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# Research on the Internet Banking in Cyprus: The Perceptions of Cypriot Internet Banking Users of Levels of Satisfaction and Service Quality

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**“Research on the Internet Banking in Cyprus:  
The Perceptions of Cypriot Internet Banking Users of Levels of  
Satisfaction and Service Quality”**

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### Declaration

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I declare that the Master thesis, with the title of "*Research on Internet Banking in Cyprus: The Perceptions of Cypriot Internet Banking Users of Levels of Satisfaction and Service Quality*" is submitted solely for academic purposes and, particularly, for the completion of the MBA studies at the Neapolis University Paphos. The present project has not been submitted for academic purposes in any other institution of higher learning in the past. Finally, I declare that except for sources acknowledged this project is entirely and truly my own work.

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Andreas Antoniou

07 January 2013

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Special thanks to the survey participants of the study who spent their valuable time to complete the questionnaire of the study.

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## Executive Summary

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E-commerce is the buying and selling of a product or service over electronic systems such as the Internet and other computer network. The Internet is a global system of interconnected computer networks that use the standard Internet protocol to serve billions of users worldwide. The Internet is defined as the worldwide interconnection of individual networks operated by government, industry, academia, and private parties. Initially the Internet served in order to interconnect laboratories and workshops involved in government research and examination, and since 1994 it has been expanded to serve millions of users and a multitude of purposes in all parts of the world. The appearance of the Electronic and Internet commerce nowadays has now begun to create a different and innovative relationship between the customer and the service provider. In the environment of the internet banking, the displayed of the use of the internet by bank associations as a network of selling their services and facilities was not only a sanctification but also a challenging and exciting issue. The whole and complete nonappearance of human interaction and collaboration, the low levels of customer satisfaction and the high levels of customer turnover have increased the need of better understanding customer's requirements and providing services of the higher quality. The present project aims to investigate customer satisfaction and the customer's perceived service quality in the area of internet banking. The following research took place in Cyprus, a place where the internet banking usage and internet perception is well below at present. In order to identify the relation between internet service quality and customers a specific model was adopted. The model consists of five major dimensions of web-based service quality selected through a detailed review of the literature. These dimensions are reliability, responsiveness, security, accessibility and quality of information. Each of the above dimensions was then examined through a survey of 120 valid questionnaires in terms of their relationship with and importance in satisfaction or dissatisfaction levels from the perspective of Cypriot electronic banking users. The results of the survey showed that while Cypriot electronic banking users are satisfied with the dimensions of security, reliability and quality of information, they are not so satisfied with the dimensions of accessibility and responsiveness.

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# *Chapter One*

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## **INTRODUCTION**

The first Chapter delivers a synopsis of what are the current research objectives and purposes to accomplish. The first chapter tries to provide a brief reference to the emergence and development of the internet and electronic commerce and the impacts it had on the banking industry and the development of electronic banking in the Cypriot market. Also a full attention is given so far as the quality of the internet service area is concerned. Finally it is focused on the problem and the purpose of the research.

### **1.1 Background of the Study**

#### **1.1.1 The Development of Electronic Commerce & Market**

The development and the rapid growth in telecommunications and computer networks, and global competition have led the business world in new innovative ways of managing conducting and executing business transactions. Electronic commerce & Electronic Market is one of those innovative ways. Electronic commerce can be defined and analysed as the sharing business information, conducting business transactions through internet-based technology and maintaining business relationships. Website is the tool for E-commerce which helps customers to search and find the appropriate information about the services or the products they need, and also buy those products and services using the world of internet. Kotler (2003) suggests internet may increase the efficiency and speed, improve customer service and help in quickly adjusting to market conditions. It also reduces operating costs

through the decrease in the number of customer service personnel (Kumar & Petersen, 2005). At the same time, electronic commerce may also provide consumers with a number of benefits such as convenience, cheaper products and instant services (Turban et al, 2004).

### **1.1.2 What is Electronic Banking?**

The word of electronic banking is a more general language, which may be used interchangeably with different methods of electronic banking, such as phone Banking, Internet banking or PC banking. Internet banking is mostly used to refer to the internet banking services provided by a virtual bank, which only operates a website rather than physical branches. In this case, the customer executes transactions through the bank's website. According to the FinCEN (2000, p. 25), "*electronic banking is an umbrella term for the process by which a customer may perform banking transactions electronically without visiting a brick-and-mortar institution*".

Electronic banking activities may involve transferring funds, paying bills, viewing checking and savings account balances, paying mortgages, and purchasing financial instruments and certificates of deposit.

### **1.1.3 The Banking Area in Cyprus**

Nowadays the banking industry is one of the main facility and service activities in Cyprus. To date, there are four major commercial banks in Cyprus. These are the Bank of Cyprus, the Laiki Bank, the Alpha Bank and the Hellenic Bank (Cyprus). As it is shown in Table 1.1, the quoted banks collectively hold the 62.7 percent of Cyprus market share. There are also a number of well-established cooperative banks, which in total have a considerable market share in the industry (19.11%).

**Table 1.1:** Main Banks in Cyprus and their Market Share

	<b>Total Deposit</b>	<b>Market Share</b>
	<b>€000</b>	<b>%</b>
Bank of Cyprus	18,241,001	26.66%
Marfin Laiki Popular Bank Public Co Ltd	8,775,712	12.83%
Hellenic Bank Group	6,886,081	10.06%
ALPHA Bank Cyprus Ltd	2,508,958	3.67%
National Bank of Greece (Cyprus) Ltd	862,527	1.26%
Coop Central Bank	15,095,235	22.06%
Bank of Piraeus (Cyprus) Ltd	1,032,504	1.51%

*Source:* Central Bank Of Cyprus (2012), "Banking in Cyprus: Market Shares of Banking Institutions" [online], Available from:  
[http://www.centralbank.gov.cy/nqcontent.cfm?a\\_id=11912&lang=en](http://www.centralbank.gov.cy/nqcontent.cfm?a_id=11912&lang=en)

#### 1.1.4 Internet Usage in Cyprus

It is a fact that internet usage in Cyprus is well below the European Union average, the up-to-date statistics by the Internet World Statistics (2009) show that internet usage in Cyprus has seen an intense growth in the latter few years. Mostly, in 2000 only 14.7% of total population was using the internet and this percent increased to 36.7% in 2007. Additional research showed by the International Telecommunications Union found that internet usage in Cyprus is predicted to rise even more in the near future.

#### 1.1.5 The Present Status Electronic Banking in Cyprus

Even though the internet usage and the banking industry in Cyprus are in growth, electronic banking usage is not growing at the same amounts. Actually, internet banking usage is only 6.1% (E-business forum, 2007). Despite the short levels of internet banking usage, there appears to be a continuous growth in usage and this leaning is expected to continue. There are many electronic banking suppliers in Cyprus but the main are the same four primary banks as stated above. Even though a different title is given to their electronic banking services, all the

providers offer very similar services (Bank of Cyprus, 2012; Laiki Bank, 2012; Alpha Bank, 2012; Hellenic Bank, 2012). Table 1.2 shows the major internet banking suppliers in Cyprus and the core services they offer.

**Table 1.2:** The Major Cyprus-based Internet Banking Providers

Internet Banking Provider	Title of Service	Main Services Provided
<i>Bank of Cyprus</i>	Direct Banking	<ul style="list-style-type: none"> <li>• Money Transfers</li> <li>• Account Balances</li> <li>• Past Transactions</li> <li>• Cheque Book Ordering</li> <li>• Statement Ordering</li> <li>• Utility Payments</li> <li>• Checking Balances</li> <li>• Requesting Cheque Books</li> </ul>
<i>Laiki Bank</i>	Electronic Banking	<ul style="list-style-type: none"> <li>• Transferring Funds</li> <li>• Standing Orders Creation</li> <li>• Performing Utility Bills Payment</li> <li>• Loan Repayments</li> <li>• Balances and Account Statements</li> <li>• Local and International Transfers</li> </ul>
<i>Hellenic Bank</i>	Net Banking	<ul style="list-style-type: none"> <li>• Creation of Standing Orders</li> <li>• Electronic Loans with competitive rates</li> <li>• Payment of Utility Bills</li> <li>• Checking balances and transaction history</li> </ul>
<i>Alpha Bank</i>	Alpha Web Banking	<ul style="list-style-type: none"> <li>• Transferring funds</li> <li>• Repaying loans</li> <li>• Placing orders</li> <li>• Placing standing orders</li> <li>• Viewing current and past fluctuations of exchange rates</li> </ul>

## **1.2 The Reasoning Behind the Selection of the Topic**

In addition the strategic customer satisfaction and importance of service quality, there are also several other reasons that led us to the decision to undertake an examination on the particular topic. Internet banking was chosen after considering the developing and a rapid growth of the segment. The low usage of internet banking in Cyprus gives the opportunity to believe that the specific area of research can contribute to a deeper and better consideration of the requirements and obligations of the Cypriot internet banking customers when using the internet banking. It might also allow banks to improve and expand their internet banking service quality on certain areas and, hence, help the enlargement of its usage in the nation.

## **1.3 Purpose of the Research & The Reasoning Behind the Selection of the Topic**

Besides the strategic importance of service quality and customer satisfaction as discussed in the previous chapter, there are also various other reasons why the author decided to undertake a research on the specific topic. Regarding the nature of the sample industry, internet banking was selected because it is an emerging and a rapidly growing sector. Furthermore, the island of Cyprus was selected as the place of conducting the research and selecting the sample population from, since no similar topic has ever been investigated in the past. This, together with the relatively low usage of internet banking in the island, makes the author to strongly believe that the particular topic can contribute to a deeper understanding of the requirement of Cypriot internet banking consumers when using the internet banking. This understanding would also enable banks to improve their internet banking service quality on particular areas and, therefore, help the expansion of its usage in the country. The major purpose of the research is dual. The research intended to examine the levels of satisfaction or dissatisfaction of Cypriot customers for each dimensions. The second major aims were to examine which dimension or dimensions of the research are measured by Cypriot electronic banking users has the most vital task in the level of their fulfilment



# *Chapter Two*

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## **LITERATURE REVIEW**

The current chapter introduces what the present research aims to achieve. The core theoretical impressions, such as customer service quality and satisfaction, will be well-defined and extended. Specific highlighting will be located on e-service quality since the current chapter of examination is service quality in internet banking.

### **2.1 Service Quality**

#### **2.1.1 Old-style Service Quality**

The service quality has generally been a major factor of retaining, attracting and satisfying customers as an important tool for sustainable competitive advantage. In this chapter the impression of service quality is defined and afterwards the major and important dimensions of service quality as find from the literature will be highlighted. The topic has the title of "Old-style Service Quality" since it refers to the quality of services delivered by old style modes like face-to-face interaction. , Parasuraman et al. (1988, p.14) defined service quality as "*an attitude and a result from a comparison of expectations with perceptions of performance*".

Parasuraman highlighted three equally important issues relating to service quality as follows:

- Service quality is the result of the comparison between the customers' expectations with the actual performance of the service

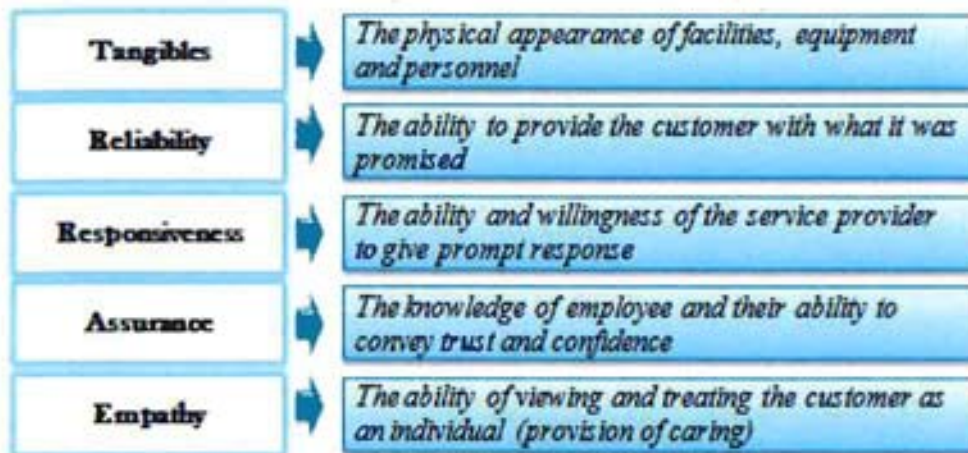


- Due to the intangible nature of services, evaluation of service quality is generally more difficult than that of goods quality
- Evaluation of the quality of a service is not only an outcome of the service but also a result of the process by which the service is delivered to the customer Parasuraman et al. (1985).

#### **2.1.1.1 Dimensions of Old - Style Service Quality**

Thousands researches have tried to identify the major dimensions of service quality that may influence the customers' perceptions of service quality. Dimensions of service quality are factors associated with a service provided, which the customer takes into account to make judgements about the quality of that service (Parasuraman et al., 1985). One important research carried out was that of Gronroos (1982) who found three vital dimensions of service quality. The first dimension is the technical aspect of the service, which refers to the actual outcome of the service encounter. The second dimension is the functional aspect of the service which relates to the interaction between the service provider and the customer. The final dimension identified by Gronroos (1982) associates with the corporate image and, more particularly, with the consumers' perceptions of the organisation that provides the service. Parasuraman *et al* (1988) identified the initial dimensions to five with tangibles, reliability, responsiveness, assurance and empathy being included. Based on the quoted dimensions, Parasuraman *et al* (1988) developed the well-known and widely-used SERVQUAL, a 22-item survey tool to undertake their research and measure service quality. A brief definition of each dimension of service quality, as provided by Parasuraman *et al* (1988), is given in Diagram 1.1:

Diagram 1.1: The SERVQUAL Model



Parasuraman *et al* (1988) "SERVQUAL: a multiple item scale for measuring consumer perceptions of service quality", *Journal of Retailing*, Vol. 64, No. 1, pp.12-40.

## 2.1.2 Internet Service Quality

The service quality meaning the quality services delivered by old-style ways, such as the physical interaction between the service provider and the service recipient. With the rapid rise of electronic commerce and the internet as a main role business activity has driven a huge number of researches trying to examine service quality in the context of internet services.

### 2.1.2.1 Definitions of Internet Service Quality

The rapid growth interest in internet service quality was most possibly a result of the uniqueness of the concept as compared to the old-style service quality. A fundamental difference between the old-style services and the internet services is that customers buying services from the internet have a more participating role in the service delivery process since they are required to carry out a transaction by themselves (Long & McMellon, 2004).

Internet service quality is the quality of a service delivered to the customer virtually over the internet. A characteristic definition is that of Santos (2003) who defined internet service quality as the evaluations and judgments that a customer makes about the excellence of the service delivery through the internet. The quoted argument seems to be as spherical as their definition of internet service quality is: '*e-service quality is the extent to which a Web site facilitates the efficient and effective shopping, purchasing and delivery*' (Zeithaml et al., 2000, p. 135).

Other writers have located importance on chastely the technical functioning of the web site and the service delivered through the internet (Liu & Arnett, 2000). For instance, Yoo & Donthu (2001) recommended that internet service quality is determined by the website's speed, security, ease of use and aesthetic design. In this sense, technical-oriented classifications view only the one side of the coin, that is, the customer interaction with the internet site itself.

#### **2.1.2.2 Dimensions of Internet Service Quality**

In sector, the dimensions of old-style service quality were observed by mostly considering the studies of Parasuraman *et al* (1988), & Gronroos (1982). Of specific attention were the five dimensions identified by Parasuraman *et al* (1988), such as tangibles, reliability, responsiveness, assurance and empathy. In the mentioned sector, the SERVQUAL model as developed by Parasuraman *et al* (1988) was as well considered as a widespread and widely-used tool for measuring and evaluating old-style service quality. Because of the need of SERVQUAL instrument to be studied, scientists and academics have focused their efforts on detecting a new set of dimensions that would be entirely to improve a new tool for measuring service quality in an online background.

Since SERVQUAL was not able to measure internet service quality, the specific tool attended as the initial point of Zeithaml's *et al* (2000) work to develop a new model that would best meet the need of measuring internet service quality. The different reviewed model, the e-SERVQUAL, identified seven major dimensions of internet service quality. These are

efficiency, reliability, fulfilment, privacy, responsiveness, compensation and contact (Zeithaml *et al*, 2000). Having identified the quoted internet service dimensions, Zeithaml *et al* (2000) then categorised them into two different groups, namely the core scale dimensions and the recovery scale dimensions.

The essential scale dimensions are efficiency, fulfilment, reliability, privacy and they were measured as the basic dimensions that customers value most when interacting with the internet service provider. The recovery scale dimensions are responsiveness, compensation and contact and they are similarly vital dimensions when the customer expressions complications for the period of the interaction with internet service provider.

SERVQUAL model, stressed out the need for a more appropriate instrument to measure web-based service quality. Using the SERVQUAL as a initial point, Li *et al* (2002) have measured four of the dimensions of old-style service quality - reliability, assurance, responsiveness and empathy- but they have studied them so that their classification is more appropriate to e-service quality. However responsiveness and empathy remained in the scale, tangibles have been excluded from the model since it does not apply to the context of e-service quality (Li *et al*, 2002). Furthermore, reliability and assurance were re-named as capability to better fit with the online environment.

Furthermore, three innovative dimensions have been included; call-back systems, quality of information and web assistance. Quality of information states to the adequacy and features of information delivered through emails or websites. Li *et al* (2002) found the quality of information had the top incomes score. Web assistance states to the range to which the website's services are helpful and significant to the customer. Lastly, call-back systems state to the corresponding role of old-style communication media to the digital media. Matching the studies of Zeithaml *et al* (2000) and Li *et al* (2002), you can easily understand that, regardless of some difference and modifications, they both emphasized similar dimensions of internet service quality, such as responsiveness, reliability, empathy and assurance. A valuable aspect to mention is that reliability has been established by both studies to be one of the most significant dimensions of e-service quality.



Different research methods, such as interviews, content analysis and questionnaires, Wolfenbarger & Gilly (2002) also recommended five dimensions of online service quality. These are reliability, website design, customer service, privacy and security. Among the quoted dimensions, reliability was found to be the most serious dimension affecting customer pleasure and satisfaction.

Kaynama & Black (2002) carried out a large-scale study on service quality in online travel agencies. Design and presentation, navigation, accessibility, responsiveness, background, content and purpose and personalisation and customisation were the important dimensions recognized to affect customer pleasure and satisfaction. Lee & Lin (2005) suggested that reliability, personalisation, responsiveness, trust and website design are the most significant internet service quality dimensions that might considerably influence over customer satisfaction.

#### **2.1.2.3 Service Quality Dimensions in the Internet Banking Sector**

We might have just analysed studies on internet service quality, but none of them is related to service quality in internet banking. Over an examination from the current literature, three researches have been established to have associated most with service quality and internet banking. The first research observed is that of Joseph et al. (1999) who observed the impact of internet technology on the banking services delivery. Joseph et al. (1999) concluded to six major dimensions of service quality including complaint management and feedback, efficiency, queue management, accessibility, convenience and security.

A different research on internet banking service quality is that of Jun & Cai (2001). Jun & Cai (2001) who in the beginning parted internet banking service quality into three categories, the customer service quality, the online systems quality and the banking service product quality. Jun & Cai (2001) recommended ten dimensions of internet banking customer service quality. These are reliability, responsiveness, competence, courtesy, security, and accessibility, communication, understanding the customer, collaboration and continuous improvement.

A third research on internet banking service quality is that of Santourides et al. (2009) who studied the association between service quality in internet banking and customer satisfaction.

## **2.2 Customer Satisfaction**

A vital sector to analyse besides the service quality and its main dimensions is the definition and examination of customer pleasure and satisfaction.

### **2.2.1 Definitions of Customer Satisfaction**

A general explanation of customer satisfaction would state that satisfaction is the overall evaluation of the performance of a product or service to date (Gustafsson, 2005). Some different research although, tried to clarify what this estimation procedure is about. Most of those researches normally accepted that customer satisfaction is an evaluation process in which the customer compares their pre-purchase expectations about how they would imagine to advantage from a particular service or product to their individual observations and perceptions of how they are truly advanced from that product or service (Oliver, 1980; Churchill & Suprenant, 1992; Bearden & Teel, 1983; Oliver & DeSarbo, 1988). A similar definition of the concept was also provided by Kotler (2000, p. 36), who defined "*customer satisfaction as a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations*".

Considering the above anyone can easily debate that the customer satisfaction and pleasure is the outcome of many evaluations between the customers about what was expected and what was really received. So this can lead, that when the result or the perceived of a service or a product exceeds the customer's expectations on the specific service or product, then this implies to a sensation of pleasure and satisfaction.

### 2.2.2 The Theoretical Model of the Present Research

Given the above, the author decided to select the dimensions of *reliability*, *responsiveness*, *accessibility*, *security* and *quality of information* as the major internet service quality dimensions of the present project. Having concluded to the above dimensions as the key to internet service quality, we may now develop a conceptual framework particularly designed to fit the purpose of our project. Our theoretical framework is presented below:

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**Diagram 2.2:** The Theoretical Model of the Present Study

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This framework is based on the notion that, in the context of online services, the above dimensions have a significant impact on either customer satisfaction or customer dissatisfaction.



### **2.2.3 A Brief Overview of the Key Dimensions of the Study**

An isolated inspection of each dimension is given below in order to help understanding in better regarding each dimension.

#### **2.2.3.1 Reliability**

Reliability may be defined as the technical functioning of the site and the extent to which the information provided is accurate (Zeithaml et al., 2002). In the same way, Yang et al. (2004) associate reliability with the ability of the service provider to be accurate when interacting with the customer. A more descriptive explanation of what is meant by reliability is provided by Jun & Cai (2001, p. 282), who presented reliability as equal to "...*providing accurate service...keeping service promise...making accurate records...keeping promise as advertised*". Consequently, the research approve that a vital aspect relating to reliability is capability of the internet service providers to bring overall internet service procedures in an correct way without different outcomes. In the section of internet banking, a reliable facility would mean the correct control of rates and commissions, the accuracy in billing and accuracy in transactions.

#### **2.2.3.2 Responsiveness**

Li et al. (2002, p. 689) defines responsiveness as "*the ability of web-based service systems to perform the online service consistently and accurately*". Parasuraman et al (1985) deliver a description of responsiveness by placing specific importance on the employees' willingness or readiness to provide customers with a service. Responsiveness is the capability of the service provider to respond on time to customers' enquiries, quickly resolve problems and avoid long queuing time.

In the section of internet banking, responsiveness has an important implication while customers very often use this mode of banking to make simple and quick transactions, such as payments and wire transfers.

### **2.2.3.3 Security**

Parasuraman stated for security "*the freedom from danger, risk or doubt.*" (Parasuraman *et al.*, 1985, p. 47). Also, Zeithaml *et al.*, (2002) clarified that security relates to the ability of the service providers to make their customers impression protected from the risk of being involved in financial loss during the establishment of any sort of financial information. It can be easily understood that security specifies that has a great implication in internet banking services since consumers are generally very sensitive when dealing with monetary issues and financial information (Song & Zinkhan, 2003). Security explanation leads to the assumption that privacy refers only to the protection of personal information provided by the customer, while security is a wider term that may associate with the protection of both personal and financial information.

### **2.2.3.4 Accessibility**

Parasuraman stated that accessibility refers to the degree to which a service is approachable and easy to access (Parasuraman *et al.*, 1985, 1988). To the degree that the internet banking segment is worried, a highly accessible service would be the possibility of the customer to easily and quickly access the website and login to the personal account.

### **2.2.3.5 Quality of Information**

At the end we have the internet service quality dimension of the current research which is the quality of information. An important research that made specific reference on the specific dimension was that of Li *et al.* (2002, p. 689), which well-defined quality of information as the "*attributes of information contained in E-mails or websites.*" The status of this dimension lies in that internet service distribution does not involve human interaction and as such customers are required to gather the suitable information by themselves from the website or by making enquiries through emails. The information must clearly and simply be presented so that it is easy for the customer to understand what services are on offer and what the process by which those services are delivered is (Sachs & Stair, 1997).

# *Chapter Three*

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## **RESEARCH METHODOLOGY**

This chapter shows the research methods and procedures used to accomplish the purpose of the research. Specifically, the current section debates and explain the study's overall research idea, research method and plan, the selection size and collection methods, the data collection procedures, the research tools and the data analysis methods used. The chapter also makes reference to the steps taken throughout the investigation procedure to confirm the cogency, reliability and ethicality of the research.

### **3.1 The Research Viewpoint**

Research viewpoint refers to '*the theoretical assumptions upon which the choice of research methods is made*' (Sidell, 1989, p. 261). The literature typically mentions to two kinds of research viewpoints; the positivist and the interpretivist approach (Smith et al, 1991). In short, the positivist researcher emphasis on quantifiable observations that leads to statistical analysis, while the interpretivist researcher highlights qualitative observations viewing the social world as humans (Saunders et al, 2007).

An implementation that has been done during the development was a questionnaire about the favoured learning styles of the contributors. The quoted questionnaire has been based on the Kolb's learning cycle model (Kolb, 1984). The previous illustrates the research characters of a positivist. According to Smith et al (2008), positivists researchers tend to measure properties



of externally existing world by objective methods. They are more quantitative-oriented researchers and they often *'make use of questionnaires to survey a representative sample of the population in whom they are interested'* (Walsh & Wiggins, 2003, p. 93). Given the research traits of the author, it was decided to follow the positivistic philosophical stance based on quantitative methods.

Regardless of the quoted restrictions of our research viewpoint, it is strongly supposed that, in the complete nonappearance of studies in the quoted topic in Cyprus, a positivistic approach would provide a first overall image of Cypriot consumers' perceptions of service quality and customer satisfaction in the internet banking.

### **3.2 Research Approach**

The research method of a study is often an outcome of the research viewpoint implemented by that study. Kolb's learning cycle model may be used to identify the reasoning approach that is followed by a research study (Gill & Johnson, 2002). The current research, initially, makes use of present theory where the theoretical outline of the study is then build upon. The research originally tried to appraisal the literature and identifies the major dimensions of e-service quality that would permit the development of a theoretical model for the research. This model would then assist in designing the research and the tool from which the main data would be collected. While this illustrates the philosophical approach of a positivist who uses existing theory to develop hypotheses (Saunders' *et al*, 2007).

Taking mind to Leedy and Ormrod (2001), there are several choices in designing a research, such as the grounded theory, experimentation, survey, modelling and case study. Research design or strategy is a general plan on how a researcher intends to gather data to answer the questions that were originally set (Saunders et al, 2000). Meanwhile the aim of the research was to collect huge measurements of data using of quantitative methods, so the selection of survey alternative to design the entire research process was selected.

As it said before, the positivist approach was followed for the research, which is repeatedly related to quantitative research methods. As Creswell (2003) mentioned a survey design seeks to analyse and describe quantitative or numeric trends, attitudes or opinions of a sample of a particular population. Considering the structured and designed questionnaire the appropriate survey strategy was followed.

### **3.3 Research Population**

Research population may possibly be well-defined as "*the study object which may be individuals, groups, organisations, human products and events or the conditions to which they are exposed*" (Kruger and Welman, 2001, p. 46). According to Leedy (1997) the research population would illustrate common feature that would be beneficial to the purpose of a research. The aim of the current research is to analyse the perspective of Cypriot consumers on the subject of service quality and their satisfaction principally on internet banking. In order for the research population to successfully be a part of the survey, it should be at least have some experience in the use of the internet in order to be able to answer to the research questions. Therefore, the current research population was districted as Cypriot consumers have the appropriate internet usage of internet banking.

#### **3.3.1 Sample Selection and Size**

There are two main sampling techniques, namely, the *probability sampling* and the *non-probability sampling* (Foreman, 1991; Babbie, 2009). Probability sampling states to the technique by which the researcher makes inferences from the sample about a population to answer the research questions or to meet the research objectives (Saunders et al, 2000). Under this approach, the selection of the population is made randomly, and if done properly, this would ensure that the sample is representative (Hair et al, 2003).

On-probability sampling is mostly based on subjective judgement (Saunders et al, 2003). Subjective judgement is the collection of sample elements may not necessarily be statistically representative of the population. Several non-sampling techniques may be engaged. *Convenience sampling* may be used where the sample can provide appropriate information and who is more available to participate in the research (Hair et al, 2006). *Quota sampling* is

also another non-probability sampling, the objective of which is to have a proportional representation of the strata of the target population for the total sample and the certain characteristics describe the dimensions of the population (Cooper & Schindler, 2003). Finally, *judgment sampling* is a purposive technique by which the researcher selects sample elements which meet certain criteria and have specific knowledge about a particular issue (Hair et al, 2006).

The weakness of non-probability techniques was stated by Robson (2003), to make statistical generalisations to the same degree as probability techniques. Ever since the purpose of the research is not to specify the results outside the sampled population, non-probability sampling other was engaged to gather the sample of the research. Taking mind again what Robson (2003) said, that this technique is chosen for small-scale surveys, which are typically less complicated and more acceptable when there is no intension for statistical inferences. Assumed the features of non-probability method, this procedure feeds better the purpose and environment of the current research.

The judgment sampling, we discuss above was alternative selected because we expected the research contributors to meet specific criteria in order to be able to deliver suitable information based on their experiences. The significant criteria used to select the sample were as follows:

- Survey contributor must have at least one year of frequent experience with internet banking
- Survey contributors must be Greek - Cypriot internet banking users

The particular relatively short length of experience was decided after considering the fact that internet banking is a relatively new activity in Cyprus and thus the majority of Greek Cypriot banking customers was not expected to have significant experience with this new mode of banking. In this sense and due to time constraints, it would be more feasible for the researcher to identify the research population within the time limits that have initially been set. Finally, in relation to the sample size, a total number of one hundred and twenty (120) questionnaires



were distributed to Greek-Cypriot internet banking users. Even though the initial plan was the distribution of 180 questionnaires, the actual sample size is still considered satisfactory given the low penetration rate of internet banking usage in Cyprus.

### **3.3.2 Data Collection Procedure**

According to (Walliman, 2005) there are two main categories of data for the purpose of the current research, the primary data and the secondary data. The current research adopted both primary and secondary data in order to address the primary research questions.

The survey took place from the period of the month of September 2012. The delivery of questionnaires took place in Paphos Town. That particular city was selected to conduct the survey since four most important branches of the big four Cyprus banks are based and located. The distribution of the questionnaire method took place throughout days during banks' opening hours between 08:00 a.m. to 13:30 p.m.

Potential participants were initially approached in each bank's branch and were asked whether they are familiar with the internet banking and for how long they have been using the internet banking process. If their answer where met the criterion set for sampling purposes, customers were then friendly asked to contribute in the examination. Also the purpose of the research was explained clearly to the participants. The purpose of the survey was also available in written on the questionnaire (Appendix IV) and participants could read it carefully. To certify the ethicality of the study, we provided the participants with an informed consent (Appendix II) in order to assure participants that research ethics have really considered in the research. Where respondents accepted to contribute, the questionnaire was given to them together with proper stationery. Contributors were escorted to an appropriate place so that the questionnaire completion process would be more easy and comfortable. Throughout the procedure, contributors were able to receive and provided any explanations of misunderstandings.



### **3.4 The Research Instrument**

Considering Birmingham & Wilkinson a research instrument may be well-defined as "a device for obtaining information relevant to a research project" (Birmingham & Wilkinson, 2003, p. 3). Appendix IV shows clearly the structured questionnaire that was presented in the research. Firstly an explanation is given regarding the aim of the survey in order to help the contributors to have a more informed decision. The following part concentrates on collecting data for demographic and personal information of the contributors. The third part is the questionnaire of the current research consisting of completely twenty-four objects. All items were based on a five point Likert-scale, where responses were ranged from Strongly Disagree [1] to Strongly Agree [5]. Hence, the survey contributors could select one option from the five presented answers for each item. The option of "Neutral" was provided for cases where internet banking users had no experience with any item of the questionnaire.

#### **3.4.1 Pilot Test**

As Bickman & Rog mentioned "new flaws that were not noted by the researcher" (Bickman & Rog, 1998, p. 30) Pilot testing is a significant step in any study due to its potential of revealing. The current tool was first sent to three bank staff that have a managerial position in the internet banking division of a specific bank. They all agreed that the scale was appropriate and suitable and the items selected were reflective to each dimension of internet service quality. On the other hand they recommended slight changes in the wording of current terms so that they become more understandable to the participants.

A second pilot test was similarly directed on a small group of five very experienced internet banking users. An explanation was given to them about the concern of designing a well-understandable instrument without difficult wording that might not be understood by contributors, so they were asked to go through it and make proposals and recommendations for perfection and improvement. The recommendations made were very useful and taken into justification and account in completing the instrument. A common recommendation made by all pilot test contributors was that a brief explanation of each dimension should be provided in

order for the research contributors to completely understand and realize the meaning of each dimension before answering the questions. Also after expression concern made by contributors in the pilot test regarding the language that the Cypriots may some of them won understand the English one questionnaire, a decision was conducted and a translation was made in order the contributors fully understand of the meaning of each question (Appendix V).

### **3.4.2 Linking the Questionnaire with Research Question Two and Three**

The design of the questionnaire was mainly resulted from the findings of the secondary research and, particularly, from the theoretical framework of the study consisting of five dimensions - reliability, responsiveness, security, accessibility and quality of information. In designing the instrument, the author set certain items corresponding to each dimension to gather data on the level of customer satisfaction with and importance of each dimension according to the perspective of Cypriot internet banking users.

#### **3.4.2.1 Research Question Two**

Research question two seeks to gather information on "which dimensions of internet service quality satisfy and which dimensions dissatisfy Cypriot electronic banking users in the context electronic banking?" In the questionnaire, a total of four items were chosen to correspond to each dimension with exemption of the dimension of quality of information, which is corresponded by three items. Therefore, the level of the survey participants' satisfaction with each service quality dimension was reflected by the total responses on the four items of each dimension. The choice of the questionnaire's item was based on the definition of each service quality dimension and its conceptual meaning as provided in the literature. The following questions of the questionnaires are related to research question 1:

- Items 1, 2, 3 and 4 correspond to the dimension of **reliability** and evaluate the levels of customer satisfaction with the particular dimension.

- Items 6, 7, 8 and 9 correspond to the dimension of **responsiveness** and evaluate the levels of customer satisfaction with the particular dimension.
- Items 11, 12, 13 and 14 correspond to the dimension of **security** and evaluate the levels of customer satisfaction with the particular dimension.
- Items 16, 17, 18 and 19 correspond to the dimension of **accessibility** and evaluate the levels of customer satisfaction with the particular dimension.
- Items 21, 22, 23 correspond to the dimension of **quality of information** and evaluate the levels of customer satisfaction with the particular dimension.

Table 3.1 indicates in detail the items that were selected to measure customer satisfaction with each internet service quality dimension:

**Table 3.1:** The Instrument's Items related to Research Question Two

No	Items of the Scale	Corresponding Dimension
1	The service is provided as promised and advertised.	Reliability
2	The service delivery process involves no extra hidden costs	Reliability
3	Any sort of calculation automatically executed by the website is accurate.	Reliability
4	The website's functioning is proper and web pages' downloading is quick.	Reliability
6	The bank responds to any transaction by promptly providing a confirmation of the execution of that transaction.	Responsiveness
7	Bank's responses are relevant to my enquiries and completely answer my questions.	Responsiveness
8	Call-centre staff is ready and willing to help when technical problems occur.	Responsiveness
9	Call-centre staff apologises and compensate when any sort of problem with service occurred.	Responsiveness



11	The bank follows a scholastic and careful procedure when receives and provides personal (ie username and password) or financial information (ie credit card number)	Security
12	I feel that the personal information I provide my bank are protected.	Security
13	I feel secured when executing internet banking transactions.	Security
14	The bank took measures to convince you that any provision of information, either personal or financial is protected and secured.	Security
16	Access to the website's information and personal account is easy and simple.	Accessibility
17	It is easy to find the contact details of the bank from its website.	Accessibility
18	A variety of contact methods (ie e-mails, telephone, fax etc) to talk to a bank representative is provided.	Accessibility
19	I can easily have access to a bank representative without long waiting time.	Accessibility
21	Information contained on the website is current and timely.	Quality of Information
22	Information provided by emails or call-centre staff is accurate and relevant.	Quality of Information
23	Information contained on the website is rich in detail.	Quality of Information

#### 3.4.2.2 *Research Question Three*

After the four questions of each dimension, an additional fifth question is followed asking the participants to specify the importance of each dimension in the level of their satisfaction. The total five questions intended to achieve the third objective of the study, which is "what do Cypriot electronic banking users consider to be the most significant internet service quality

dimension or dimensions of those identified in the present study?" The following questions are related to research question 2:

- **Item 5** evaluates the levels of importance of **reliability** in the level of satisfaction of Cypriot internet banking users.
- **Item 10** evaluates the levels of importance of **responsiveness** in the level of satisfaction of Cypriot internet banking users.
- **Item 15** evaluates the levels of importance of **security** in the level of satisfaction of Cypriot internet banking users.
- **Item 20** evaluates the levels of importance of **accessibility** in the level of satisfaction of Cypriot internet banking users.
- **Item 24** evaluates the levels of importance of **quality of information** in the level of satisfaction of Cypriot internet banking users.

The following table reveals in detail the items of the questionnaire that were selected to gather data on the importance of each dimension in the level of customer satisfaction. Each item is placed in the questionnaire right after the four items of each corresponding dimension.

**Table 3.2:** The Instrument's Items related to Research Question Three

<b>Item</b>	<b>Corresponding Dimension</b>	<b>Definition</b>	<b>Sources Used</b>
I consider reliability to play an important role in my satisfaction with the quality of the internet banking services I receive.	<b>Reliability</b>	<i>The ability to provide an accurate service and keep promises as advertised.</i>	Zeithaml et al. (2002) Yang et al. (2004) Parasuraman et al (1985) Jun & Cai (2001) Nantel (2000) Santos (2003)
I consider responsiveness to play an important role in my satisfaction with the quality of the internet banking services I receive.	<b>Responsiveness</b>	<i>The ability to provide a service accurately, consistently and timely.</i>	Johnston (1997) Jun & Cai (2001) Santos (2003) Yang et al. (2004) Parasuraman et al (1985)
I consider security to play an important role in my satisfaction with the quality of the internet banking services I receive.	<b>Security</b>	<i>The ability to make customers feel protected and secured when providing personal or financial information.</i>	Johnston (1997) Jun & Cai (2001) Yang et al. (2004) Zeithaml et al. (2002) Song & Zinkhan (2003) Parasuraman et al. (1985)
I consider accessibility to play an important role in my satisfaction with	<b>Accessibility</b>	<i>The ability to provide a service that is approachable</i>	Jun & Cai (2001) Yang et al. (2004) Vriens (2000) Parasuraman et al. (1985)



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the quality of the internet banking services I receive.

*and easy and simple to access.*

I consider quality of information to play an important role in my satisfaction with the quality of the internet banking services I receive.

***Quality of Information***

*The ability to provide information that is current, timely, accurate, relevant and rich in detail.*

Li et al. (2002)

Liu & Arnett (2000)

Santourides et al. (2009)

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### **3.5 Data Analysis**

The current research, the collected data were analysed in a particular statistical software package, namely SPSS. Data analysis involves examining, categorizing, tabulating or otherwise recombining the collected data (Yin, 1994). The examination will contain general descriptive statistics regarding the level of agreement with different statements and they will be obtainable in the form of graphs, such as bar charts and pie charts. Similarly, tables of frequency distributions will be provided.

### **3.6 Secondary Research**

Secondary sources may be well-defined as "*data which has already been collected by someone else and the researcher needs only to extract the information required for the purpose of the study*" (Kumar, 2005, p. 141). Separately from the main study, also used secondary sources to collect information for the determination of the study. Secondary data plays important role for the current study. For the aim of the secondary research, the majority



of secondary data were collected from previous research that has by this time been carried out by others and connected to the aim of the current study. Above and beyond appropriate textbooks and published journals, several online sources such as that of World Stats and E-business forum were used to gather specific data regarding the levels of internet usage as well as internet banking usage in Cyprus.

### **3.7 Reliability and Validity**

The concepts of validity and reliability are important considerations in any research in that they determine how compelling the results of the study are (Saunders et al, 2003). Reliability is demonstrated when measures are repeated under the same conditions and yield highly similar measurements each time (Case, 2007, p. 181). From the other hand, validity refers to the extent to which the results of the survey are exactly about what they appear to be about (Saunders et al, 2003). The current study had followed some specific steps in order to ensure the validity and reliability:

- Contributors were confirmed, verbally and in written, that their names and identities would not be made known so that they could feel free and protected to contribute in the study.
- Data was collected from population with experience in internet banking usage, which could provide suitable data based on their previous experiences.
- The strategy and the design of the survey questionnaire was based on present literature and, mostly, on popular studies on internet service quality.
- A pilot test was conducted by three professionals working in the internet banking divisions of a major Cyprus banks and five experienced internet banking users. The

pilot test contributed to the design of the actual survey tool that best fit the research objectives of the study.

- The survey tool was translated into the Greek language in order for population who won understand in English so it would clearly understand each item of the questionnaire for them.

## **3.8 Ethical Issues**

### **3.8.1 The Market Research Society Code**

Many of the methods used in marketing research projects are subject to particular ethical concerns (Smith & Albaum, 2005). In ensuring the compliance of the project with particular ethical standards, the researcher followed the principles of the Market Research Society Code (Appendix VI). The purpose and nature of the research was completely described to contributors verbally and in written. The participants were ensured that the information provided by them would remain confidential and never be used for any purpose other than academic. The consideration and application of the market research ethical code enabled the researcher to fully respect the participant of the survey and treat all the data gathered in as a careful and sensitive way as possible.

### **3.8.2 Informed Consent**

In order to better apply the code of Market Research Society, the researcher has considered the development of informed consent forms. Informed consent is widely being used in human research in order to fully inform participants the risks and benefits of participating in the research in order to make a more informed decision whether or not they are willing to participate (Morse, 1994). The researcher prepared a consent form that was given to

questionnaire respondents before filling the survey questionnaire (Appendix II). As with the questionnaire, the consent form was translated in the Greek language (Appendix III) to enable participant to clearly understand the nature of the study and their rights during and after the survey. In the consent form, all the necessary information was enclosed, such as the name of the researcher, the purpose of the project, and assurance that none of their personal details will they be made known to any other person except for research purposes. Finally, respondents were given the opportunity to choose whether or not they wished to receive the outcome of the final project.

# *Chapter Four*

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## **PRESENTATION & ANALYSIS OF RESULTS**

In the current chapter the data collected from the quantitative survey will be presented & analysed. The data were analysed using the descriptive statistics method, which contain detailed percentage and graphical analysis. Data analysis was conducted according to the research question and particularly with respect to satisfaction level of Cypriot Internet banking for the dimensions of reliability, responsiveness, security, accessibility and quality of information. Additionally, each dimension in satisfaction levels is presented and analyzed. Also the current chapter target is to give meaning and explanation to the collected data by discussing them in relation to the research question of the study.



## 4. 1 Demographic Characteristics of the Sample

The second part of the questionnaire aimed at gathering demographic data.

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**Chart 1:** Gender Distribution of the Sample

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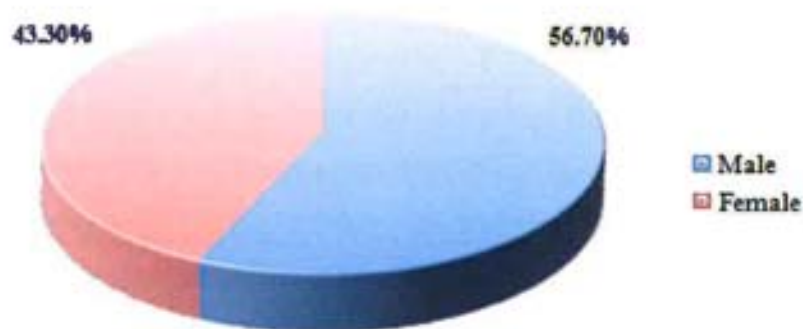


Chart 1 shows that the percentage of males was totalled 56.70% of the total sample population, while the remaining of 43.30% were female respondents.

**Chart 2:** Age Distribution of the Sample

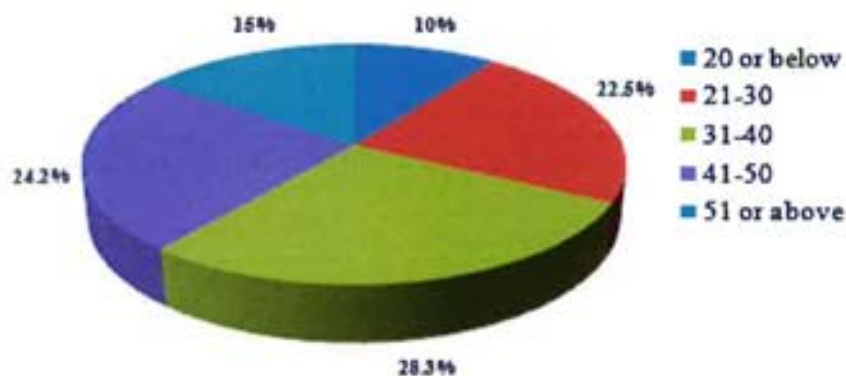
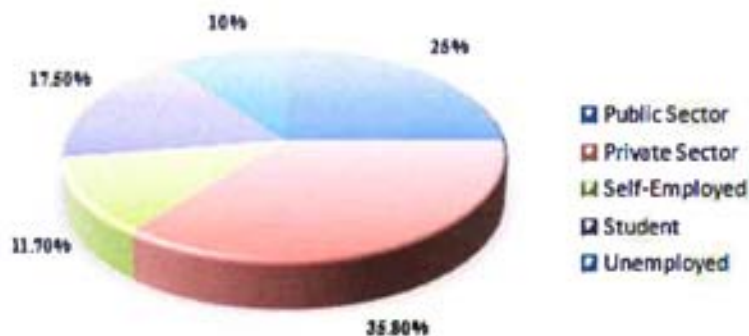


Chart 2 shows that the larger age group was that of between the ages of 31 to 40 years old (28.3%). However, the age groups of 21 to 30 and 41 to 50 years old were also considerable in proportional terms (22.5% and 24.2% respectively). Finally, the age groups of 20 or below and 51 or above were the smaller groups in the survey (10% and 15% respectively)

**Chart 3:** Occupation Distribution of the Sample

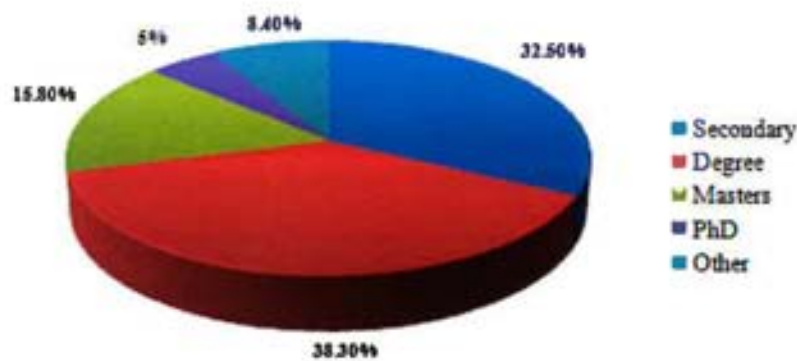


The majority of the survey's respondents are employees in the private sector (35.80% of the total sample population), while the 25% of the sample are employees in the public sector and government. Respondents currently being students totalled 17.50%, while respondents running their own business totalled almost 11.70% of the survey's sample. Finally, the lower percentage was that of unemployed respondents totalling 10% of the whole sample.

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**Chart 4:** Educational Distribution of the Sample

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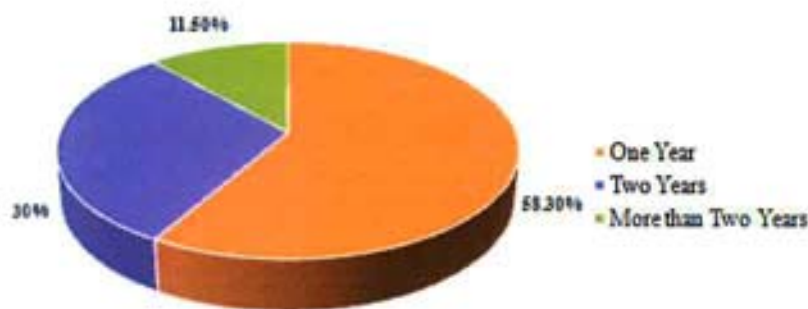


In terms of educational background, most of the respondents are holders of a bachelor degree (38.3%), while a considerable percentage of the sample are only educated to secondary level education. Lower percentages of the sample are holders of either a Masters degree or a PhD (15.80% and 5% respectively). Most of the respondents who selected the option of "other", they described their educational profile as being holders of professional certifications.

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**Chart 5:** Internet Banking Experience Distribution of the Sample

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Finally, with respect to the respondents' levels of internet banking usage and length of experience, the overwhelming majority of respondents have only very recently started using the internet banking method. Particularly, 58% of total sample has only just one year experience with internet banking. This result justifies our initial prediction that Cypriot internet banking users are not expected to have extensive experience with internet banking. This also justifies statistics revealed by the E-business forum (2007) that due to the infancy stage at which internet banking activities in Cyprus is, the internet banking usage by Cypriot consumers is both low and not extensive in length.

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Overall, the demographic data indicates that generally the respondents of the survey are younger in age and highly educated, mostly holding positions in either public or private sector, and having relatively low levels of experience with internet banking. Table 3.1 summarises the results associated with the demographic characteristics of respondents.



**Table 4.1:** Demographic Characteristics of the Sample

	<i>Number of Responses</i>	<i>Results in Percentage (%)</i>
<b><i>Gender</i></b>		
Male	68	56.7%
Female	52	43.3%
<b><i>Age</i></b>		
20 or below	12	10%
21-30	27	22.5%
31-40	34	28.3%
41-50	29	24.2%
51 or above	18	15%
<b><i>Occupation</i></b>		
Public Sector Employee	30	25%
Private Sector Employee	43	35.8%
Self-Employed	14	11.7%
Student	21	17.5%
Unemployed	12	10%
<b><i>Education</i></b>		
Secondary	39	32.5%
Degree	46	38.3%
Masters	19	15.8%
PhD	6	5%
Other	10	8.4%
<b><i>Internet Banking Experience</i></b>		
One Year	56	58.3%
Two Years	36	30.2%
More than Two Years	28	11.5%

## 4.2 Customer Satisfaction with Internet Banking

### Service Quality

In this section, the responses on satisfaction levels with each dimension of service quality are presented:

#### 4.2.1 Reliability

The first four questions of the survey tool were seeking to gather information on the satisfaction levels with regard to the dimension of reliability. Table 4.2 reveal the responses expressed both in numbers and percentage, for each item of reliability dimension.

**Table 4.2:** Frequency distribution of responses on satisfaction with dimension of reliability

			Strongly Disagree	Slightly Disagree	Neutral	Slightly Agree	Strongly Agree	
<i>Reliability</i>	Q1	Number	21	28	0	40	31	120
		Percent(%)	17.5%	23.3%	.0%	33.3%	25.8%	100.0%
	Q2	Number	23	30	0	31	36	120
		Percent(%)	19.2%	25.0%	.0%	25.8%	30.0%	100.0%
	Q3	Number	18	26	2	28	46	120
		Percent(%)	15.0%	21.7%	1.7%	23.3%	38.3%	100.0%
	Q4	Number	22	32	0	35	31	120
		Percent(%)	18.3%	26.7%	.0%	29.2%	25.8%	100.0%
<b>Total</b>		Number	84	116	2	134	144	480
		Percent(%)	17.5%	24.2%	.4%	27.9%	30.0%	100.0%

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**Chart 6: Number of Responses for each Item of Reliability Dimension**

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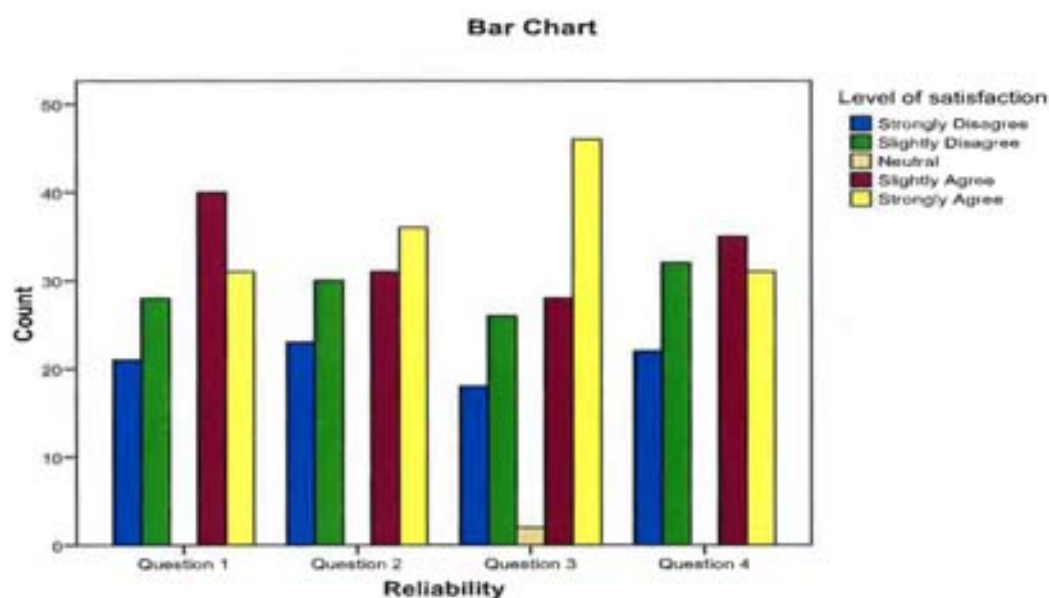


Chart 6 also present a clustered bar chart of number of responses on the dimension Reliability with respect to level of satisfaction

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As it is revealed by both Table 4.2 and Chart 6, the majority of internet banking users (33.3%) slightly agree on that service is delivered as promised and advertised. The 30% of the customers strongly agree on the reliability of the service in that there no extra hidden costs throughout the delivery process. A high percentage of the sample of about 39% strongly agree on the reliability of transactions and, particularly, on the accuracy of calculations when they are automatically executed by the website. Finally, almost 30% of the total sample slightly agrees that the website's functioning is proper and web pages' downloading is quick.

Overall, the above results indicate that the survey sample strongly agree with the reliability of internet banking services in terms of, no extra hidden cost on delivery process, and accurate execution of automatic calculation by website and slightly agree on promises given, website's functioning is proper and web pages' downloading is quick.

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**Chart 7:** Total Responses on the Items of Reliability Dimension

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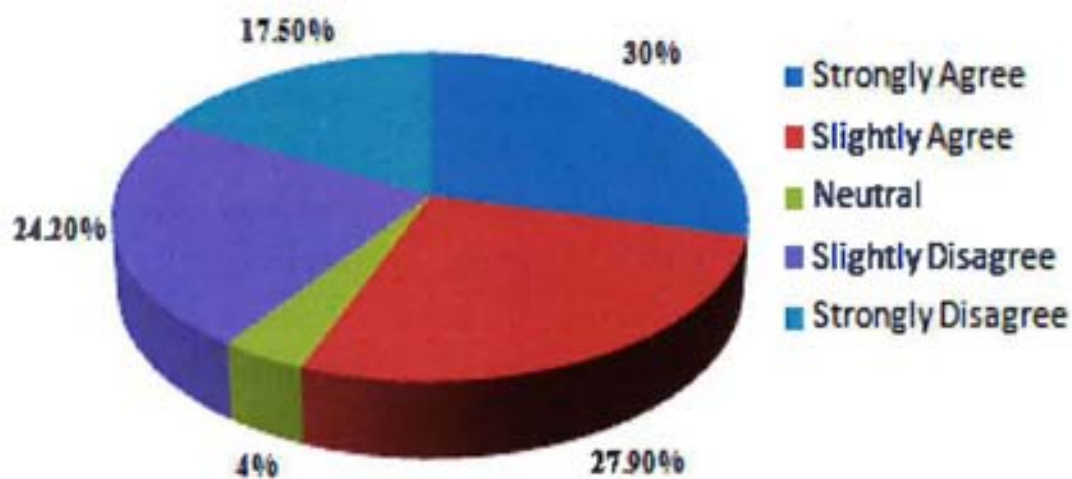


Chart 7 shows in percentage the total number of responses associated with reliability.



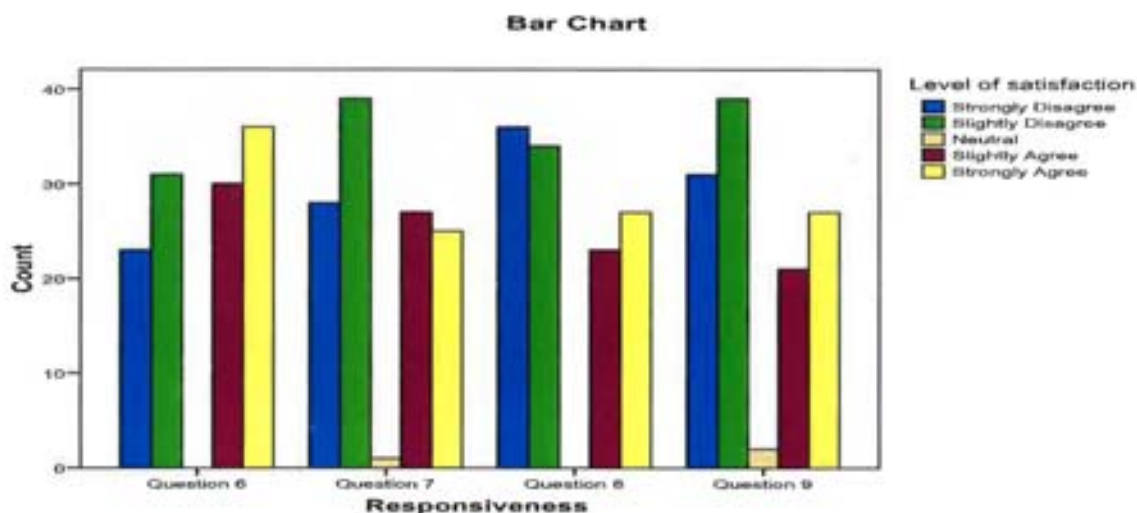
## 4.2.2 Responsiveness

**Table 4.3:** *Frequency distribution of responses on Satisfaction with Dimension Responsiveness*

			Strongly Disagree	Slightly Disagree	Neutral	Slightly Agree	Strongly Agree	
<b>Responsiveness</b>	Q6	Number	23	31	0	30	36	120
		Percent(%)	19.2%	25.8%	.0%	25.0%	30.0%	100.0%
	Q7	Number	28	39	1	27	25	120
		Percent(%)	23.3%	32.5%	.8%	22.5%	20.8%	100.0%
	Q8	Number	36	34	0	23	27	120
		Percent(%)	30.0%	28.3%	.0%	19.2%	22.5%	100.0%
	Q9	Number	31	39	2	21	27	120
		Percent(%)	25.8%	32.5%	1.7%	17.5%	22.5%	100.0%
<b>Total</b>		Number	118	143	3	101	115	480
		Percent(%)	24.6%	29.8%	.6%	21.0%	24.0%	100.0%

The second set of four items was seeking to gather information on the satisfaction levels with regard to the dimension of responsiveness. Table 4.3 reveal the responses expressed both in numbers and percentage, for each item of responsiveness dimension.

**Chart 8:** Number of Responses for each Item of Responsiveness Dimension



The responses on the levels of satisfaction with the dimension of responsiveness reveal that Cypriot internet banking customers are generally not satisfied with the quality of banks' responsiveness. Even though the majority of respondents (30.0%) are satisfied with the prompt receipt of confirmation of transactions, they seem to disagree with the remaining corresponding items. Particularly, 32.5% of total responses slightly disagree on that banks' responses are relevant to their enquiries and completely answer their questions. Moreover, the 30% of customers are strongly disagreed with the readiness and willingness of call-centre staff to help when technical problems occur. Finally, the majority of respondents seem to be dissatisfied with the way in which banks deal with problems with service occurred, since call-centre staff do not apologise or compensate for problematic services. Overall, therefore, respondents seem to be dissatisfied with the dimension of responsiveness.

**Chart 9:** Total Responses on the Items of Responsiveness Dimension

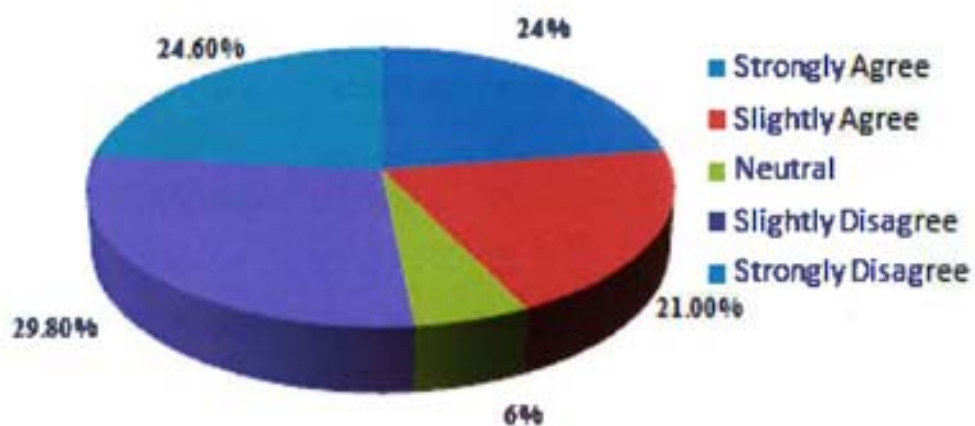


Chart 9 shows in percentage the total number of responses associated with responsiveness. Strongly Agree is up to 24.00%, Slightly Agree up to 21.00%, Neutral the lowest 6%, Slightly Disagree the highest rate up to 29.80% and the last one which is the Strongly Disagree up to 24.60%.

### 4.2.3 Security

**Table 4.4:** Frequency distribution of responses on Satisfaction with dimension Security

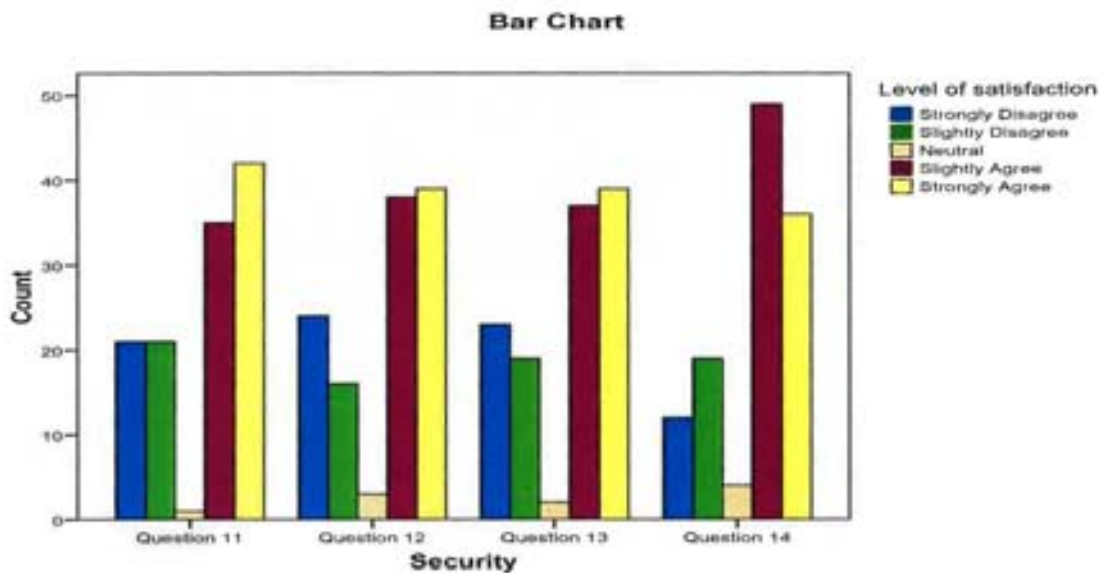
			Strongly Disagree	Slightly Disagree	Neutral	Slightly Agree	Strongly Agree	
<b>Security</b>	Q11	Number	21	21	1	35	42	120
		Percent(%)	17.5%	17.5%	.8%	29.2%	35.0%	100.0%
	Q12	Number	24	16	3	38	39	120
		Percent(%)	20.0%	13.3%	2.5%	31.7%	32.5%	100.0%
	Q13	Number	23	19	2	37	39	120
		Percent(%)	19.2%	15.8%	1.7%	30.8%	32.5%	100.0%
	Q14	Number	12	19	4	49	36	120
		Percent(%)	10.0%	15.8%	3.3%	40.8%	30.0%	100.0%
<b>Total</b>		Number	80	75	10	159	156	480
		Percent(%)	16.7%	15.6%	2.1%	33.1%	32.5%	100.0%

Items numbered as 11, 12, 13 and 14 were included to gather information on the satisfaction levels with regard to the dimension of security. Table 4.4 summarises the responses expressed both in numbers and percentage, for each item of security dimension



Chart 10 also present a clustered bar chart of number of responses on the dimension security with respect to level of satisfaction.

**Chart 10:** Number of Responses for each question of Security Dimension

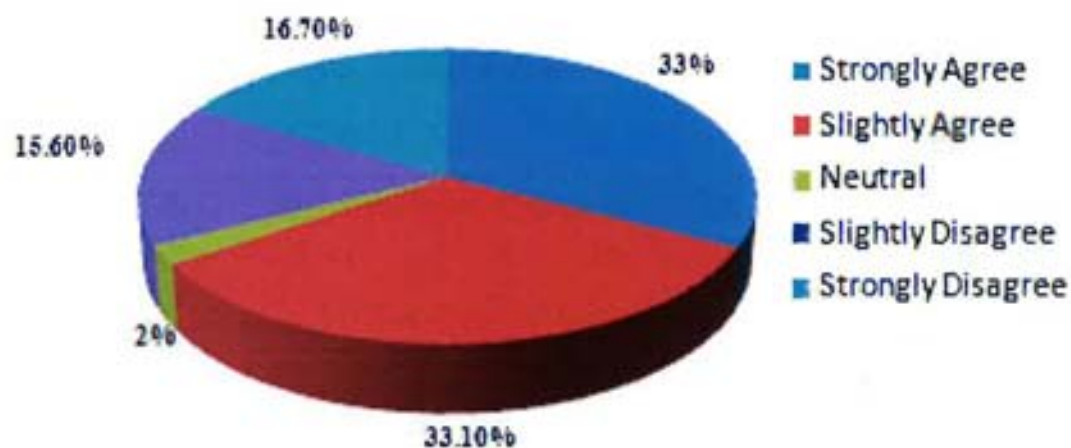


The above table and chart indicate that 35% of respondents strongly agree with the scholastic and careful procedures followed by banks when they receive and provide personal and financial information. Most respondents believe that the Cypriot internet banking providers are careful about the personal or financial information of the customers. The 32.5% of the sampled population also show strong agreement with statement regarding their feelings of security when executing internet banking transactions. Finally, the majority of respondent slightly agreed with the measures taken by internet banking providers to ensure that any provision of information, either personal or financial is protected and secured. Based on the above results, it is obvious that the overwhelming majority of respondents (almost 66%) either slightly or strongly agree with the corresponding items of security dimension and this is a clear indication of high levels of satisfaction with the quoted dimension

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**Chart 11:** Total Responses on the Items of Security Dimension

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Chart 11 shows in percentage the total number of responses associated with security. Strongly Agree is up to 33.00%, Slightly Agree which is the higher up to 31.00%, Neutral the lowest 2%, Slightly Disagree up to 15.60% and the last one which is the Strongly Disagree up to 16.70%.

#### 4.2.4 Accessibility

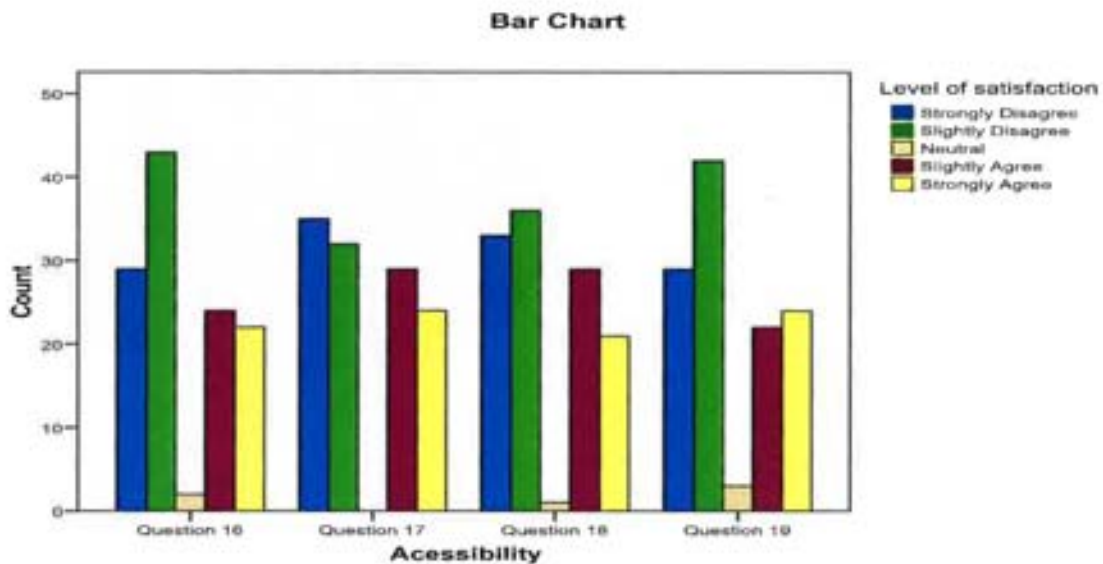
The fourth dimension of the survey questionnaires was that accessibility and it was assessed by items 16, 17, 18 and 19. Table 4.5 reveal the responses expressed both in numbers and percentage, for each item of accessibility dimension.

**Table 4.5:** *Frequency distribution of responses on Satisfaction with dimension Accessibility*

			Strongly Disagree	Slightly Disagree	Neutral	Slightly Agree	Strongly Agree	
Access	Q16	Number	29	43	2	24	22	120
		Percent (%)	24.2%	35.8%	1.7%	20.0%	18.3%	100.0%
	Q17	Number	35	32	0	29	24	120
		Percent (%)	29.2%	26.7%	.0%	24.2%	20.0%	100.0%
	Q18	Number	33	36	1	29	21	120
		Percent (%)	27.5%	30.0%	.8%	24.2%	17.5%	100.0%
	Q19	Number	29	42	3	22	24	120
		Percent (%)	24.2%	35.0%	2.5%	18.3%	20.0%	100.0%
<b>Total</b>	Number	126	153	6	104	91	480	
	Percent (%)	26.3%	31.9%	1.3%	21.7%	19.0%	100.0%	

Chart 12 also present a clustered bar chart of number of responses on the dimension accessibility with respect to level of satisfaction.

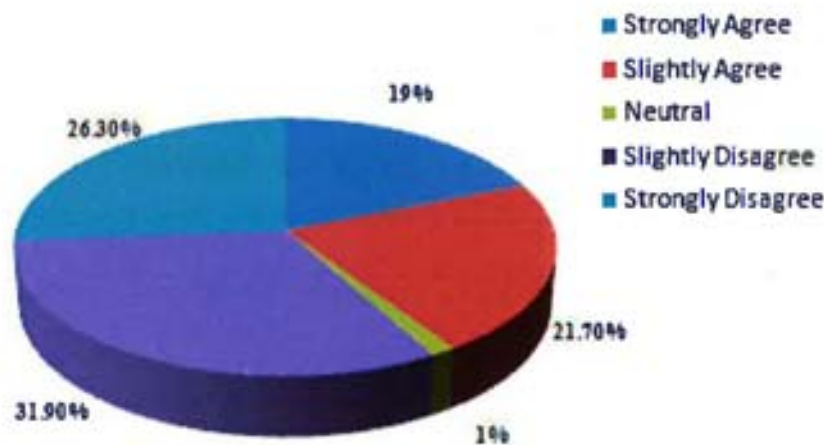
**Chart 12:** Number of Responses for each Item of Accessibility Dimension



The above table and chart of frequency analysis indicate that the 35.8% of respondents are slightly disagreed with the ease and simplicity to access website's information and personal account. Added to this, 29.2% of customers are slightly opposed to the ease to find the contact details of the bank from its website. There have also been found considerable disagreements with the existence of variety of contact methods (ie e-mails, telephone, fax etc) to talk to a bank representative. A total of 57.5% are either slightly or strongly disagreed with the accessibility to bank representatives. Finally, the majority of customers feel that the waiting time to access a bank representative is long. The results show a general disagreement with the corresponding items of accessibility, which, in turn, reveal low levels of satisfaction with the quoted dimension. Chart13 shows in percentage the total number of responses related to the dimension of accessibility.



**Chart 13:** Total Responses on the Items of Accessibility dimension



#### 4.2.5 Quality of Information

The final dimension, the quality of information, was assessed by three items with number 21, 22 and 23. Table 4.6 indicate the responses expressed both in numbers and percentage, for each item of quality of information dimension.

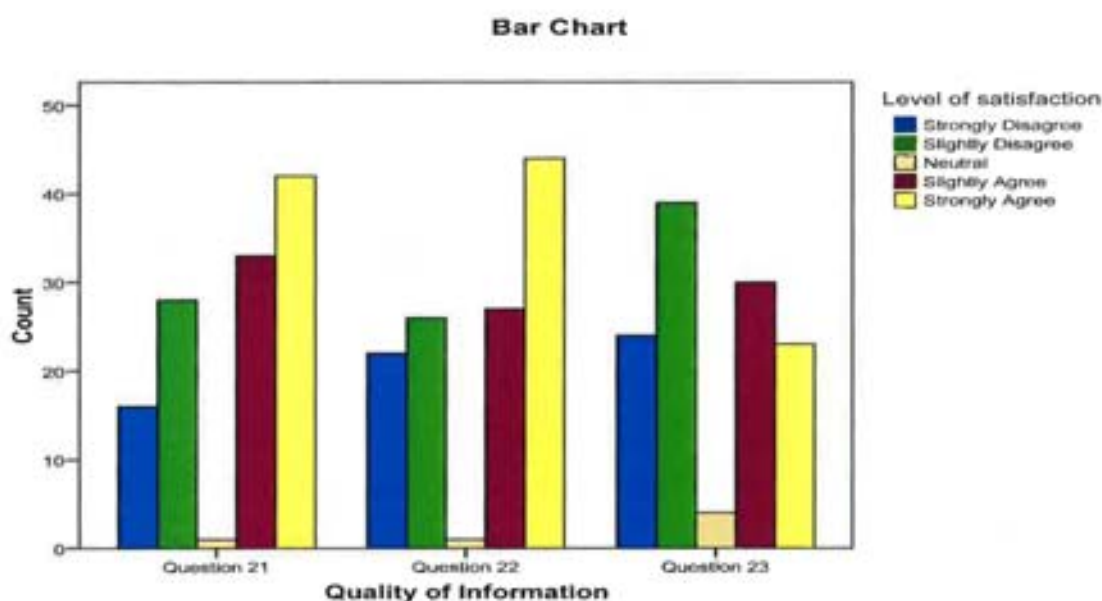
**Table 4.6:** *Frequency distribution of responses on Satisfaction with Quality of Information*

			Strongly Disagree	Slightly Disagree	Neutral	Slightly Agree	Strongly Agree	
Quality of Information	Q21	Number	16	28	1	33	42	120
		Percent (%)	13.3%	23.3%	.8%	27.5%	35.0%	100.0%
	Q22	Number	22	26	1	27	44	120
		Percent (%)	18.3%	21.7%	.8%	22.5%	36.7%	100.0%
	Q23	Number	24	39	4	30	23	120

	Percent (%)	20.0%	32.5%	3.3%	25.0%	19.2%	100.0%
Total	Number	62	93	6	90	109	360
	Percent (%)	17.2%	25.8%	1.7%	25.0%	30.3%	100.0%

The above results are also shown in Chart 14 with the number of responses on the dimension of quality of information with respect to level of satisfaction.

**Chart 14:** Number of Responses for each Item of Quality of Information Dimension



From the above information, it is shown that, according to the majority of respondents, the information contained on the website is current and timely. The 36.7% of the sampled population is also agreed on the accuracy and relevance of information provided by call-centre staff. Nevertheless, a large proportion of respondents, slightly disagree with that the

information contained on the website is rich in detail. As a general conclusion, it seems that the majority of respondents are agreed on the quality of information provided by the bank. Chart 15 shows in percentage the total number of responses related to the dimension of quality of information.

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**Chart 15:** Total Responses on the Items of Quality of Information Dimension

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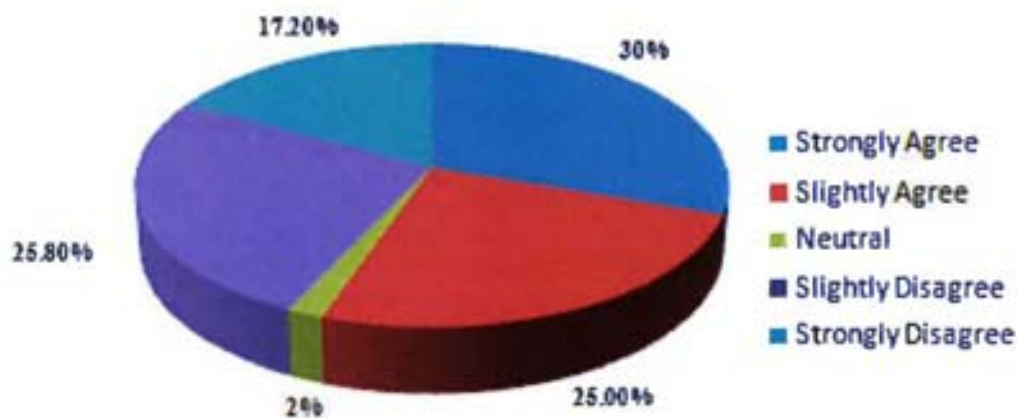


Chart 15 shows in percentage the total number of responses associated with Quality Of Information Dimension. Strongly Agree is up to 33.00%, Slightly Agree up to 25.00%, Neutral the lowest 2%, Slightly Disagree the highest rate up to 25.80% and the last one which is the Strongly Disagree up to 17.20%.

#### 4.2.6 Analysis of Total Scores

The percentage analysis is obtained by using the total of scores in all questions in each dimension.

**Table 4.7:** Frequency distribution of total responses on each dimension for Cypriot internet banking users with respect to level of satisfaction

	Response				
	Strongly Disagree	Slightly Disagree	Neutral	Slightly Agree	Strongly Agree
	Reliability	17.5%	24.2%	.4%	27.9%
Responsiveness	24.6%	29.8%	.6%	21.0%	24.0%
Dimension Security	16.7%	15.6%	2.1%	33.1%	32.5%
Accessibility	26.3%	31.9%	1.3%	21.7%	19.0%
Quality of Information	17.2%	25.8%	1.7%	25.0%	30.3%



**Chart 16:** Clustered Bar Chart of Total Responses

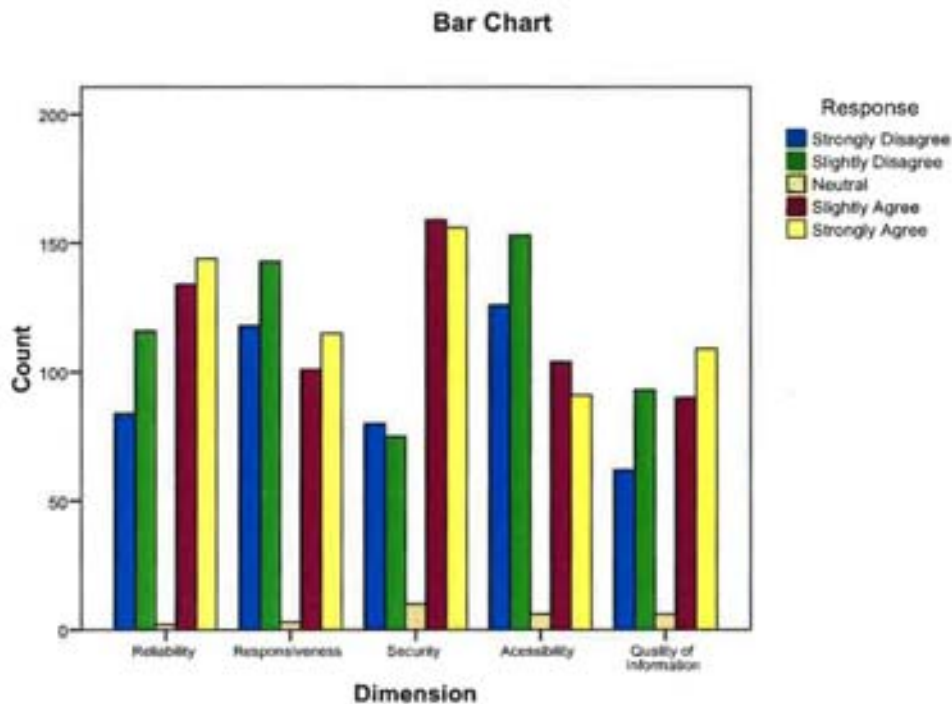


Chart 16 also show a clustered bar chart of total responses of each dimension for Cypriot internet banking with respect to level of satisfaction

### 4.3 Importance of Each Dimension in Customer Satisfaction

Besides the impact of each dimension of service quality on customer satisfaction, the survey instrument was also designed to gather data on the importance of each dimension in satisfaction levels. 4.7 show the frequency distribution of responses on importance of dimension for Cypriot internet banking users with respect to level of satisfaction

**Table 4.8:** Level of Importance of each Dimension

		Strongly Disagree	Slightly Disagree	Neutral	Slightly Agree	Strongly Agree	
<b>Reliability</b>	Count	21	23	3	39	34	120
	% within Dimension	17.5%	19.2%	2.5%	32.5%	28.3%	100%
	% within Level of satisfaction	15.0%	16.1%	21.4%	25.8%	22.4%	20.0%
<b>Responsiveness</b>	Count - %	18	20	1	38	43	120
	Dimension	15.8%	16.7%	0.8%	31.7%	35.8%	100%
	Level of satisfaction	27.1%	30.1%	7.1%	13.2%	11.8%	20%
<b>Security</b>	Count - %	34	33	5	23	25	120
	Dimension	28.3%	27.5%	4.2%	19.2%	20.8%	100%
	Level of satisfaction	24.3%	23.1%	35.7%	15.2%	16.4%	20%
<b>Accessibility</b>	Count - %	21	22	1	34	42	120
	Dimension	17.5%	18.3%	.8%	28.3%	35.0%	100%
	Level of satisfaction	15.0%	15.4%	7.1%	22.5%	27.6%	20%
<b>Quality of Information</b>	Count - %	26	22	4	35	33	120
	Dimension	21.7%	18.3%	3.3%	29.2%	27.5%	100%
	Level of satisfaction	18.6%	15.4%	28.6%	23.2%	21.7%	20%
Count		140	143	14	151	152	600
% within Dimension		23.3%	23.8%	2.3%	25.2%	25.3%	100%
% within Level of satisfaction		100.0%	100.0%	100.0%	100.0%	100.0%	100%

In order to simplify the data above and make the results more understandable to the reader, we combine the scores of "Slightly Agree" and "Strongly Agree" as positive statements and "Slightly Disagree" and "Strongly Disagree" as negative items for showing the levels of importance. Table 4.8 shows this summary:

**Table 4.9:** Summary of data on level of importance of each dimension in satisfaction

	Disagree	Agree
<b>Reliability</b>	36.7	60.8
<b>Responsiveness</b>	31.7	67.5
<b>Security</b>	55.8	40
<b>Accessibility</b>	35.8	63.3
<b>Quality of Information</b>	40	56.7

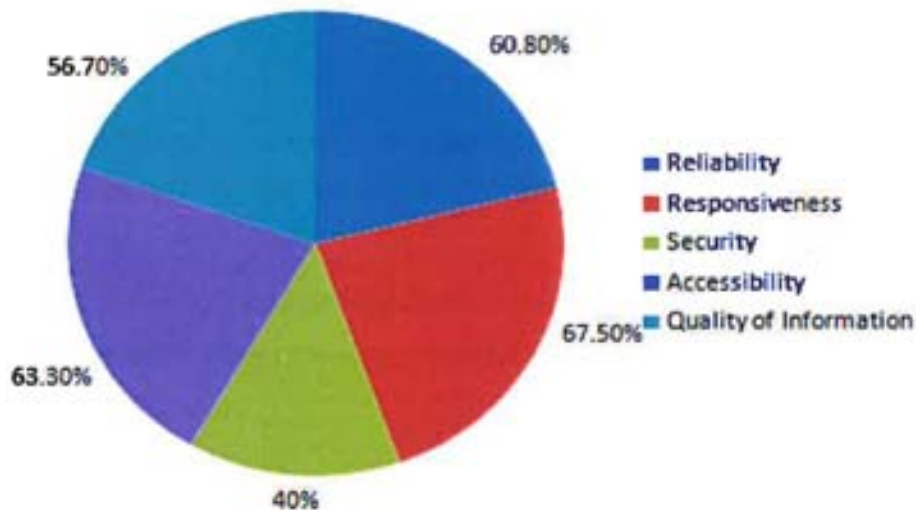
Based on the figures of Table 4.8, the following chart provides a graphical presentation of results relating to level of importance of each dimension.

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**Chart 17:** Graphical interpretation of data on level of importance of each dimension

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**Chart Showing Level of Importance**



The more the variable is shown in the right side more importance will it hold. It is seen that most important aspects are Responsiveness and Accessibility as per the %. The most significant dimension identified in the present study is Responsiveness (67.5%). The next significant dimension identified is Accessibility (63.3%) followed by Reliability (60.8%) and Quality of Information (56.7%). Finally, the least important dimension identified is Security (40%).



## **4.4 Customer Satisfaction with Internet Banking Service Quality**

The main aim of the research objectives was to inspect the level of satisfaction of Cypriot electronic banking users with each dimension of internet service quality. This objective was determined as the research question two as follows:

*"Which dimensions of internet service quality satisfy and which dimensions dissatisfy Cypriot electronic banking users in the context electronic banking?"*

For this objective, the data collected with respect to satisfaction levels with each dimension - reliability, responsiveness, security, accessibility and quality of information - are examined, analysed and discussed.

### **4.4.1 Reliability**

Reliability was the first dimension for which contributors were asked to state their levels of agreement or disagreement with assured items of the questionnaire. For analysing our collected data, we had combined the scale "Slightly Agree" and "Strongly Agree" as well as "Slightly Disagree" and "Strongly Disagree" in % in order to have a clear picture of the positive as well as the negative responses. An answer from a contributor in a response of being "Slightly Agree" or "Strongly Agree", we assumed that provides the same point of view with just the different of the intensity of opinion. The scale and the graphical analysis of the collected data of response indicate the results that, the total of response indicated 41.7% disagree on the reliability dimension of e-service quality while 57.9% agree on reliability dimension of e-service quality.

Therefore the level of satisfaction for reliability dimension of e-service quality is "Agree".

According to Jun & Cai (2001, p. 282), reliability means *"...providing accurate service...keeping service promise...making accurate records...keeping promise as advertised"*.

The definition that reliability was given in this study is the ability to provide an accurate service and keep promises as advertised (Zeithaml et al., 2002; Yang et al., 2004; Parasuraman *et al.* 1985; Jun & Cai, 2001; Nantel, 2000; Santos, 2003). Those characteristics related to a reliable service are what we have found in our research. Mostly, the sample strongly agrees that the internet banking service offered involves no extra hidden costs and the transactions and calculations are accurately executed. As far as the term "accuracy" is concerned, Al-Hakim (2007) stated that accuracy, in the context of online services, is a significant aspect of quality, the improvement of which will ensure improvement in customer satisfaction levels. Definitely, our survey results show that there appears to be a positive relationship between reliable services in terms of accurate transactions and calculations and customer satisfaction.

Another important aspect coming out from our sample is that the contributors slightly agrees that the service is provided as promised and advertised and that the website's functioning is proper and web pages' downloading is quick. Zeithaml et al (2002) found that one of the major gaps in serving the customer from the internet is the design gap due to the possible failure of the provider to incorporate knowledge about customers' expectations into the functioning of the website. Our results, however, reveal that the majority of the sample is satisfied with the functioning of the website, which is, in turn, an indication that Cypriot internet banking providers incorporated knowledge well about customers' requirements.

Considering the above, it can mentioned that Cypriot electronic banking users, limited to our survey's sample, are mostly satisfied with that the service is provided as promised and advertised, the service delivery process involves no extra hidden costs, any sort of calculation automatically executed by the website is accurate and the website's functioning is proper and web pages' downloading is quick. Taking mind our results compare with the findings of Santourides et al (2009) in their study of internet banking service quality in Greece we can easily understand that both results are correlated. On both results reliability has a strong impact upon satisfaction levels.

#### **4.4.2 Responsiveness**

Responsiveness is the following dimension for which contributors were asked to state their levels of agreement or disagreement with specific items of the questionnaire. In bearing in mind the results of the total responses on satisfaction levels with providers' responsiveness, it appears that among the sample, 54.4% disagree on responsiveness dimension of e-service quality whereas 45% agree on responsiveness dimension of e-service quality. Simply specified, the survey's illustration is not satisfied with the dimension of responsiveness.

The definition provided for the dimension of responsiveness was the ability to provide a service accurately, consistently and timely (Johnston, 1997; Jun & Cai, 2001; Santos, 2003; Yang et al, 2004; Parasuraman *et al*, 1985). In the literature, a close interrelation was given between a bank's responsiveness and the willingness and readiness of bank representatives to provide customers with assistance in cases of problems or enquiries (Parasuraman *et al*, 1985). However, our illustration appears to be dissatisfied with the willingness and readiness of representatives when they are needed for support and assistance. Our findings correlates with the findings of Forester Research Inc (2001, cited in Johnson & Weinstein, 2004), which found that online service providers failed to meet the rising expectations of customers regarding the prompt response via emails or telephones or the willingness and readiness of call-centre staff to provide assistance. Our finding must carefully be taken into account since, in the absence of personal interaction, the role call-centre staff is more than important (Jun & Cai, 2001).

#### **4.4.3 Security**

The third dimension tested in terms of its relationship with customer satisfaction was the dimension of security. 32.3% of Cypriot electronic banking users disagree on Security dimension of e-service quality whereas 65.6% agree on security dimension of e-service quality. In previous chapter we determined security to be the protection of both personal and financial information by the service provider (Johnston 1997; Yang et al., 2004; Flavian &



Guinaliu, 2006). The impact of security on perceived service quality and customer satisfaction was also mentioned. When a customer clearly receives the message that the service delivery process is safe and secure, customers' perceived service quality and satisfaction levels improve (Song & Zinkhan, 2003). In other words, the higher the levels of security, the more chances for customers to trust a particular website and being satisfied with the service purchased (Wolfenbarger & Gilly, 2002; Santos, 2003).

Certainly, our results shows that the majority of contributors have frequently agreed that their banks have taken measures to send the message that any information sharing between the provider and the customer is protected, secured and confidential. Having clearly received the message, customers seem to be very satisfied with general security of the service. In fact, the majority of contributors are pleased and satisfied with the bank cares about the personal such as passwords and usernames or financial information such as transactions of the customers, the personal information is protected, security when executing internet banking transactions.

#### **4.4.4 Accessibility**

Accessibility is the fourth internet service quality of our research dimension. In view of the total responses on the dimension of accessibility, the majority of Cypriot electronic banking users (51.8%) disagree with the items corresponding to accessibility dimension whereas only 40.6% agree on those items. Accessibility refers to the degree to which a service is approachable and easy to access (Parasuraman *et al*, 1985, 1988). As far as the electronic banking is concerned, a service would be accessible when information in the website and personal account are easy to access (Yang *et al.*, 2004). Considering our research, nevertheless, it clearly shows that the Cypriot electronic banking users disagree on the ease to access website's information and personal account. For instance, the majority of respondents find it difficult to identify the contact details of the bank from the website.

The customer needs to communicate with different ways with bank, if it appears absence of human interaction such as via email and telephone. This method of communication must be accessible in that they must easily be identified from the website. Also an important aspect is



that the banks should understand that the internet banking is used not only by experienced users but also by users who are not so familiar with the internet. Consequently, access to such information must be easy and simple. The contributors of the survey were dissatisfaction to the ease simplicity to find the contact details of the bank.

Additional feature making a service accessible is the time taken for a bank representative to become available for assistance (Jun & Cai, 2001). To the degree that this feature is concerned, the majority of the sample disagrees with the ease to access a bank representative without long waiting time. This means that in their efforts to communicate with the bank either via email or by telephone they strive to do so by waiting long time in the queue until a representative becomes available. According to Vriens (2000), long waiting times is an indication of operational inefficiency and a major reason for high levels of customer dissatisfaction.

In conclusion Cypriot electronic banking users seem to be dissatisfied with the dimension of accessibility, in terms of the ease, speed and simplicity to access the website, the personal account or a bank representative.

#### **4.4.5 Quality of Information**

Quality of information is the final dimension of internet service quality in our research. In our survey, it was found that 43.1% of Cypriot electronic banking users disagree on the quality of information dimension whereas 53.3% agree on quality of information dimension of e-service quality.

Li et al. (2002, p. 689), which defined quality of information as the "*attributes of information contained in E-mails or websites.*" The importance of this dimension lies in that internet service delivery does not involve human interaction and as such customers are required to collect the appropriate information by themselves from the website or by making enquiries through emails. In this sense, the information must clearly and simply be presented so that it

is easy for the customer to understand what services are on offer and what the process by which those services are delivered is (Sachs & Stair, 1997).

Li et al. (2002) additionally clarifies that quality of information means providing information that is current, relevant, timely and accurate. The above characteristics of information are found in our research to positively affect customer satisfaction. In specific, the survey's participants stated their agreement in that the information provided in the website or in emails is current, relevant and timely. This implies that Cypriot internet banking providers manage information effectively by updating their websites on a frequent basis and providing their customers with information that are meaningful. Nevertheless, Li et al. (2002) mentioned that the information provided must also be rich in detail. In this viewpoint, our sample disagrees in that the information provided is rich in detail. In overall, though, it is apparent that Cypriot electronic banking users are satisfied with the dimension of quality of information. The finding related to the quoted dimension correlate with the studies of Liu & Arnett (2000), Li et al. (2002), Santourides et al. (2009), which also found that the quality of information has a significantly positive effect on overall customer satisfaction.

## **4.5 Importance of each Dimension in Customer Satisfaction**

The third objective of our study was to chart the importance of each dimension of internet service quality in customer satisfaction as perceived by Cypriot electronic banking users. As it was mentioned in Chapter One, the corresponding research question was:

*"What do Cypriot electronic banking users consider to be the most significant internet service quality dimension or dimensions in satisfaction levels?"*

This question presents the third objective of the study and, to achieve this objective, certain items were included in the scale to gather data for each dimension. Question 5 is used to

evaluate the levels of importance of Reliability. Question 10 is used to evaluate the levels of importance of Responsiveness. Question 15 is used to evaluate the levels of importance of Security. Question 20 is used to evaluate the levels of importance of Accessibility. Question 24 is used to evaluate the levels of importance of Quality of Information.

Our findings as presented in the previous chapter indicate that responsiveness is ranked as the most important dimension in customer satisfaction from the perspective of the sampled Cypriot internet banking users. Therefore, given the responses of the sample, it appears that responsiveness in our study has the most significant influential power on customer satisfaction..

The second most important dimension of internet banking service quality is accessibility. This finding was gathered by surprise since a number of popular studies have not found a strong relationship between accessibility and customer satisfaction (Parasuraman *et al*, 1988; Johnston, 1997; Jun & Cai, 2001). In contrast with those studies, our research reveals that Cypriot electronic banking users are highly concerned with the ease and simplicity provided to access website's information, find contact details and talk to a bank representative without long waiting time.

The third and fourth important dimensions of service quality as perceived by the survey sample are the reliability and quality of information dimensions respectively. Regarding reliability, given the ranking that it was given in other studies, such as those of Johnston (1997), Jun & Cai (2001), Santos (2003) and Yang *et al* (2004), it should be expected a higher actual score for this dimension in terms of its importance in satisfaction levels. The overwhelming majority of respondents, however, agreed with the corresponding item of reliability, which confirms its importance in customer satisfaction as expressed and empirically found by previous studies.

With respect to the quality of information, the dimension was ranked fourth. The low score of this dimension contradicts with the studies of Santourides *et al* (2009) and Li *et al*. (2002) in



which the quality of information was amongst the most important factors, which customer value when assessing service quality of web-based services. Despite the low ranking of the dimension in our study, the agreements with the corresponding item were more than the disagreements.

Finally and surprisingly enough, the dimension of security was ranked as the least important dimension in satisfaction levels. According to Santourides et al (2009), in countries with relatively low internet and internet banking penetration rates, it is expected that security issues are highly considered by the users. Given the above, it was expected that Cypriot internet banking customers would be highly concerned with the security dimensions. Nevertheless, the sample of the study seems not to consider security as a significant factor influencing their satisfaction levels.

## 4.6 Summary

The following table provide a summary of our findings; the level of satisfaction for each dimension and importance of each internet service quality dimension from the perspective of Cypriot electronic banking users.

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**Table 4.9:** Summary of Findings for Research Question Two and Three

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	<b>Level of Satisfaction</b>	<b>Importance Ranking</b>
<i>Reliability</i>	Agree	2
<i>Responsiveness</i>	Disagree	5
<i>Security</i>	Agree	4
<i>Accessibility</i>	Disagree	1
<i>Quality of Information</i>	Agree	3

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Responsiveness is the most significant dimension of service quality in customer satisfaction. Cypriot electronic banking users are, however, dissatisfied with the level of responsiveness of internet banking providers. Accessibility such as the ability to provide a service that is approachable, easy and simple to access is the second most significant dimension of internet service quality among Cypriot internet banking users. As with the responsiveness dimension, however, the level of customer satisfaction with accessibility dimension of service quality is low, according to the findings. Reliability and quality of information are the third and fourth important dimensions of internet service quality respectively among Cypriot internet banking users for which they are satisfied with these two dimensions. Finally, though security is the fifth important dimension of internet service quality among Cypriot internet banking users, the sample of the study is satisfied with it.

# *Chapter five*

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## **CONCLUSIONS AND RECOMENDATIONS**

This chapter will summarise the results and associate them to the research objectives of the study. Based on the final outcomes, certain recommendations are given to Cypriot internet banking providers that would enable them to improve their service quality in areas, which the present study found to be more important. Finally, the limitations of the study and the implications for further research are discussed.

### **5.1 Research Objectives and Summary of Outcomes**

Identifying the principal the key dimensions of internet service quality was the first objective this research. Regardless of the disagreeing arguments on the mentioned connection, we state that, in the context of online services, perceived service quality offerings a significant feature influencing customer satisfaction. The dimensions were then selected though a scholastic review of the literature and, mostly, the research on online service quality. Even though our research on existing studies has led to the identification of numerous dimensions of internet service quality, only five dimensions were selected on the basis of the frequency of mention in the literature. The selected dimensions are reliability, responsiveness, security, accessibility and quality of information. Using these dimensions of service quality, a conceptual framework was then established for the purpose of our research. This context is based on the idea that, in the context of online service, the above dimensions have an important influence

on either customer satisfaction or customer dissatisfaction. By accomplishing the first objective of the research, we then concentrated on designing the research instrument of the research, which was a structured questionnaire consisting of totally twenty four items. The tool was used to principally achieve the second and third objective of the study. The second objective of the study was to inspect which of the selected dimensions lead to customer satisfaction and which of those dimensions lead to customer dissatisfaction. The results of the survey discovered that while Cypriot electronic banking users, are happy and satisfied with the dimensions of reliability, security and quality of information, they are not so with the dimensions of accessibility and responsiveness . The consequence of study's findings is, hence, that the previous dimensions of internet service quality lead to customer satisfaction while the other ones lead to customer dissatisfaction. The third and the last objective of the research were to examine the amount of importance of the five selected dimensions from the perspective Cypriot electronic banking users. The findings relating to this objective revealed that responsiveness and accessibility are the most important dimensions of internet service quality followed by reliability, quality of information and security. The two dimensions leading to customer dissatisfaction are the most important dimensions in customer satisfaction. The dimensions of responsiveness and accessibility have the most powerful influence on the levels of satisfaction of Cypriot electronic banking users. Based on the beyond results, we may now move on achieving the fourth research objective of the study, which is to provide a number of recommendations to Cypriot electronic banking providers on the areas that should concentrate to improve their service quality. Service quality has commonly been realized as a vital contributing issue of influence, attracting, satisfying and retaining customers as well as a vibrant tool of attainment a supportable competitive advantage. Hence, internet banking providers are required to focus their attempts in gaining a sustainable competitive advantage not only on the basis of price but also on the basis of the quality of their services. In order to do so, they are required to obviously appreciate and understand customers' requirements and requests. Only in this ways, internet banking providers will manage to overcome the challenges associated with customer dissatisfaction and high levels of customer turnover. On the basis of our findings, certain recommendations could be made that would enable internet banking providers to improve the quality of their services and keep their customers satisfied and loyal.



## **5.2 Recommendations to Cypriot Internet Banking Providers**

The research acknowledged five key dimensions. Just for clarification all five dimensions it is recommended that the appropriated emphasis should be given since all have an influential power on customer satisfaction. Nevertheless, given the differences in intensity of the impact on customer satisfaction, Cypriot internet banking providers are also called to pay particular attention to the areas of service quality, in which customers are either dissatisfied or they perceive them as more important than others in customer satisfaction.

Secondly, it is recommended that Cyprus-based internet banking providers pay particular attention on the dimension of responsiveness. Our study's sample was found to be dissatisfied with this dimension while, simultaneously, considering it as the most important one in their satisfaction levels. This implies that banks should more effectively manage the operations of their internet banking services so that they could respond to the customer more quickly effectively. Possible actions should be the prompt response to customers via emails or telephones when a technical problem occurs. This, in turn, requires a careful management of call-centres, human resources and operations. Beside the immediate response, banks should also provide customers with sufficient information so that the customer could be satisfied through a complete answer. Moreover, bank could also possibly compensate customers in case of a poor service provided or, at least, apologise gracefully. Apologising means that the bank accepts its responsibility for a mistake and this may positively influence the overall impression in customers' minds. Also, Cypriot internet banking providers could possibly think of the provision of live chat support through the website. Such an action could provide more interactive methods of communication with the customer that allows easy and quick response to customers' enquiries.



Thirdly, banks are recommended to place increased emphasis on the dimension of accessibility. The particular dimension was also found in our study to have a negative relationship with customer satisfaction. At the same time, the quoted dimension is perceived by Cypriot electronic banking users to be the second most important dimension in their satisfaction levels. On the basis of this finding, it is recommended that Cypriot internet banking providers focus on making their services more accessible to their customers. Firstly, it is important for the banks to simplify their websites so that it becomes easier for customers to find out the appropriate information. Banks must keep in mind that not all customers are familiar with the internet and therefore websites must be accessible to a variety of audience. Banks must provide their contact details in the website in as a clear and easy way. In case of the introduction of a live chat support, as recommended previously, the icon of that support must be easily recognised by customers. Finally, it is important for the banks to rethink of their call-centres operations so that the call waiting time can be reduced. Our sample seems to be highly dissatisfied with the long waiting time when attempting to contact a bank representative and this issue must carefully be considered by Cyprus internet banking providers.

### **5.3 Implications for Further Research**

The limitations of the study as undertaken in the previous section provide several implications for further research. Due to the limitation of the study's positivistic approach, further research could be undertaken to measure Cypriot internet banking users' to give the contributors the opportunity to describe specific incidents that satisfied or dissatisfied them. Such methods could enable the selection of more experienced internet banking users who could describe and expand on a series of different incidents that influenced their perception of a particular service.

Future research might also re-consider the dimensions determining internet service quality and make possible changes in the theoretical framework of the present study. Even though the dimensions identified are deemed by the author to be significant attributes of internet service quality, other important dimension not included in the theoretical model of the study could

also be tested in terms of their impact on and importance in customer satisfaction. Furthermore, the study investigated service quality in Cyprus internet banking from the perspective of internet banking users. Further research could also examine the perceptions of internet banking providers.

Finally, the current study was restricted to a general investigation of internet banking service quality and levels of satisfaction from the perspective of Cypriot internet banking users. In future research, however, it would be interesting to examine the differences in perception within certain groups of the sample population. For example, what are the differences in perceptions between males and females or between different age groups of Cypriot internet banking users? A similar approach could be applied to examining customers' perceived service quality for specific internet banking providers based in Cyprus.

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# APPENDICES

## Appendix II: Informed Consent Form

### Research Participation Consent Form – Questionnaire

**Project Title:** *A Study on Internet Banking in Cyprus: Investigating the Perceptions of Cypriot Internet Banking Users of Service Quality and Levels of Satisfaction*

*Data gathered during this research (including the names of participants) will be treated as confidential and securely stored. Please answer each statement concerning the collection and use of the research data.*

		YES	NO
1.	I have read and understood the information sheet		
2.	I have been given the opportunity to ask questions about the study		
3.	I have had my questions answered satisfactorily		
4.	I understand that I can withdraw from the study at any time without having to give an explanation		
5.	I would like to receive information about the outcome of the research project		
6.	I consent to being contacted at any time within the next two months for further clarifications.		

Name:

Signature: \_\_\_\_\_

Date:

Do not hesitate to contact me if you have further question

**Appendix III: Informed Consent Form Translated in Greek Language**



Μην διατάξετε να επικοινωνήσετε μαζί μου για οποιοδήποτε ερωτήματα.

Όνομα: \_\_\_\_\_  
 Υπογραφή: \_\_\_\_\_  
 Ημερομηνία: \_\_\_\_\_

6.	Αποδέχομαι το δικαίωμα του ερευνητή να επικοινωνήσει μαζί μου ανά πάσα στιγμή για τους επόμενους δύο μήνες για περαιωτέρες διεκρινίσεις σχετικά με τις απαντήσεις που έδωσα.		
5.	Θα ήθελα να εισπράξω πληροφορίες σχετικά με το πόσημα της έρευνας.		
4.	Κατανοώ το δικαίωμα μου να αποσύρω την συμμετοχή μου από την έρευνα ανά πάσα στιγμή χωρίς την υποχρέωση να δώσω οποιοδήποτε εξηγήσεις.		
3.	Μου δόθηκαν επαρκείς απαντήσεις στις ερωτήσεις μου.		
2.	Μου δόθηκε η ευκαιρία να υποβάλω ερωτήσεις σε ότι αφορά την έρευνα.		
1.	Έχω ενημερωθεί και κατανοώ τον σκοπό της έρευνας.		
		YES	NO

Όλας οι πληροφορίες που θα συγκεντρωθούν από την έρευνα θα παραμείνουν εμπιστευτικές και θα αποθηκευτούν σε τόπο ασφαλή. Διαβιβάζονται πως το όνομά σας δεν θα δημοσιευτεί σε καμία περίπτωση. Παρακαλώ συμπληρώστε τα παρακάτω κενά.

### Συγκατάθεση συμμετοχής στην έρευνα και κατανοηση των όρων

## Appendix IV: The Study's Questionnaire

### Survey on Internet Banking Service Quality in Cyprus

#### **Part 1: Purpose of the Survey**

*The survey is conducted by the researcher for academic purposes and, particularly, for the completion of his MBA studies in the UK. The purpose of the survey is to evaluate the opinions of Greek-Cypriot internet banking users on the service quality in internet banking and the levels of their satisfaction based on their past experiences. The findings of the survey will be used to gain a better understanding of what Greek-Cypriots require when interacting with bank via the internet. You are kindly asked to fill the items set below. Your participation in the survey will be highly appreciated. All the data gathered will remain confidential during the life of the survey and after its completion.*

---

#### **Part 2: Personal Information**

##### **1. Gender**

Male  Female

##### **2. Age Group**

20 or below  21-30  31-40  41-50  51 or above

##### **3. Occupation**

Public sector employee   
Private sector employee   
Self-Employed   
Student   
Unemployed

##### **4. Educational Background**

Secondary Education   
Bachelor Degree   
Masters   
PhD   
Other (Please specify)

##### **5. I have been an internet banking user for:**

One year  Two years  More than two years

### **Part 3: Service Quality and Customer Satisfaction in Internet Banking**

SCALE	[1] Strongly Disagree	[2] Slightly Disagree	[3] Neutral	[4] Slightly Agree	[5] Strongly Agree				
No					1	2	3	4	5
1	The service is provided as promised and advertised.								
2	The service delivery process involves no extra hidden costs								
3	Any sort of calculation automatically executed by the website is accurate.								
4	The website's functioning is proper and web pages' downloading is quick.								
5	Reliability* of the internet banking service plays an important role in my satisfaction with the quality of the internet banking services. <i>* Reliability is defined as the ability of the bank to provide an accurate service and keep promises as advertised.</i>								
6	The bank responds to any transaction by promptly providing a confirmation of the execution of that transaction.								
7	Bank's responses are relevant to my enquiries and completely answer my questions.								
8	Call-centre staff is ready and willing to help when technical problems occur.								
9	Call-centre staff apologises and compensate when any sort of problem with service occurred.								
10	Responsiveness* plays an important role in my satisfaction with the quality of the internet banking services. <i>* Responsiveness is defined as the ability of the bank to provide a service accurately, consistently and timely.</i>								
11	The bank follows a scholastic and careful procedure when receives and provides personal (ie username and password) or financial information (ie credit card number)								
12	I feel that the personal information I provide my bank are protected.								
13	I feel secured when executing internet banking transactions.								
14	The bank took measures to convince you that any provision of information, either personal or financial is protected and secured.								
15	Security* plays an important role in my satisfaction with the quality of the internet banking services. <i>*Security is defined as the ability to make customers feel protected and secured when providing personal or financial information.</i>								

16	Access to the website's information and personal account is easy and simple.					
17	It is easy to find the contact details of the bank from its website.					
18	A variety of contact methods (ie e-mails, telephone, fax etc) to talk to a bank representative is provided.					
19	I can easily have access to a bank representative without long waiting time.					
20	Accessibility* plays an important role in my satisfaction with the quality of the internet banking services. <i>*Accessibility is defined as the ability to provide a service that is approachable and easy and simple to access.</i>					
21	Information contained on the website is current and timely.					
22	Information provided by emails or call-centre staff is accurate and relevant.					
23	Information contained on the website is rich in detail.					
24	The quality of information* plays an important role in my satisfaction with the quality of the internet banking services. <i>*Information quality is defined as the ability to provide information that is current, timely, accurate, relevant and rich in detail.</i>					

**Thank you for your participation**

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## Appendix V: The Study's Questionnaire Translated in Greek Language

### Ερωτηματολόγιο για την ποιότητα υπηρεσίας των τραπεζικών δραστηριοτήτων στην Κύπρο

#### Μέρος 1: Σκοπός της Έρευνας

Το παρόν ερωτηματολόγιο σχεδιάστηκε από τον ερευνητή για ακαδημαϊκούς σκοπούς και συγκεκριμένα για την ολοκλήρωση της μεταπτυχιακής του διατριβής. Ο σκοπός της έρευνας είναι να αξιολογήσει τις απόψεις των Κύπριων καταναλωτών που χρησιμοποιούν την διαδικτυακή τραπεζική πάνω στα θέματα ποιότητας των υπηρεσιών που λαμβάνουν και τα επίπεδα ικανοποίησης τους βασισμένοι σε εμπειρίες τους μέσα από την χρήση της διαδικτυακής τραπεζικής. Τα ευρήματα της έρευνας θα χρησιμοποιηθούν για τον σχηματισμό μιας καλύτερης εικόνας για το τι ζητούν οι Κύπριοι καταναλωτές όταν αγοράζουν τραπεζικές υπηρεσίες από το διαδίκτυο. Ευγενικά καλείστε να συμπληρώσετε το παρόν ερωτηματολόγιο. Η συμμετοχή σας στην έρευνα θα εκτιμηθεί ιδιαίτερα. Όλες οι πληροφορίες που θα δώσετε θα παραμείνουν εμπιστευτικές κατά την διάρκεια της έρευνας και μετά την ολοκλήρωσή της.

#### Μέρος 2: Προσωπικές πληροφορίες

##### 6. Φύλο

Αρρεν  Θήλυ

##### 7. Ηλικία

20 ή μικρότερος  21-30  31-40  41-50  51 ή μεγαλύτερος

##### 8. Επάγγελμα

Υπάλληλος δημόσιου τομέα   
Υπάλληλος ιδιωτικού τομέα   
Αυτό-εργοδοτούμενος   
Μαθητής/Φοιτητής   
Άνεργος

##### 9. Επίπεδο Μόρφωσης

Δευτεροβάθμια εκπαίδευση   
Κάτοχος πτυχίου   
Κάτοχος μεταπτυχιακού διπλώματος   
Κάτοχος διδακτορικού   
Άλλο (Παρακαλώ αναφέρεται)

10. Είμαι γρήστης της διαδικτυακής τραπεζικής για:

Ένα χρόνο  Δύο χρόνια  Περισσότερο από δύο χρόνια

**Μέρος 3: Ποιότητα υπηρεσίας και ικανοποίηση στην διαδικτυακή τραπεζική**

Κλίμακα	[1] Διαφωνώ Απόλυτα	[2] Διαφωνώ Ελαφρώς	[3] Δεν τοποθετούμε	[4] Συμφωνώ Ελαφρώς	[5] Συμφωνώ Απόλυτα				
					1	2	3	4	5
No									
1	Η διαδικτυακή υπηρεσία προσφέρεται όπως υποσχέθηκε και διαφημίστηκε.								
2	Η διαδικασία παροχής υπηρεσιών δεν περιλαμβάνει οποιαδήποτε επιπλέον κόστη.								
3	Κάθε μορφή υπολογισμού που αυτόματα εκτελείτε από την ιστοσελίδα είναι ακριβής								
4	Η λειτουργία της ιστοσελίδας είναι αποτελεσματική και η διαδικασία καταφόρτωσης είναι γρήγορη.								
5	Η αξιοπιστία* της υπηρεσίας είναι σημαντική στην ικανοποίηση μου για την ποιότητα της διαδικτυακής υπηρεσίας που λαμβάνω. <i>*Αξιοπιστία ερμηνεύεται ως η ικανότητα της τράπεζας να παρέχει ακριβείς υπηρεσίες και να τηρεί τις υποσχέσεις όπως διαφημίστηκαν.</i>								
6	Η τράπεζα ανταποκρίνεται σε κάθε συναλλαγή με την κατάλληλη παροχή επιβεβαίωσης της εκτέλεσης της συναλλαγής.								
7	Η ανταποκρίσεις της τράπεζας είναι σχετικές των ερωτημάτων μου και επαρκώς τις απαντούν.								
8	Οι υπάλληλοι τηλεφωνικών κέντρων έχουν τις κατάλληλες γνώσεις και είναι πρόθυμοι να βοηθήσουν όταν παρουσιάζονται προβλήματα τεχνικής φύσεως.								
9	Οι υπάλληλοι τηλεφωνικών κέντρων απολογούνται και ανταμείβουν με κάθε τρόπο για λάθη και προβλήματα που παρουσιάστηκαν κατά την παροχή της υπηρεσίας								
10	Η ανταπόκριση* της τράπεζας είναι σημαντική στην ικανοποίηση μου για την ποιότητα της διαδικτυακής υπηρεσίας που λαμβάνω. <i>*Ανταπόκριση ερμηνεύεται ως η ικανότητα της τράπεζας να ανταποκρίνεται με τρόπο ακριβή, συνεπή και έγκαιρο.</i>								
11	Η τράπεζα ακολουθεί σχολαστικές και προσεχτικές διαδικασίες όταν εισπράττει και παρέχει προσωπικές και χρηματοοικονομικές πληροφορίες.								

12	Λιθάνομαι ασφαλής όταν παρέχω προσωπικά δεδομένα στην τράπεζα μου.				
13	Λιθάνομαι ασφαλής όταν εκτελώ τραπεζικές συναλλαγές από το διαδίκτυο.				
14	Η τράπεζα λαμβάνει μέτρα να με πείσει πως οποιαδήποτε παροχή πληροφορίας μου (είτε προσωπική είτε χρηματοοικονομική) θα παραμείνει ασφαλής και εμπιστευτική.				
15	Τα θέματα ασφάλειας* είναι σημαντικά στην ικανοποίηση μου για την ποιότητα της διαδικτυακής υπηρεσίας. <i>*Ασφάλεια ερμηνεύεται ως η ικανότητα της τράπεζας να μεταφέρει το αίσθημα ασφάλειας στους χρήστες όταν αυτοί παρέχουν προσωπικά και άλλα δεδομένα.</i>				
16	Η πρόσβαση στην ιστοσελίδα και τον προσωπικό μου λογαριασμό είναι απλή και εύκολη.				
17	Τα στοιχεία επικοινωνίας της τράπεζας μπορούν εύκολα να εντοπιστούν από την ιστοσελίδα.				
18	Παρέχονται ποικίλες μέθοδοι (πχ ηλεκτρονικό ταχυδρομείο, φαξ, τηλέφωνο κα) για επικοινωνία με αντιπρόσωπο της τράπεζας.				
19	Μπορώ εύκολα να επικοινωνήσω με αντιπρόσωπο της τράπεζας χωρίς μεγάλη διάρκεια αναμονής.				
20	Η προσβασιμότητα* της υπηρεσίας είναι σημαντική στην ικανοποίηση μου για την ποιότητα της διαδικτυακής υπηρεσίας. <i>* Προσβασιμότητα ερμηνεύεται ως η ικανότητα της τράπεζας να παρέχει προσεγγίσιμες υπηρεσίες, η πρόσβαση των οποίων είναι απλή και εύκολη.</i>				
21	Η πληροφόρηση που γίνεται από την ιστοσελίδα είναι έγκαιρη και άμεση.				
22	Οι πληροφορίες που περιλαμβάνονται στην ιστοσελίδα είναι ακριβής και σχετικές.				
23	Οι πληροφορίες που παρέχονται από ηλεκτρονικά ταχυδρομεία ή υπάλληλους τηλεφωνικών κέντρων είναι λεπτομερές.				
24	Η ποιότητα των πληροφοριών* είναι σημαντική στην ικανοποίηση μου για την ποιότητα της διαδικτυακής υπηρεσίας. <i>*Η ποιότητα της πληροφορίας ερμηνεύεται ως η ικανότητα της τράπεζας να παρέχει πληροφορίες οι οποίες είναι τρέχουσες, ακριβής, λεπτομερές και σχετικές.</i>				

## Ευχαριστώ για την συμμετοχή σας

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### **Appendix VI:** The principles of Market Research Society Code

- Market researchers will conform to all relevant national and international laws.
- Market researchers will behave ethically and will not do anything which might damage the reputation of market research.
- Market researchers will take special care when carrying out research among children and other vulnerable groups of the population.
- Respondents' cooperation is voluntary and must be based on adequate, and not misleading, information about the general purpose and nature of the project when their agreement to participate is being obtained and all such statements must be honoured.
- The rights of respondents as private individuals will be respected by market researchers and they will not be harmed or disadvantaged as the result of cooperating in a market research project.
- Market researchers will never allow personal data they collect in a market research project to be used for any purpose other than market research.
- Market researchers will ensure that projects and activities are designed, carried out, reported and documented accurately, transparently, objectively and to appropriate quality.
- Market researchers will conform to the accepted principles of fair competition.

*Source:* Market Research Society (2005), "Code of Conduct", [online], Available from: <http://www.mrs.org.uk/standards/downloads/code2005.pdf> [Accessed At: 07/04/2009]