	23,9
	Three times	48	23,4
	More than 4 times	38	18,5

Total n = 205

Table 5.3 shows how long the customers of each of the three mobile companies use their mobile telecommunications provider. These findings probably indicates an average length of staying with the particular operator. The most of our respondents (43,9%) were using their current mobile telecommunications operator from 2 to 4 years.

Table 5.3 Firm and length of use

		Length of use					Total
	Months	≤12	13 - 24	25 - 36	37 - 48	≥49	
Firm	Cosmote	22	16	9	24	15	86
		25,6%	18,6%	10,5%	27,9%	17,4%	100,0%
	Vodafone	7	14	23	17	9	70
		10,0%	20,0%	32,9%	24,3%	12,9%	100,0%
	Wind	7	14	9	8	11	49
		14,3%	28,6%	18,4%	16,3%	22,4%	100,0%
Total		36	44	41	49	35	205
		17,6%	21,5%	20,0%	23,9%	17,1%	100,0%

Total n = 205

From the table 5.4 we can see that the majority in this survey change mobile devices approximately once a year. It was an expected result due to special benefits and subventions companies offering every year to subscribers who renew their contracts in order to buy new devices.

Table 5.4 Change device and length of use

		Length of Use					Total
	Months	≤12	13 - 24	25 - 36	37 - 48	≥49	
Change device	0 Times	13	5	0	0	4	22
		59,1%	22,7%	,0%	,0%	18,2%	100,0%
	1 Time	16	21	5	6	0	48
		33,3%	43,8%	10,4%	12,5%	,0%	100,0%
	2 Times	6	13	14	13	3	49
		12,2%	26,5%	28,6%	26,5%	6,1%	100,0%
	3 Times	0	5	15	19	9	48
		,0%	10,4%	31,3%	39,6%	18,8%	100,0%
	≥4 times	1	0	7	11	19	38
		2,6%	,0%	18,4%	28,9%	50,0%	100,0%
Total		36	44	41	49	35	205
		17,6%	21,5%	20,0%	23,9%	17,1%	100,0%

5.1.2 Reliability coefficient and descriptive statistics

The reliability coefficients, means and standard deviations of all constructs in the current study are displayed in Table 5.5. The coefficient alphas for the different constructs were computed using the reliability procedure in SPSS (version 14.0). The reliabilities of all the constructs found to be above 0.70 which is a sufficient number for this stage of analysis (Appendix 4).

Table 5.5 Reliability coefficient and descriptive statistics

Scales	Number of items	Alpha	M	SD
Network	2	0,75	3,71	0,71
Value added service	3	0,7	3,51	0,72
Mobile device	3	0,86	4,01	0,68
Customer services	4	0,77	3,47	0,59
Pricing structure	3	0,73	3,4	0,7
Billing system	3	0,88	3,41	0,91
Monetary cost	4	0,93	3,24	0,88
Benefit loss cost	2	0,88	3,39	0,95
Uncertainty cost	3	0,86	3,54	0,88
Evaluation cost	3	0,85	3,45	0,86
Learning cost	3	0,91	2,98	0,89
Customer satisfaction	1		3,43	0,88
Customer loyalty	5	0,89	3,31	0,67

Mean scores have been computed by equally weighting the mean scores of all the items (Appendix 3).

On a five-point scale, the mean scores of *service quality* range from 3.4 - 4.01 indicating that consumers' perception about the service quality of Greek mobile telecommunications providers is high. Respondents rated *pricing structure* dimension low and *mobile device* dimension high.

Results also suggest that switching costs in this industry are relative high except from *learning cost* dimension which appear values near the average. It possibly shows that it isn't a strong reason that prevents them from changing their mobile company.

The mean score for *customer satisfaction* is 3.43 (sd = 0.88). It implies that the mobile telecommunications users are generally satisfied with the offered services.

The mean score for *customer loyalty* is also high (3.31, sd = 0,67) which is probably suggests that these customers are enough loyal to their mobile company.

5.2 Analysis

5.2.1 Correlation between the factors

Correlation is a statistical technique which can show whether and how strongly pairs of variables are related. A Pearson's correlation analysis was conducted on all variables to explore the relationship between them (Appendix 5). The result of correlation analysis for all the variables is shown in Table 5.4. The main result of a correlation is called the *correlation coefficient* (or "r"). It ranges from -1.0 to +1.0. The closer "r" is to +1 or -1, the more closely the two variables are related. If "r" is close to 0, it means there is no relationship between the variables. If "r" is positive, it means that as one variable gets larger the other gets larger. If "r" is negative it means that as one gets larger, the other gets smaller (inverse correlation). Correlation is significant at the 0.05 level or less and determined whether the relationship is significant or not.

Table 5.4 Correlation matrix for Service quality, Switching costs, Customer satisfaction, and Customer loyalty

	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Network	1.00												
2.Valueadded service	.20	1.00											
3.Mobile device	.16	.24	1.00										
4.Customer service	.19	.19	.21	1.00									
5.Pricing structure	.31	.16	.08	16	1.00								
6.Billing system	.08	.15	.13	.10	.38	1.00							
7.Monetary cost	-.01	.01	.05	-.03	-.22	-.19	1.00						
8.Benefit-loss cost	.11	.11	.19	.09	-.15	-.01	.66	1.00					
9.Uncertainty cost	.14	.02	.17	.06	.12	.21	.03	.16	1.00				
10.Evaluation cost	.12	.04	.16	.05	.08	.06	.07	.12	.36	1.00			
11.Learning cost	.04	.09	.09	.04	-.06	.02	.01	.12	.26	.58	1.00		
12.Customer Satisfaction	.28	.20	.23	.32	.48	.40	-.12	-.05	.04	.04	-.01	1.00	

13.Customer Loyalty	.29	.25	.25	.38	.40	.32	.02	.20	.26	.27	.14	.59	1.00

As seen in the above table there is a relationship between each of the quality dimensions and customer satisfaction. More explicitly, pricing structure (r = 0.48) and billing system (r = 0.40) were mostly related with customer satisfaction. Inline, customer service (r = 0.32) network quality (r = 0.28), mobile device (r = 0.23), value-added services (r = 0.20) appear an association with customer satisfaction as theoretically assumed. The strong relationship between service quality dimensions and customer satisfaction also depicted from the significant levels of these constructs that present values < 0.01.

Additionally, the above results reveal the relationship between perceived switching costs and customer loyalty. We observe that the variables significantly correlated with customer loyalty are benefit-loss cost (r = 0.20), uncertainty cost (r = 0.26), evaluation cost (r = 0.27) and learning cost (r = 0.14). Contradictory, a weak correlation appeared among monetary cost (r = 0.02, significant level > 0.05) and customer loyalty.

Table 5.4 also show a strong correlation among customer satisfaction and customer loyalty (r = 0.59, significant level < 0.01) (Appendix 5).

5.2.2 Regression analysis

Regression analysis is a statistical tool for the investigation of relationships between variables. The researcher seeks to ascertain the causal effect of one variable upon another. To explore such issues, we assemble data on the underlying variables of interest and employ regression to estimate the quantitative effect of the causal variables upon the variable that they influence. The investigator also evaluate the "statistical significance" of the estimated relationships, that is, the degree of confidence that the true relationship is close to the estimated relationship.

Initially we analyzed sex, package, service quality and satisfaction in order to investigate in which degree (if any), sex or type of package were significant and explain variances of the satisfaction. Results (sig. > 0.05, R square = 0.380)

indicated that sex and type of package were not significantly related with satisfaction. Similarly, a regression analysis on sex, type of package, switching costs dimensions, satisfaction and loyalty was contacted where also revealed that sex and type of package didn't related closely with loyalty (sig. > 0.05, R square = 0.485) (Appendix 6).

We omit the non significant variables (sex and type of package) and two entered regressions were conducted to assess relationship between the original examined variables.

Firstly, we rerun the regression analysis for all service quality dimensions and satisfaction to obtain trimmed model coefficients (Table 5.5).

Table 5.5 Regression - Service quality and Customer satisfaction

	B	Std. Error	Beta	t	Sig.
Network	0,13	0,075	0,106	1,736	0,084
Value-added service	0,036	0,072	0,03	0,497	0,62
Mobile device	0,143	0,077	0,11	1,858	0,065
Customer service	0,294	0,087	0,198	3,358	0,001
Pricing structure	0,392	0,08	0,314	4,905	0
Billing system	0,228	0,059	0,237	3,856	0

R Square = 0,374

The above table indicates that only the dimension of value-added service is not significantly associated with customer satisfaction (sig = 0.62).

More detailed, customer service (sig = 0.001), pricing structure (sig = 0) and billing system (sig = 0) are highly influence customer satisfaction when network quality (sig = 0.084) and mobile device (sig = 0.065) have significant but lower effect on customer satisfaction.

There is also appeared that all service quality variables explain 37,4% of the variance in customer satisfaction (Appendix 6).

Additionally, "Beta" results indicated that there is a positive relationship between the examined service quality dimensions and customer satisfaction. These findings provide as a solid base in order to discuss the first research hypothesis.

The main results of the second regression analysis which contacted for switching costs dimensions, satisfaction and loyalty, presented in table 5.6.

Table 5.6 Regression - Switching Costs, Customer satisfaction and Customer loyalty

	B	Std. Error	Beta	t	Sig.
Monetary cost	-0,063	0,054	-0,082	-1,172	0,243
Benefit-loss cost	0,175	0,05	0,246	3,494	0,001
Uncertainty cost	0,124	0,051	0,136	2,426	0,016
Evaluation cost	0,147	0,051	0,188	2,858	0,005
Learning cost	-0,014	0,048	-0,019	-0,297	0,767
Satisfaction	0,446	0,04	0,582	11,193	0

R square = 0,477

The results show that the significant levels of monetary cost (sig.= 0.243) and learning cost (sig.= 0.767) appear values lower than 0.05, thus these dimensions probably do not directly influence loyalty.

Moreover, "Beta" ($\beta < 0$) indicates that monetary cost and learning cost have small negative effect loyalty.

Switching costs consisted from benefit-loss cost, uncertainty cost and evaluation cost along with customer satisfaction significantly and positively related with loyalty. According to regression analysis these factors explain 47,7 % of customer loyalty (Appendix 6).

5.3 Test of hypothesis

5.3.1 First hypothesis

In order to test the first hypothesis we examine separately each dimension of service quality and the relationship with customer satisfaction. The test of

hypothesis 1, which suggested that factors establishing service quality positively affect customer satisfaction, reveal that network, mobile device, customer service, pricing structure and billing system are significant and positively influence satisfaction. Value-added services dimension related with satisfaction but the relationship is not significant. These results partly corroborate results produced by earlier studies.

The results validate that respondents' satisfaction increases with the positive perception of network quality. Both correlation and regression analysis provide us the stand to support hypothesis 1.1. The dimension of network quality also related positively with satisfaction in similar studies. In their investigation on the determinants of satisfaction and loyalty in the use of mobile services Lim et al. (2006) were found that network quality had a significant direct influence on customer satisfaction. Kim et al. (2004) also confirm that the relationship between call quality and customer satisfaction is significant. Lee et al. (2001) actually measured partially customer satisfaction with a dimension named "overall core services" (coverage of the calling area and clarity of sound). The lasts confirm that consumers in the "economy" and "standard" groups consider the quality of core services the most important factor of satisfaction. All the researches reinforces the fact that call quality of telephone service is the top issue that directly creates customer satisfaction for mobile users.

When correlation analysis depicts that value-added service correlated with satisfaction, the results of the regression analysis were found non significant relationship between these dimensions. Consequently, value-added services do not increase the level of Greek mobile telecommunications customer's satisfaction and thus we reject hypothesis 1.2. In contrary previous studies confirm a positive effect of value-added service on satisfaction (Kim et al., 2004). Besides, Lim et al. (2006) found that for perceived emotional value and perceived satisfaction, perceived quality of data services is a significant predictor. Lee et al. (2001) found, only for heavy-users of mobile services, that they show a strong attachment to value-added services.

Test of the hypothesis 1.3 verify that mobile device dimension has a significantly positive effect on the satisfaction. Dissimilar, Kim et al. (2004), who also

implemented this dimension to measure service quality, found that it wasn't an important factor for creating customer satisfaction. Most likely, our research depict that mobile devices' design and quality increase the levels customer satisfaction.

Findings of this analysis prove the positive and significant relationship between customer service and customer satisfaction. Consequently, hypothesis 1.4 is established. In the research of Lim et al's. (2006) contrary to expectations the results indicated a negative relationship between customer service quality and perceived emotional value. However, the outcomes of their research model confirmed that customer service quality had a significant direct influence on customer satisfaction. Kim et al. (2004) also show the positive and significant effect of customer support on satisfaction. Hence, customer service quality can help to resolve customer issues, thing that increases the levels of satisfaction.

A positive and highly significant relationship between pricing structure and customer satisfaction is statistically verified in our study. Therefore we accept hypothesis 1.5. Contradictory, Kim et al. (2004) were not found evidence to support the hypothesis that a high level of pricing structure leads to high customer satisfaction. Lim et al. (2006) were found that pricing plans have indirect effect on customer satisfaction through perceived economic value when Lee et al. (2001) revealed that the level of satisfaction on pricing was much less significant for heavy users than for regular users. Therefore, well designed pricing plans and pricing policy from mobile companies are able to enhance customer satisfaction.

Finally, hypothesis 1.6 also supported from the above correlation and regression analysis. The results depict that billing system significantly and positively related with satisfaction. In their model Lim et al. (2004) appear that billing system dimension have significant influences on respondents' perceived emotional value, although it didn't related directly with customer satisfaction. Findings of the current study show that precise billing systems and speedy solution of billing problems can increase mobile customers' satisfaction.

5.3.2 Second hypothesis

Both the result of correlation and regression analysis depict that customer satisfaction positively and significantly related with customer loyalty ($r = 0.59$, sig. < 0.05, $\beta > 0$). Therefore, hypothesis 2 is validated. The findings support the results from the existing literature that customer satisfaction explain customer loyalty. Numerous other studies revealed this positive relationship between these two constructs. For instance, in mobile telecommunications industry researches by Gerpott et al. (2001), Kim et al. (2004), Lee et al. (2001) and Aydin et al. (2005) confirm that customer satisfaction have a significant positive effect on customer loyalty.

5.3.3 Third hypothesis

The impact of switching costs on customer loyalty is partly confirmed, supporting the results of several former studies (Aydin and Ozer, 2005; Burnham et al., 2003). Particularly, the results of the statistical analysis on the five proposed dimensions of switching costs show that benefit-loss cost ($r = 0.20$, sig.< 0.05), uncertainty cost ($r = 0.26$, sig. < 0.05) and evaluation cost ($r = 0.27$, sig. < 0.05) have a positive and significant relation with customer loyalty. Monetary cost ($r = 0.02$, sig. > 0.05) has a weak correlation with loyalty and learning cost ($r = 0.14$, sig.> 0.05) appear non significant effect on loyalty. In addition, regression analysis reveal a weak negative influence of monetary cost ($\beta = -0.082$) and learning cost ($\beta = -0.019$) on loyalty. Consequently, we accept three of the five switching costs dimensions as positive related constructs with customer loyalty when the first and the fifth element of this hypothesis is rejected.

Specifically, hypothesis 3.1 is not supported from the prior correlation and regression analysis. This findings are close to the conclusion of Burnham et al. (2003) that financial costs have the weakest impact on customers' intention to stay with their current provider.

Regarding hypothesis 3.2, we accept that when the potential of losing benefits increasing, customer's loyalty will be increasing. Respondents in our survey believe that the bonus and extra counters they gained with their existing mobile

operator are important for them. So, we conclude that the higher the perceived loss of these benefits the more loyal they appear.

Hypothesis 3.3 that suggests higher uncertainty cost results into higher loyalty confirmed as occurred in relevant researches. Burnham et al. (2003) found that increasing current customer's perceptions of the risk involved in switching (or the safety of staying) will increase customer's likelihood of remaining in an existing relationship. The higher the perceived risk concerning the functionality of alternative services and the prices of alternatives, the higher the customers' loyalty appear.

The results also explain a significant relationship between evaluation cost and loyalty. The positive and direct relationship between these dimensions confirm hypothesis 3.4. In conjunction, Burnham et al. (2003) also conclude that increasing the difficulty of evaluating alternatives (or the easy of not doing so) also increasing customers retaining.

Finally, the positive relationship between learning cost and loyalty doesn't supported from our results. Therefore, hypothesis 3.5 is rejected. This findings indicates that customers perceived barriers to switch due to learning cost are low. Customers believe that it isn't required to spend a lot of time and effort to learn to use value-added services of an alternative mobile operator. This observations may related with the results that value-added services failed to produce the expected results on satisfaction. Probably value-added services doesn't have yet the role that mobile operators in Greece wish to have.

5.4 Summary of findings

After analyzed the study's variables in the context of Greek mobile telecommunications market it was found that all variables of service quality have impact on satisfaction. Although, customer service, pricing structure and billing system are more significant and direct influence customer satisfaction.

Switching costs dimensions that appear a significant positive relation with loyalty were benefit-loss cost, uncertainty cost and evaluation cost. Findings reveal that

two of the five proposed dimensions (monetary cost and learning cost) had a weak effect of on loyalty and failed to produce the expected results.

Thus, the above dimensions that highly influence loyalty should mostly be taken under consideration when managers propose strategies and tactics that enhance satisfaction and loyalty or when researchers examine relative constructs in similar theoretical framework.

Chapter 6. Conclusion

6.1 Conclusion

This study examined service loyalty and factors affecting its development. In so doing, the study extends previous loyalty research in several respects. Firstly, this study proposed a two-stages model of customer loyalty included three constructs: service quality, customer satisfaction and switching costs.

More specifically, it aimed to examine the association between six service quality factors also proposed in past relevant studies and overall satisfaction that customers perceived from the use of mobile telecommunications services. Network quality, mobile device, customer service, pricing structure and billing system were the factors that mostly influence customers' satisfaction with their mobile telecommunications provider. Value-added service dimension rejected as a satisfaction driver due to insignificant correlation.

Five dimensions investigated in this study as factors that would influence customers decision to stay with or leave their current mobile telecommunications service provider. Three of them, benefit-loss cost, uncertainty cost and searching cost revealed that positively and significantly affect customer loyalty.

Finally, the hypothesis of a significant positive effect of customer satisfaction on customer loyalty also confirmed by the results of the statistical analysis.

6.2 Implications

Operators in the mobile telecommunications market are observed to lose about 30 per cent or more of their subscribers every year and have large customer acquisition expenditures (Lee et al., 2001). It is important of mobile operators to develop well-designed customer satisfaction programs for increased customer loyalty. As both customer satisfaction and customer loyalty measured more completely, specific actions can be recommended that will optimize managers' investment in improved service. The proposed service quality dimensions should

be carefully examined and the perceptions of customers should be considered when companies aim to enhance customer loyalty.

As mentioned before dimensions of billing system, pricing structure and customer service should be taken in more consideration due to the positive and high significant relationship with satisfaction. Mobile companies ought to ensure accurate and more convenient billing systems when they should also provide a range of pricing schedules and consider more carefully the prices of the provided services. Additionally, the positive effect of customer service on satisfaction indicates that mobile companies should focus to resolve customers problems with courtesy and emphasize more to minimize customers' inconvenience by offering more accurate and fast call-center services.

Furthermore, companies should implement strategies that increase switching costs so as to enhance the loyalty of the current customers. Besides, companies should make efforts to reduce the perceived switching costs of competitors' customers so as to attract them easier. Specifically, in order to raise benefit-loss costs, companies could offer free and special services or reduce prices for the loyal customers. Results also show that uncertainty costs and evaluation costs positively affect customer loyalty. These findings drive the need for companies to implement marketing strategies that underline the uncertainty and the risks associated with a potential departure of the existing relationship. Even if companies couldn't prevent customers to evaluate alternatives they could reduce the perceptions of the complexity of their services. From the acquisition management's view, an aim could be the reducing of energy, time and afford required from customers to leave a competitor and choose the particular mobile company.

However, managers should be cautious in employing switching barriers as a mechanism for customer retention. High switching costs may act negatively in customers' loyalty because companies might retain dissatisfied customers who feel "entrapped". Such retained (but dissatisfied) customers might spread negative word-of-mouth, become hostile, and even engage in communication sabotage (White and Yanamandram, 2007).

6.3 Limitations

The research has some limitations regarding initially the relative small sample size. This research could be done in a bigger sample size, that would required more time, effort and money, in order to provide more generalisable results.

Other difficulties related to the time and effort needed to provide full explanations to reluctant consumers about the exact purpose of the study and the actual use of the gathered information. Besides, a part of those who initially agree to participate in the survey didn't complete the questionnaire totally referred lack of time and rush.

Limitations were also existed regarding the questionnaire and the wording of the questionnaire. The survey was contacted in Greece, so the initial questionnaire translated into the Greek language. Even if all the questions translated precisely and with conscious there might be existed hidden problems concerning the exact meaning that respondents perceived.

Finally, the implemented key measures for customer satisfaction in the study were single item measures. While we believe that this measure is capable of capturing consumers' feelings and intentions and are quite reliable, we recognize the superiority of multiple item measures.

6.4 Further study

Customer loyalty is basically a dynamic phenomenon that evolves over time. The methodology used in the study does not fully capture such dynamics. To better assess causality, future studies should be conducted to examine the present issue using different methods. Besides, the relationships among service quality customer, satisfaction and customer loyalty demand further research. These days the loyalty concept has great importance and different aspects can be studied in different situations.

For instance, a future study could focus on the interaction effects of switching costs on retention. When switching barriers are high, service firms may continue to retain customers even if they are not highly satisfied (Colgate and Lang, 2001;

Jones et al., 2002). Customers are motivated to stay in existing relationships to economize on the types of switching costs described above. These potential costs thus constitute a significant barrier to moving to other service providers when customers are dissatisfied with the services of a provider. This would indicate that service providers are more likely to retain dissatisfied customers who perceive high switching barriers. So, in an upcoming research we can examine the moderating role of switching costs on the satisfaction - loyalty link in the particular market and test the existing theory. A potential study could also implement added dimensions that influence loyalty such as trust, inertia, attractiveness of alternatives or examine the impact of customer loyalty on profitability.

6.2 Reflections

After a period of constructive review of the literature concerning different management fields of knowledge the presented subject found as a challenging and interesting area for research. The area of relationship management, which mainly interested on how to build and maintain a committed, loyal relationship between a customer and an organization, is an interesting field for research because there involve marketing theory with psychology and concerning human behavior. Customer's loyalty depended by a number of variables which are impossible to analyzed in the framework of this dissertation. So, the main antecedents of loyalty investigated in the context of mobile telecommunications services which appeared as part of everyday life for individuals, business and the community.

Before started writing the dissertation the author deal with problems regarding the formulation of the precise subject of the research and the development of the specific research questions and hypotheses. After some modifications in the initial proposed research questions, due to word limits and time restrictions, the specific concepts and their interrelationship were investigated.

In the end, the author would like to mention that a main learning outcome of this final study is that it helping him to develop management skills through identify ways to change negative behaviour, feelings and attitudes and creating new strategies to achieve further personal goals.

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Appendices

Appendix 1.

As Saunder's et al. (2003) refers, at the beginning of a questionnaire there is a need to explain clearly and concisely why you want the respondent to complete the survey. Interviewer-administrated questionnaire require a short introduction which the interviewer can read to each respondent. The next paragraph which developed from deVaus (2002) and referred in Saunders (2003 pp.307) was used in our research:

"Good morning/afternoon/evening. My name is Karyotis Fanis postgraduate student from the TEI of Larissa. We are doing a research project to find out customers perspectives about mobile telecommunications services in Greece. We are aim to determine the relationships between service quality, customer satisfaction and loyalty and how the last one effected by the switching barriers that exists. You are chosen randomly from the total population of mobile users in Greece. The questions I should like to ask will take about 5-8 minute. If you have any queries, I shall be happy to answer them. Please can I ask you the questions now?"

Finally at the end of the questionnaire thank the person for taking the time to complete the questionnaire.

Part A: Demographics

[Please check the appropriate box (☑)]

1) Gender: Male❑ Female❑
2) Age: Less than 24 years❑ 25-34 year ❑ 35-44 years❑ 45-54 years❑ More than 55 years❑
3) Education: Primary School❑ Secondary School❑ University or T.E.I. Degree❑ Postgraduate (PhD,MBA)❑
4) Personal Income per Month: Less than 800 €❑ 801-1500 €❑ 1501-2500 €❑ More than 2500 €❑

Part B: Supplementary facts

[Please check the appropriate box (☑)]

1) What package of mobile telecommunications services are you using? Contract❑ Pre-paid❑
2) Which company is your current mobile telecommunications service provider?
Cosmote❑ Vodafone❑ Wind❑
3) How much money per month do you spend for mobile telecommunications services?
Less than 15 €❑ 16-30 €❑ 31-45 €❑ 46-60 €❑ 61-75 €❑ More than 76 €❑
4) How long do you use your current service provider?
Less than 12 months❑ 13-24 months❑ 25-36 months❑ 37-48 months❑ More than 49 months❑
5) How many times do you replace mobile device during the period of use your current service provider?
0 times❑ 1 time❑ 2 times❑ 3 times❑ more than 4 times❑

Part C: Core Questionnaire

[Please circle [O] the number that better describes consumer's perception.
There are choices representing the strength of their agreement to each statement, ranging from "1:Strongly disagree" to "5:Strongly agree" and "1:Very dissatisfied" to "5:Very satisfied". Choice "3" declare neutrality].

SERVICE QUALITY	*strongly disagree*				*strongly agree*
Network					
1) My mobile phone company provides high voice quality	1	2	3	4	5
2) My mobile phone company provides superior coverage	1	2	3	4	5
Value-added service					
3) My mobile phone company makes available a variety of value added services	1	2	3	4	5
4) The value added services that my mobile phone company provides are up to date	1	2	3	4	5
5) My mobile phone company offers easy-of-use value-added services	1	2	3	4	5
Mobile device					
6) My mobile phone company provides qualitative mobile devices	1	2	3	4	5
7) My mobile phone company provides a wide range of mobile devices types	1	2	3	4	5
8) My mobile phone company provides a variety of mobile devices design	1	2	3	4	5
Customer service					
9) My mobile phone company always succeeds to fix a problem	1	2	3	4	5
10) Customer service representative is courteous	1	2	3	4	5
11) Call-center personnel are able to help with my problems	1	2	3	4	5
12) Service agents in a call-center provide consistent advice or instructions from one to the next	1	2	3	4	5
Pricing structure					
13) My mobile phone company charge reasonable prices	1	2	3	4	5
14) My mobile phone company offers a variety of price schedules	1	2	3	4	5
15) My mobile phone company gives the possibility of freely choosing price schedules	1	2	3	4	5
Billing system					
16) My mobile phone company provides accurate billing	1	2	3	4	5
17) My mobile phone company makes it easy to understand and resolve billing issues	1	2	3	4	5
18) My mobile phone company resolves billing issues quickly	1	2	3	4	5

SATISFACTION

	very dissatisfied				very satisfied
1) What is your overall level of satisfaction with your current service provider?.....	1	2	3	4	5

LOYALTY

	strongly disagree				strongly agree
1) I will go on using this GSM line.....	1	2	3	4	5
2) If I bought a new GSM line I would prefer this GSM operator.....	1	2	3	4	5
3) I recommend this operator to people.....	1	2	3	4	5
4) I encourage friends who plan buying GSM line.....	1	2	3	4	5
5) Even if the other operators' billing is cheaper, I would go on using this GSM line...	1	2	3	4	5

SWITCHING COSTS

a) Financial costs

Monetary cost	strongly disagree				strongly agree
1) Switching to a new operator causes monetary cost.....	1	2	3	4	5
2) Closing the account in my current operator brings on monetary cost.....	1	2	3	4	5
3) The monetary cost of closing the account in my current operator is high.....	1	2	3	4	5
4) The monetary cost of switching to a new operator is high.....	1	2	3	4	5
Benefit loss cost					
5) Switching to a new operator would mean losing points, extra counters etc. that I have gained with my current operator.....	1	2	3	4	5
6) These points and extra counters etc. that I have gained with my current operator are important for me.....	1	2	3	4	5

b) Psychological costs

Uncertainty cost					
If I switched to a new operator:					
7) The service offered by the new operator might not work as well as expected.....	1	2	3	4	5
8) I might meet inadequate service in a short period of time.....	1	2	3	4	5
9) I am not sure that the billing of a new operator would be better for me.....	1	2	3	4	5

c) Procedural cost

Evaluation cost					
To switch to a new operator:					
10) I should compare all operators (on account of services, coverage area, billing, etc)	1	2	3	4	5
11) Deciding to prefer another operator takes a lot of energy, time and effort.....	1	2	3	4	5
12) Even if I have enough information, comparing the operators with one another takes a lot of energy, time and effort.....	1	2	3	4	5
Learning cost					
If I switched to a new operator:					
13) I could not use some services (MMS, GPRS, WAP etc.), until I learned to use services effectively.....	1	2	3	4	5
14) Learning to use the services offered by the new operator might take some period of time.....	1	2	3	4	5
15) Time for learning to use services effectively would be important for me.....	1	2	3	4	5

Appendix 2. Demographics – Descriptive analysis

Sex

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	94	45,9	45,9	45,9
	Male	111	54,1	54,1	100,0
	Total	205	100,0	100,0	

Age

	Years	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<24	48	23,4	23,4	23,4
	25-34	78	38,0	38,0	61,5
	35-44	44	21,5	21,5	82,9
	45-54	22	10,7	10,7	93,7
	>55	13	6,3	6,3	100,0
	Total	205	100,0	100,0	

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Primary School	14	6,8	6,8	6,8
	Secondary School	69	33,7	33,7	40,5
	University or TEI	102	49,8	49,8	90,2
	Postgrad.	20	9,8	9,8	100,0
	Total	205	100,0	100,0	

Monthly income

	Euro	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 800	64	31,2	31,2	31,2
	801-1500	90	43,9	43,9	75,1
	1501-2500	38	18,5	18,5	93,7
	> 2501	13	6,3	6,3	100,0
	Total	205	100,0	100,0	

Package

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Pre-paid	54	26,3	26,3	26,3
	Contract	151	73,7	73,7	100,0
	Total	205	100,0	100,0	

Firm

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cosmote	86	42,0	42,0	42,0
	Vodafone	70	34,1	34,1	76,1
	Wind	49	23,9	23,9	100,0
	Total	205	100,0	100,0	

Monthly Expenses.

	Euro	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 15	26	12,7	12,7	12,7
	16-30	47	22,9	22,9	35,6
	31-45	40	19,5	19,5	55,1
	46-60	44	21,5	21,5	76,6
	61-75	30	14,6	14,6	91,2
	< 76	18	8,8	8,8	100,0
	Total	205	100,0	100,0	

Length of use

	Months	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	< 12	36	17,6	17,6	17,6
	13-24	44	21,5	21,5	39,0
	25-36	41	20,0	20,0	59,0
	37-48	49	23,9	23,9	82,9
	< 49	35	17,1	17,1	100,0
	Total	205	100,0	100,0	

Device change

	Times	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0	22	10,7	10,7	10,7
	1	48	23,4	23,4	34,1
	2	49	23,9	23,9	58,0
	3	48	23,4	23,4	81,5
	More than 4	38	18,5	18,5	100,0
	Total	205	100,0	100,0	

Appendix 3. Frequencies of each factor

Service Quality

Network

		QA1	QA2
N	Valid	205	205
	Missing	0	0
Mean		3,78	3,66
Std. Deviation		,753	,834

Value-added services

		QB1	QB2	QB3
N	Valid	205	205	205
	Missing	0	0	0
Mean		3,73	3,55	3,27
Std. Deviation		,847	,882	1,020

Mobile device

		QC1	QC2	QC3
N	Valid	205	205	205
	Missing	0	0	0
Mean		3,68	4,17	4,19
Std. Deviation		,864	,718	,717

Customer service

		QD1	QD2	QD3	QD4
N	Valid	205	205	205	205
	Missing	0	0	0	0
Mean		3,45	3,81	3,43	3,20
Std. Deviation		,782	,809	,793	,696

Pricing structure

		QE1	QE2	QE3
N	Valid	205	205	205
	Missing	0	0	0
Mean		2,88	3,72	3,62
Std. Deviation		,874	,789	,951

Billing system

		QF1	QF2	QF3
N	Valid	205	205	205
	Missing	0	0	0
Mean		3,25	3,54	3,48
Std. Deviation		1,121	,942	,978

Switching Costs

Monetary cost

		SCA1	SCA2	SCA3	SCA4
N	Valid	205	205	205	205
	Missing	0	0	0	0
Mean		3,59	3,42	2,99	2,97
Std. Deviation		,873	,990	1,000	,985

Benefit-loss cost

		SCB1	SCB2
N	Valid	205	205
	Missing	0	0
Mean		3,57	3,21
Std. Deviation		,981	1,026

Uncertainty cost

		SCC1	SCC2	SCC3
N	Valid	205	205	205
	Missing	0	0	0
Mean		3,57	3,32	3,76
Std. Deviation		,787	,835	,896

Evaluation cost

		SCD1	SCD2	SCD3
N	Valid	205	205	205
	Missing	0	0	0
Mean		3,83	3,44	3,11
Std. Deviation		,921	1,035	,996

Learning cost

		SCE1	SCE2	SCE3
N	Valid	205	205	205
	Missing	0	0	0
Mean		2,90	3,19	2,86
Std. Deviation		,960	,962	,976

Loyalty

		LOY1	LOY2	LOY3	LOY4	LOY5
N	Valid	205	205	205	205	205
	Missing	0	0	0	0	0
Mean		3,85	3,61	3,46	3,38	2,24
Std. Deviation		,768	,794	,757	,780	,939

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Network	205	2,00	5,00	3,7195	,71271
Value-added service	205	2,00	5,00	3,5154	,72791
Mobile device	205	1,33	5,00	4,0130	,68029
Customer service	205	1,25	4,75	3,4744	,59482
Pricing structure	205	1,67	5,00	3,4065	,70677
Billing system	205	1,00	5,00	3,4195	,91564
Average Serv.Q	205	1,83	4,60	3,5886	,40385
Satisfaction	205	1	5	3,43	,881
Monetary cost	205	1,00	5,00	3,2439	,88022
Benefit loss cost	205	1,00	5,00	3,3902	,95044
Uncertainty cost	205	2,00	5,00	3,5431	,88022
Evaluation cost	205	1,67	5,00	3,4520	,86603
Learning cost	205	1,00	5,00	2,9837	,89098
Average S.Cost	205	2,11	4,67	3,3261	,54489
Loyalty	205	1,80	5,00	3,3121	,67478
Valid N (listwise)	205				

Appendix 4. Reliability Analysis

Network

Cronbach's Alpha	N of Items
,758	2

Value-added service

Cronbach's Alpha	N of Items
,702	3

Mobile device

Cronbach's Alpha	N of Items
,860	3

Customer service

Cronbach's Alpha	N of Items
,773	4

Pricing structure

Cronbach's Alpha	N of Items
,736	3

Billing system

Cronbach's Alpha	N of Items
,886	3

Customer loyalty

Cronbach's Alpha	N of Items
,890	5

Monetary cost

Cronbach's Alpha	N of Items
,934	4

Benefit-loss cost

Cronbach's Alpha	N of Items
,885	2

Uncertainty cost

Cronbach's Alpha	N of Items
,861	3

Evaluation cost

Cronbach's Alpha	N of Items
,855	3

Learning cost

Cronbach's Alpha	N of Items
,912	3

Appendix 5. Correlations

Correlations

		AverageQA	AverageQB	AverageQC	AverageQD	AverageQE	AverageQF	Aver SCA	Aver SCB	Aver SCC	Aver SCD	Aver SCE	SAT	Aver LOY
AverageQA	Pearson Correlation	1	,200(**)	,163(*)	,193(**)	,310(**)	,082	-,014	,117	,146(*)	,126	,044	,285(**)	,298(**)
	Sig. (2-tailed)		,004	,020	,006	,000	,241	,837	,094	,037	,073	,529	,000	,000
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
AverageQB	Pearson Correlation	,200(**)	1	,243(**)	,194(**)	,160(*)	,151(*)	,010	,119	,026	,049	,091	,202(**)	,253(**)
	Sig. (2-tailed)	,004		,000	,005	,022	,030	,887	,090	,714	,482	,194	,004	,000
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
AverageQC	Pearson Correlation	,163(*)	,243(**)	1	,215(**)	,088	,131	,056	,198(**)	,175(*)	,160(*)	,091	,236(**)	,257(**)
	Sig. (2-tailed)	,020	,000		,002	,212	,061	,425	,004	,012	,022	,194	,001	,000
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
AverageQD	Pearson Correlation	,193(**)	,194(**)	,215(**)	1	,161(*)	,102	-,034	,099	,069	,059	,049	,323(**)	,382(**)
	Sig. (2-tailed)	,006	,005	,002		,021	,144	,626	,158	,328	,400	,483	,000	,000
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
AverageQE	Pearson Correlation	,310(**)	,160(*)	,088	,161(*)	1	,382(**)	-,225(**)	-,157(*)	,122	,081	-,068	,484(**)	,406(**)
	Sig. (2-tailed)	,000	,022	,212	,021		,000	,001	,025	,081	,249	,332	,000	,000
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
AverageQF	Pearson Correlation	,082	,151(*)	,131	,102	,382(**)	1	-,192(**)	-,017	,218(**)	,069	,026	,405(**)	,329(**)
	Sig. (2-tailed)	,241	,030	,061	,144	,000		,006	,806	,002	,322	,707	,000	,000
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
Aver.SCA	Pearson Correlation	-,014	,010	,056	-,034	-,225(**)	-,192(**)	1	,666(**)	,034	,074	,014	-,123	,029
	Sig. (2-tailed)	,837	,887	,425	,626	,001	,006		,000	,630	,289	,837	,079	,682
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
Aver.SCB	Pearson Correlation	,117	,119	,198(**)	,099	-,157(*)	-,017	,666(**)	1	,162(*)	,128	,120	-,054	,204(**)
	Sig. (2-tailed)	,094	,090	,004	,158	,025	,806	,000		,020	,067	,085	,442	,003
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
Aver.SCC	Pearson Correlation	,146(*)	,026	,175(*)	,069	,122	,218(**)	,034	,162(*)	1	,369(**)	,267(**)	,040	,261(**)
	Sig. (2-tailed)	,037	,714	,012	,328	,081	,002	,630	,020		,000	,000	,569	,000
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
Aver.SCD	Pearson Correlation	,126	,049	,160(*)	,059	,081	,069	,074	,128	,369(**)	1	,581(**)	,041	,277(**)
	Sig. (2-tailed)	,073	,482	,022	,400	,249	,322	,289	,067	,000		,000	,556	,000
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
Aver.SCE	Pearson Correlation	,044	,091	,091	,049	-,068	,026	,014	,120	,267(**)	,581(**)	1	-,016	,146(*)
	Sig. (2-tailed)	,529	,194	,194	,483	,332	,707	,837	,085	,000	,000		,821	,036
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
SAT	Pearson Correlation	,285(**)	,202(**)	,236(**)	,323(**)	,484(**)	,405(**)	-,123	-,054	,040	,041	-,016	1	,592(**)
	Sig. (2-tailed)	,000	,004	,001	,000	,000	,000	,079	,442	,569	,556	,821		,000
	N	205	205	205	205	205	205	205	205	205	205	205	205	205
Aver.LOY	Pearson Correlation	,298(**)	,253(**)	,257(**)	,382(**)	,406(**)	,329(**)	,029	,204(**)	,261(**)	,277(**)	,146(*)	,592(**)	1
	Sig. (2-tailed)	,000	,000	,000	,000	,000	,000	,682	,003	,000	,000	,036	,000	
	N	205	205	205	205	205	205	205	205	205	205	205	205	205

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Appendix 6. Regressions

Sex - Package - Service quality - Satisfaction

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	Package, AverQA, Sex, AverQC, AverQF, AverQD, AverQB, AverQE(a)	.	Enter

a All requested variables entered.
b Dependent Variable: SAT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,617(a)	,380	,355	,708	,380	15,044	8	196	,000

a Predictors: (Constant), Package, AverQA, Sex, AverQC, AverQF, AverQD, AverQB, AverQE

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	60,246	8	7,531	15,044	,000(a)
	Residual	98,115	196	,501		
	Total	158,361	204			

a Predictors: (Constant), Package, AverQA, Sex, AverQC, AverQF, AverQD, AverQB, AverQE
b Dependent Variable: SAT

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-,731	,470		-1,556	,121					
	AverQA	,134	,076	,108	1,772	,078	,285	,126	,100	,844	1,185
	AverQB	,032	,073	,026	,436	,663	,202	,031	,025	,881	1,136
	AverQC	,148	,077	,115	1,920	,056	,236	,136	,108	,889	1,125
	AverQD	,300	,088	,203	3,412	,001	,323	,237	,192	,894	1,118

	Aver QE	,378	,081	,303	4,689	,000	,484	,318	,264	,756	1,323
	Aver QF	,216	,060	,225	3,611	,000	,405	,250	,203	,818	1,223
	Sex	,016	,102	,009	,161	,872	,020	,012	,009	,946	1,057
	Package	-,162	,117	-,081	-1,382	,168	-,171	-,098	-,078	,920	1,087

a Dependent Variable: SAT

Sex - Package - Switching costs - Satisfaction - Loyalty

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	SAT, AverSCE, Sex, AverSCA, AverSCC, AverSCD, Package, AverSCB(a)	.	Enter

a All requested variables entered.
b Dependent Variable: Aver.LOY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,696(a)	,485	,464	,494	,485	23,049	8	196	,000

a Predictors: (Constant), SAT, AverSCE, Sex, AverSCA, AverSCC, AverSCD, Package, AverSCB

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	45,026	8	5,628	23,049	,000(a)
	Residual	47,860	196	,244		
	Total	92,886	204			

a Predictors: (Constant), SAT, AverSCE, Sex, AverSCA, AverSCC, AverSCD, Package, AverSCB
b Dependent Variable: Aver.LOY

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	,414	,271		1,527	,128					
	Sex	,101	,070	,075	1,432	,154	,072	,102	,073	,967	1,034
	Package	,076	,110	,050	,695	,488	-,016	,050	,036	,507	1,971
	AverSCA	-,082	,060	-,107	-1,372	,171	,029	-,098	-,070	,432	2,317
	AverSCB	,162	,052	,229	3,153	,002	,204	,220	,162	,499	2,002
	AverSCC	,132	,051	,145	2,568	,011	,261	,180	,132	,826	1,211
	AverSCD	,156	,052	,200	3,022	,003	,277	,211	,155	,599	1,668
	AverSCE	-,013	,048	-,017	-,262	,793	,146	-,019	-,013	,645	1,551
	SAT	,447	,040	,584	11,156	,000	,592	,623	,572	,960	1,042

a Dependent Variable: Aver.LOY

Regression: Service quality – Satisfaction

Descriptive Statistics

	Mean	Std. Deviation	N
SAT	3,43	,881	205
AverQA	3,72	,713	205
AverQB	3,52	,728	205
AverQC	4,01300813008130	,680288851920174	205
AverQD	3,4744	,59482	205
AverQE	3,40650406504065	,706768533484253	205
AverQF	3,42	,916	205

Correlations

		SAT	AverQA	AverQB	AverQC	AverQD	AverQE	AverQF
Pearson Correlation	SAT	1,000	,285	,202	,236	,323	,484	,405
	AverQA	,285	1,000	,200	,163	,193	,310	,082
	AverQB	,202	,200	1,000	,243	,194	,160	,151
	AverQC	,236	,163	,243	1,000	,215	,088	,131
	AverQD	,323	,193	,194	,215	1,000	,161	,102
	AverQE	,484	,310	,160	,088	,161	1,000	,382
	AverQF	,405	,082	,151	,131	,102	,382	1,000
Sig. (1-tailed)	SAT	.	,000	,002	,000	,000	,000	,000

	Aver QA	,000	.	,002	,010	,003	,000	,120
	Aver QB	,002	,002	.	,000	,003	,011	,015
	Aver QC	,000	,010	,000	.	,001	,106	,030
	Aver QD	,000	,003	,003	,001	.	,011	,072
	Aver QE	,000	,000	,011	,106	,011	.	,000
	Aver QF	,000	,120	,015	,030	,072	,000	.
N	SAT	205	205	205	205	205	205	205
	Aver QA	205	205	205	205	205	205	205
	Aver QB	205	205	205	205	205	205	205
	Aver QC	205	205	205	205	205	205	205
	Aver QD	205	205	205	205	205	205	205
	Aver QE	205	205	205	205	205	205	205
	Aver QF	205	205	205	205	205	205	205

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	AverQF, AverQA, AverQC, AverQD, AverQB, AverQE(a)	.	Enter

a All requested variables entered.
b Dependent Variable: SAT

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,612(a)	,374	,355	,707	,374	19,749	6	198	,000

a Predictors: (Constant), AverQF, AverQA, AverQC, AverQD, AverQB, AverQE

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	59,289	6	9,881	19,749	,000(a)
	Residual	99,072	198	,500		
	Total	158,361	204			

a Predictors: (Constant), AverQF, AverQA, AverQC, AverQD, AverQB, AverQE
b Dependent Variable: SAT

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-,887	,456		-1,947	,053					
	AverQA	,130	,075	,106	1,736	,084	,285	,122	,098	,855	1,170
	AverQB	,036	,072	,030	,497	,620	,202	,035	,028	,887	1,127
	AverQC	,143	,077	,110	1,858	,065	,236	,131	,104	,897	1,115
	AverQD	,294	,087	,198	3,358	,001	,323	,232	,189	,906	1,104
	AverQE	,392	,080	,314	4,905	,000	,484	,329	,276	,769	1,301
	AverQF	,228	,059	,237	3,856	,000	,405	,264	,217	,836	1,197

a Dependent Variable: SAT

Collinearity Diagnostics(a)

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions						
				(Constant)	AverQA	AverQB	AverQC	AverQD	AverQE	AverQF
1	1	6,825	1,000	,00	,00	,00	,00	,00	,00	,00
	2	,057	10,901	,00	,03	,04	,02	,02	,03	,70
	3	,035	13,943	,00	,22	,31	,05	,00	,29	,08
	4	,029	15,418	,01	,02	,61	,15	,19	,09	,01
	5	,023	17,189	,00	,54	,01	,06	,27	,32	,11
	6	,021	17,967	,00	,13	,01	,51	,34	,23	,09
	7	,010	26,516	,99	,06	,02	,21	,17	,04	,01

a Dependent Variable: SAT

Regression: Switching costs – Satisfaction – Loyalty

Descriptive Statistics

	Mean	Std. Deviation	N
Aver.LOY	3,31	,675	205
AverSCA	3,2439	,88022	205
AverSCB	3,39	,950	205
AverSCC	3,54308943089431	,742362855391692	205
AverSCD	3,45203252032521	,866026937738841	205
AverSCE	2,98373983739838	,890983702503826	205
SAT	3,43	,881	205

Correlations

		Aver. LOY	AverSCA	AverSCB	AverSCC	AverSCD	AverSCE	SAT
Pearson Correlation	Aver.LOY	1,000	,029	,204	,261	,277	,146	,592
	AverSCA	,029	1,000	,666	,034	,074	,014	-,123
	AverSCB	,204	,666	1,000	,162	,128	,120	-,054
	AverSCC	,261	,034	,162	1,000	,369	,267	,040
	AverSCD	,277	,074	,128	,369	1,000	,581	,041
	AverSCE	,146	,014	,120	,267	,581	1,000	-,016
	SAT	,592	-,123	-,054	,040	,041	-,016	1,000
Sig. (1-tailed)	Aver.LOY	.	,341	,002	,000	,000	,018	,000
	AverSCA	,341	.	,000	,315	,145	,418	,039
	AverSCB	,002	,000	.	,010	,034	,043	,221
	AverSCC	,000	,315	,010	.	,000	,000	,285
	AverSCD	,000	,145	,034	,000	.	,000	,278
	AverSCE	,018	,418	,043	,000	,000	.	,410
	SAT	,000	,039	,221	,285	,278	,410	.
N	Aver.LOY	205	205	205	205	205	205	205
	AverSCA	205	205	205	205	205	205	205
	AverSCB	205	205	205	205	205	205	205
	AverSCC	205	205	205	205	205	205	205
	AverSCD	205	205	205	205	205	205	205
	AverSCE	205	205	205	205	205	205	205
	SAT	205	205	205	205	205	205	205

Variables Entered/Removed(b)

Model	Variables Entered	Variables Removed	Method
1	SAT, AverSCE, AverSCA, AverSCC, AverSCD, AverSCB(a)	.	Enter

a All requested variables entered.
b Dependent Variable: Aver.LOY

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	,691(a)	,477	,462	,495	,477	30,140	6	198	,000

a Predictors: (Constant), SAT, AverSCE, AverSCA, AverSCC, AverSCD, AverSCB

ANOVA(b)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	44,339	6	7,390	30,140	,000(a)
	Residual	48,547	198	,245		
	Total	92,886	204			

a Predictors: (Constant), SAT, AverSCE, AverSCA, AverSCC, AverSCD, AverSCB
b Dependent Variable: Aver.LOY

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	,491	,268		1,831	,069					
	AverSCA	-,063	,054	-,082	-1,172	,243	,029	-,083	-,060	,539	1,857
	AverSCB	,175	,050	,246	3,494	,001	,204	,241	,180	,531	1,885
	AverSCC	,124	,051	,136	2,426	,016	,261	,170	,125	,839	1,192
	AverSCD	,147	,051	,188	2,858	,005	,277	,199	,147	,607	1,648
	AverSCE	-,014	,048	-,019	-,297	,767	,146	-,021	-,015	,649	1,540
	SAT	,446	,040	,582	11,193	,000	,592	,623	,575	,977	1,023

a Dependent Variable: Aver.LOY

Collinearity Diagnostics(a)

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions						
				(Constant)	AverSCA	AverSCB	AverSCC	AverSCD	AverSCE	SAT
1	1	6,712	1,000	,00	,00	,00	,00	,00	,00	,00
	2	,107	7,927	,00	,12	,10	,01	,04	,10	,02
	3	,080	9,166	,01	,01	,01	,00	,03	,16	,47
	4	,038	13,251	,01	,01	,01	,57	,01	,29	,18
	5	,027	15,666	,00	,18	,21	,12	,63	,28	,00
	6	,023	17,001	,07	,40	,63	,02	,29	,13	,03
	7	,013	22,783	,92	,28	,04	,28	,00	,04	,29

a Dependent Variable: Aver.LOY