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***"E-BANKING SERVICES: WHAT IMPACTS CUSTOMER
SATISFACTION IN THE GREEK B TO C MARKET?"***

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1 INTRODUCTION

In recent years technology has paced in such paths that have provided many new opportunities for business development and overall evolution. The ever-challenging economic and technological environment seeks for new solutions in satisfying the customer needs. The business world today is very competitive and this leads to the continuous search of new methods in order to offer better products and services. The lack of time and the increasing costs have led the customers to seek for less expensive and time consuming solutions, the most important of which being the electronic commerce.

The globalization of the market environment could never become a reality without the Internet. The emergence of new technologies especially over the last two decades had an unprecedented impact in the way people communicate, interact with the environment, and do business together. In the financial sector it has created what it became known as the 'new economy' a term which describes the range of business activities and transactions based on the new model of economy, which is a result of the convergence of technology (Hart et al., 1997). Internet expansion and integration in all forms of businesses, contributes to the enlargement of markets. It has become a primary tool for businessmen and marketers. It serves large companies and corporations in their expansion plans in global markets and their increase in market share. New technologies can help towards this direction and introduce new ways of trade and commerce.

With a few years of delay –compared to other developing and developed nations- the Greek business started realizing the use of the Internet advertising.

They started building web sites and thousands of firms started promoting their products and services on a global basis and through the use of the Internet.

The next evolution was the e-commerce. “Electronic commerce, or e-commerce, as frequently stated, is a new and already thriving form of conducting business; from its business perspective e-commerce is utilizing the Internet towards the automation of procedures and the establishment of business transactions and workflows via telephone” (Hartman et al., 2000). Thus the application of new technological advancements is facilitating the speedy and easy access to goods and services, while at the same time it reduces the costs and improves the quality of goods and services provided.

The Greek businesses seemed to hesitate to adopt the e-commerce and many of them seem to lose the game. The ultimate aim of the e-commerce is the creation of an added value for the consumers with the adaptation of Information Technology (IT) and the Internet applications to the daily operations of the businesses that will create a source of competitive advantage for the firms that are using it. However, most of the businesses seem to fail in applying it properly. First of all, Greek firms have failed to assure their customers that Internet Transactions are as safe as the traditional ones. Since customers don't trust internet transactions due to internet frauds, they feel reluctant to adopt internet services and firms have neither adjusted their safety and IT policies to fight frauds nor do they effectively communicate enough their safety

measures. In addition, businesses in Greece have also failed to communicate the benefits and value of the internet services to their customers. As a result, customers resist even to a change in their life that is actually going to improve their real lives. Furthermore, certain group of customers like older segments in age and women are not familiarized with internet transactions. As a result, firms have failed to educate potential users about potential benefits and how to use that tool. Besides, the Greek e-service portals are not user-friendly and they also use too many graphics making internet transactions very slow.

One of the mostly used fields of e-commerce in Greece is the e-banking used by more and more customers. Due to the lack of time many customers and mostly business ones choose to make their banking transactions through the Internet. Even though this type of transactions seems to be safe many of them still feel insecure to make important transactions through the Internet. Therefore, Greek banks are constantly seeking to make their e-banking services safer and safer. The use of e-banking was the result of the satisfaction of customer's needs in the banking sector. Their increasing responsibilities leave them little time to do their tasks, thus the customers and mostly business customers seek to find solutions of less cost and time consumption. After a few years of application of e-banking services the main question is if the customers using it are satisfied by the services provided and in what ways can these services be improved in order to increase the number of customers using e-banking and their satisfaction.

The motive of the researcher to choose this topic has been the lack of published scientific research in the field of the Greek Business to Consumer Internet Banking Services. Due to the fact that this field has been newly applied there is not much research done in the field of how customers are satisfied by e-banking services and if they are satisfied by them. In addition, as e-banking has been one of the newest and most upcoming technologies issued there should be presented some results regarding the satisfaction of customers as this can help the services evolve.

This research could bring a benefit not only to the upper management of the Greek banks that design and apply e-banking but also to the customers themselves. First of all, the upper management may be helped as they could understand if the customers are satisfied by the services provided and how they could improve the services in order to have more satisfied clientele. Moreover, it can also help the management to decide on new services launched in e-banking in order to satisfy customers' needs. On the other hand, the customers can be helped because the services provided to them will be better and in this way they can save time and money. At last, this research has the opportunity to help in the overall study of customer satisfaction in services, customer perceived quality in service and customer loyalty.

Within this project the writer will primarily focus on the services provided by the Greek banks in the e-banking sector. Moreover, he will determine the factors that affect perceived quality and how perceived quality impacts customer satisfaction. Also customer satisfaction for e-banking services will be examined under the light of Loyalty and Word of Mouth Communication.

Finally, there will be some recommendations on how customer satisfaction can be improved in order to increase the number of customers using the e-banking services.

In this context, the route map of the project will be as follows: In the Literature Review (**Chapter 2**) the terms of Service Quality will be analysed in contrast to the E-Service Quality in order to understand the uniqueness of E-banking services compared to traditional services. Also, customer satisfaction will be analyzed under the light of end-user computing satisfaction and bibliography will be developed for both Customer Loyalty and Word of Mouth Communication. As a result of the secondary research, the project's research questions will be developed. In **Chapter 3**, the writer presents the basis of the research, methodological framework that consists of various elements of the research of how the research has been conducted and what measures have been used to acquire reliable primary data. In **Chapter 4**, the data of the primary analysis will be presented in accordance to the research questions developed and in **Chapter 5**, the conclusions per research question. Finally, in **Chapter 6**, Recommendations will be provided to Executives and Institutions in order for them to enhance both perceived quality and customer satisfaction as possible precursors of Customer Loyalty for the E-banking services.

2. LITERATURE REVIEW

2.1 SERVICE QUALITY

Service quality is one of the most discussed terms in the business literature, since it is presented both as an abstract as well as an elusive concept. The latter fact is attributed to the nature of services; services are intangible, services are heterogeneous and of course there is a great deal of inseparability of production and consumption (Walker, 1995). Intangibility of services means that in services there is a lack of physical attributes or combination of ingredients in a manner there is too hard on behalf of the consumer to pre-define quality (search quality) (Zeithaml, 2008). As a result, consumers cannot pre-define the performance of a service prior to its consumption (services strong in experience qualities). Examples of services strong in experience quality can be found in restaurants, vacations, haircuts and telecommunications. In many services, however, the service performance cannot be judged even after their consumption such as TV repair services, Legal services, Car Repair and Medical Diagnoses. The latter services seem to be strong in credence qualities. As a result, customers lack of knowledge about the value of the service that only the provider knows better and this fact leads to a big knowledge gap.

Heterogeneity of Services is a feature that underlines the fact that their performance cannot remain predictable over time (Christopher Lovelock et. al, 2008). Service production or “SERVUCTION” is based heavily on employees’ efforts, mood, experience and behaviours. As a result, a store service in a peak hour provided by an employee with no good mood might be very different comparing to a service provided in the morning by an employee in a good mood.

Unlike goods, where faulty products can be controlled and withdrawn before arriving at the market, in services where operations take place in front of the customers' eyes quality blunders cannot be hidden or foreseen (Oliver, 1997). The latter issue deals with the feature of Inseparability of consumption and service production.

As a result, service quality is hard to get evaluated before consumption, cannot remain stable over time and is also subjective rather than objective (Walker, 1995). As a result, Perceived Service Quality concerns the discrepancy between customer expectations of what a firm would provide and actual service output or performance (Goran Svensson, 2006). As a result, a customer after the consumption of a service might be Dissatisfied, Satisfied or even thrilled (Wong and Sohal, 2003). Dissatisfied is the customer whose expectations (of what the provider should give) prior the consumption exceed the actual service performance, whereas Satisfied is when expectations meet the service performance after the consumption. On the other hand, thrilled are the customers whose expectations are far less than the final service performance.

The factors influencing heterogeneity in services, thus influencing service performance and Perceived Service Quality were examined by many authors such as Ganguli and Roy (2011) and Meyer et. al.(2003). According to these authors, Parasuraman et al. (1988) was the first to develop such a method using a 22-item scale for measuring service quality (SERVQUAL) in 5 distinct dimensions:

- 1) **Reliability**: that is the capability of the business to deliver the service accurately and precisely.
- 2) **Responsiveness**: The correspondence of the provider over the customer's problem
- 3) **Assurance**: The confidence that the firm's delivery system is able to provide customers both with the promised and safe service,
- 4) **Empathy**: The emotional association of the contact personnel with the customer and finally
- 5) The **tangible elements** involved during service delivery (facilities, personnel's appearance, equipment and promotional material)

On the other hand, Mayer et. al. (2003), proposed an extended model for predicting services' perceived value through expressive performance, work area and employee appearance that is close to Parasuraman's "tangible elements", employee effort that is close to Responsiveness and they also added customer participation. The latter is based on the fact that customer's participation during service delivery is very crucial, since they must define exactly their needs and desires in order for the provider to provide a customized solution (Shirshendu and Kumar, 2011). Duration is also a factor influencing the variability of service quality, since it provides both the sense of reliability and assurance (Walker et. al., 2006).

A very fast service sometimes is not the most desirable feature on behalf of the customer, since it shows that the employee's interest is the quantitative output rather than the customer's satisfaction. Alternatively, a very fast service should be combined by employee effort and appearance and most importantly by empathy (Zeithaml et. al., 2008).

Besides, customers should be assured that the service delivery system is precise and well organized in order to minimize customer perceived risk (e.g. functional and financial risk) and as a result to maximize customer value. Figure 2.1 that follows is very illustrative.

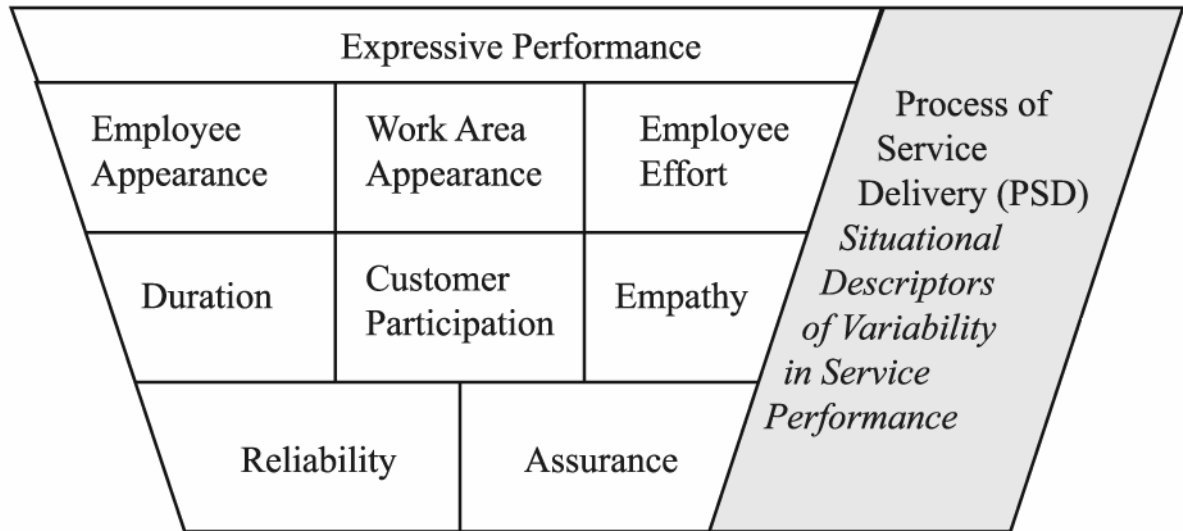


Figure 2.1: The service delivery process

Source: Mayer et. al. (2003)

Lastly, the most important determinant of “Perceived Service Quality” is the critical incidences occurred during the “moments of truth” or interaction with the customer (Svensson, 2006). Memorable incidents taking place during interaction of employees with a customer, may define when a consumer becomes satisfied or dissatisfied and finally if he remains loyal to the service provider (Lovelock et. al., 2008). As a result, incidents consist of crucial moments of 1) How employees react during service delivery errors, 2) of how employees react when customers express obvious requests, and 3) of how employees respond to customer’s spontaneous responses (Zeithaml, et. al., 2008).

For instance, front-line employees should always react politely when service delivery errors happen and the most important is to compensate customers for these errors as well as to show empathy and assurance that this is something that occurs very rarely. The same is true for the second category as well, since customers wait for obvious answers and reactions when they request something obvious (Kotler and Keller, 2005). Assurance, empathy and increased employee efforts towards delivery errors, customer requests and spontaneous responses are the key to satisfy customers in any case (Zeithaml, et. al., 2008).

2.2 E-SERVICE QUALITY

The basic element of traditional services is the so called “service encounter”. Service encounter is the interaction of a customer with the front line employees, where physical evidences and processes are involved (Walker, 1995). E-Service is mentioned as a service provided by an interactive information system and is developed by Banks and firms in order to augment their service offering and thus to build on a competitive advantage (Pikkarainen, et. al., 2006). According to Kotler (2005), competitive advantage in marketing management is guided through creating innovative value and quality by simultaneously reducing customer costs. The creation of the highest outcome of Value to customers comparing to the customer costs is the most critical success factor in every industry.

E-Services have contributed to the creation of excessive value comparing to the customer cost (Herington and Weaven, 2009). The way to create value is presented on figure 2.2. First of all, E - services are supposed to provide augmented Performance or

Results (the “what” of the service) through ad hoc reports and outputs related to information about banking services, availabilities, returns and so on (Rod et. al., 2009). Process Quality is the “how” of the delivery, since end-users desire is to have a user friendly interface, speed of service delivery and easy comparison with regards to other banking services (Ho and Lin, 2010). Aesthetics (colours, functionality of searching items etc) are also important since they create positive customer mood and intention to increase the use of E-services (Herington and Weaven, 2009). Process Quality also refers to IT processes that facilitate the complaints handling that aim to recover mistakes during the delivery process (Ganguli and Kumar, 2011).

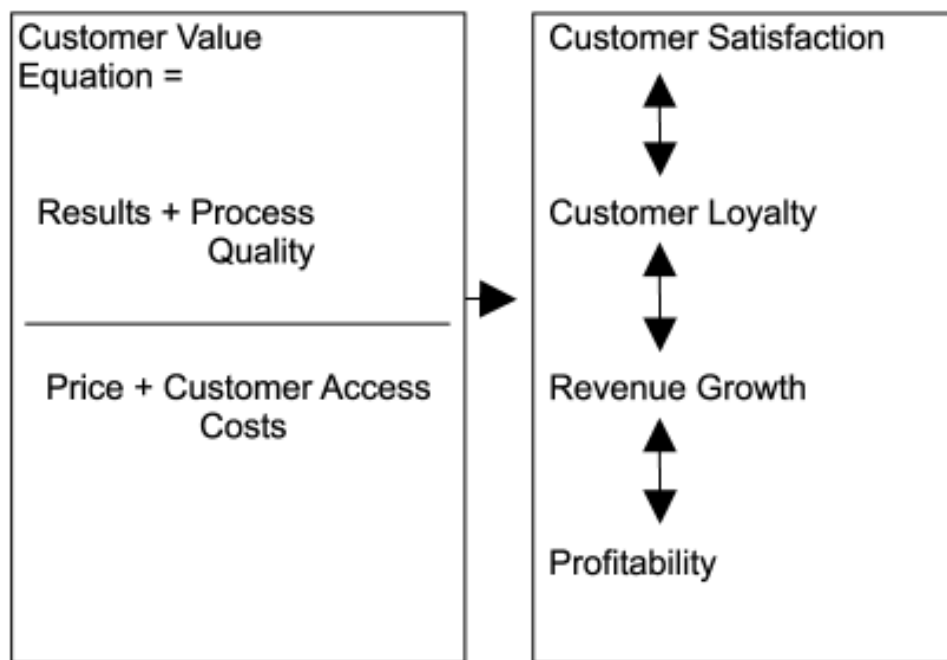


Figure 2.2: Customer Value Chain, Source: Walker et. al. (2006)

Complaints handling is a very crucial issue, since the recovery of a service results in even increased customer satisfaction and retention (Lovelock et. al., 2008). Other processes refer to the safety of the service. Safety and trust is crucial in banking, since perceived risk works as an extremely important cost for the customer that could possibly hamper the creation of value (Levesque and McDougall, 1996). Hackers using various techniques (e.g. fishing) and viruses are capable of stealing passwords or sensitive personal data (Ho & Lin, 2010). Approximately 20 million Euros have been stolen in 2005 comparing to the amount of 10 millions in 2000 from customers using E-Banking transactions, making potential users even more suspicious and reluctant to use these portals (Herington & Weaven, 2009). Managerial issues arising from this field is that IT management of a bank should adopt proactive policies about safety, privacy and confidentiality of every transaction and protect all the sensitive personal data of its customers (Rod et. al., 2009).

Because of the fact that prices or fees in E-Services and generally in E-Banking are lower compared to traditional banking, this works as an asset for the banks retaining E-Banking in their portfolio and this fact adds extra value according to Figure 2.2.

Finally, Customer Access Costs consist of every extra psychological or physical cost of using this channel. The fact that customers don't have to go to the bank, using E-Banking induces increased value for money ratio (Herington & Weaven, 2009). Access is very easy using the internet and information is easier to get acquired in E-Banking comparing to the traditional banking and thus, there is no need to wait on the queue.

As a result, IT should focus on creating user friendly reports about various products in order to facilitate easier access (Pikkarainen et al, 2006). Furthermore download speed is also imperative since it leads to less psychological cost of transactions (Zeithaml, et. al., 2008).

Summarizing on the customer value chain, one could realize how banks using the channel of E-Banking would be capable of increasing customer value and perceived quality using the referring equation of the last figure. Extended value comparing to the costs, result in better Customer Satisfaction Indexes, Customer Loyalty and in turn increased Revenue Growth Rates and Profitability (Walker et. al., 2006).

With regards to the Literature Review of E-Service Quality, there have been many topics analyzed like the dimensions and scale construction of on-line quality, customer satisfaction, and intention to use, loyalty and trust. Since the human element of the service delivery has been radically changed, the exact application of SERVQUAL as mentioned in paragraph 2.1 is not the proper one. Instead, many authors proposed an emphasis on the impact of technological service facilitators on service quality dimensions and consumer buying process.

In order to solve these issues, Zeithaml et al. (2002) proposed an e-service quality scale (e-SQ), including five elements:

- 1) Availability of Information
- 2) Friendliness of use
- 3) Safety of use
- 4) Graphic aesthetics and,
- 5) Reliability.

In a more recent study, Parasuraman et. al. (2006) developed a scale for measuring e-service quality in online shopping portals, consisting of four components:

- 1) Efficiency
- 2) Performance
- 3) Availability and
- 4) Privacy

In a research of e-service quality about online stores for books and CD's, Ribbink et al. (2004) proposed the following five components:

- 1) Assurance
- 2) Friendliness of use
- 3) Graphic aesthetics
- 4) Responsiveness and
- 5) Customization

2.3 CUSTOMER SATISFACTION

Certain customer's attitudes, feelings and stances about a service brand related to a series of service encounter experiences concerns the level of satisfaction or dissatisfaction (Levesque and McDougall, 1996). Attitudes, feelings and stances are closely related to expectations and past experience (Walker et. al., 2006). In case expectations about service performance set by marketing communication are higher than the experienced one, customers feel dissatisfied and vice versa (Svensson, 2006). Customer Satisfaction is the cornerstone of marketing orientation, since marketing strategy should aim not only on the best satisfaction of targeted segments comparing to the firm's competitors but it should also lead to profitability (Wong and Sohal, 2003). As a result, companies should elaborate periodic market research in order to perform benchmarking with their competitors (Walker et. al., 2006).

In order for banks to keep their customers satisfied, there also should be an "Internal Marketing Orientation" (Levesque and McDougall, 1996). The latter concept relies on the fact that well retained and satisfied internal customers or employees feel committed towards external customer's needs by applying all the necessary policies with the proper customer-oriented behavior. Internal Marketing Orientation or IMO is very similar to the appliance of Human Resource Management that relies on recruiting, training, career paths and incentives (Zeithaml et. al., 2008). Best Places to Work proved to have increased customer satisfaction levels comparing to the ones that didn't belong to that list (Wong and Sohal, 2003). Other research indicated that employee's retention rates as well as satisfaction rates are closely related to customer satisfaction (Oliver, 1997).

The best strategy to keep the highest levels of productivity and quality of output is to recruit employees according to the qualities of the job description, to train them according to the needs of customers, to plan their career so that they will be retained in the bank and to provide them with incentives closely related to customer satisfaction (Levesque and McDougall, 1996). These practices in services lead to the formation of capabilities and core competencies providing the best results or experience to customers (Kotler and Keller, 2005). Figure 2.4 clearly depicts that Customer Value is related to Employee satisfaction.

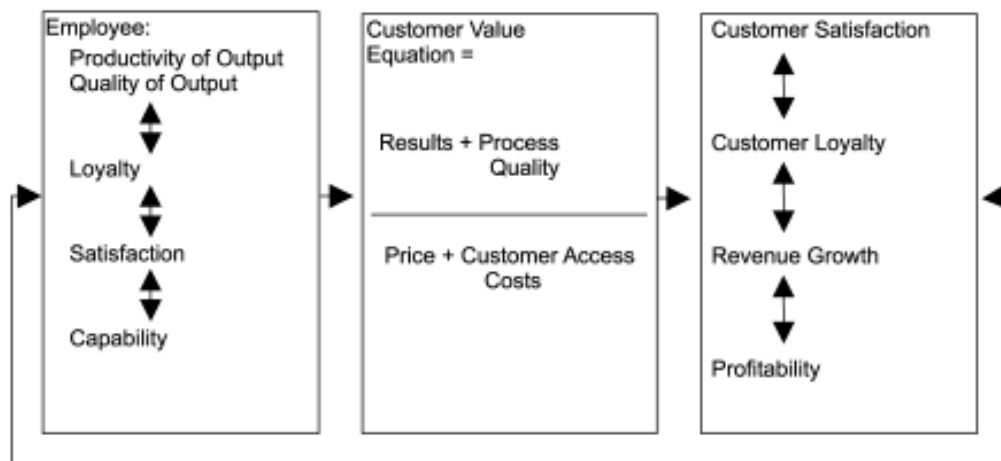


Figure 2.4: Customer Value Chain, Source: Walker et. al. (2006)

Together with the strategy of building processes of high quality, at the right price and at the minimum customer access costs, the value for money ratio becomes very strong. Increased value added leads to ameliorated customer satisfaction. Also customer satisfaction is the precursor of customer loyalty (Faullant et. al., 2008). In other words, firms should keep their customers 100% satisfied in order to retain them. Customer loyalty is less costly than finding new customers. Research has shown that

retaining existing customers is 70% less expensive than finding new ones (Oliver, 1997). In paragraph 2.5 the terms of customer loyalty and word of mouth communication are further analysed.

2.4 END-USER SATISFACTION

End-User is the person who actually uses an Information System (Ho and Lin, 2010). An E-banking portal is considered to be an Information System providing information for users/customers in order for them to fulfill their needs (Pikkarainen et. al, 2006). As a result, there are some distinct Customer Satisfaction criteria other than in traditional banking services where the interaction between the teller and customers is the most prominent (Zeithaml, 2002). Satisfaction in Information Systems is widely connected to the intention to make use of them (Rod et. al., 2009). In case a system is good, the user develops positive attitudes and feelings whereas if the system is not good in the brains of the user he/she develops negative feelings and probably he/she will not use it any more unless it is involuntary. Despite that success is not heavily related to the technical standards of the system, it is easy to make the conclusion that in case the system cannot extract the needed information the user will become dissatisfied and not use the system any more (Pikkarainen et. al, 2006).

An E-Banking Portal works as an online Information System, since it provides users with enough information to make their own decisions (Rod et. al., 2009). From the above-mentioned facts, it is easy to make the conclusion that User satisfaction works as the most Critical Success Factor for the success of an Information System and as a result of a Bank's portal (Pikkarainen et. al, 2006).

First and foremost, it makes common sense that end-user satisfaction is the most precious tool for managers to develop and restructure their E-Banking Portals. Secondly, there are reliable scales available for measuring satisfaction and lastly, other measures for defining IS success seem to be conceptually weak (Zeithaml, 2002).

There have been various approaches that contributed to the end-user satisfaction literature. For instance Rod et al. (2009) referred to service quality, transaction costs, and easy access to information as the most important prerequisites of e-commerce consumer satisfaction. Besides, Parasuraman et. al. (2006) suggested that factors like site design, convenience, product information, and online security were of the most crucial determinants on e-satisfaction. Further research of Herington and Weaven (2009) proved that Web customer satisfaction should neither be connected with quality of website information nor with content quality of website's system performance. Moreover, Ho and Lin (2010) indicated that strict privacy tactics and customized services are the key determinants to e-business success. Rod et. al. (2009) was also in favour of an extension to Parasuraman et. al. (2006) framework assigning an independent variable labelled as "Customer E-commerce Satisfaction". They pointed out that e-commerce as well as web systems are very similar to the old IS systems, and as a result older frameworks for Information Systems' satisfaction may be exercised to e-banking systems.

Despite User Satisfaction measurement is broadly used and acknowledged by academics, some researchers view it with scepticism since it is not easy to use it as an explanatory variable. This defensive stance was resolved by Rod et al. (2009), who included friendliness of use, total satisfaction and total success in their scale that originally included 40 items. These items were reduced to 5 categories, using factor analysis and the significant items were also reduced to 12 items. The factors included to measure End-User Computing Satisfaction are the following (Pikkarainen et. al, 2006):

1) **Content:** The content refers to the accuracy of the information provided. It also deals with the necessity of the information given. In many cases Portals provide information that is irrelevant and do not meet the needs of users. Also, a very important aspect of e-banking and generally for Information Systems is the reports extracted or downloaded from the portal. These reports should contain only the information required by the users and be easily understood.

2) **Accuracy:** A system should be very reliable to assure that the service delivery provides the least heterogeneity.

3) **Format:** The format is a very crucial aspect since it deals with the functionality of buttons, information, graphics and aesthetics of the screen or Portal. Functionality of the format deals with the search effort to find information and also aesthetics with the mood of the user.

4) **Ease of Use:** Ease of use is probably the most vital factor of user satisfaction since there should be enough information about how customers could use some tools, reports and also how users could possibly navigate and customize the view of the portal according to their preferences.

5) **Timeliness:** Timeliness involves all the qualities related to the time as well as to the synchronization of the service delivery. A very slow portal with exaggerative graphics would probably hamper the speed of transactions. Bad functionality and classification of tasks inside the portal or the web-page would also require much time from the users to search and find the information needed. Lastly, information should be up-to-date in order to show that everything works fine and users develop trust for the system. Figure 2.3 represents all the determinants influencing End-User Satisfaction.

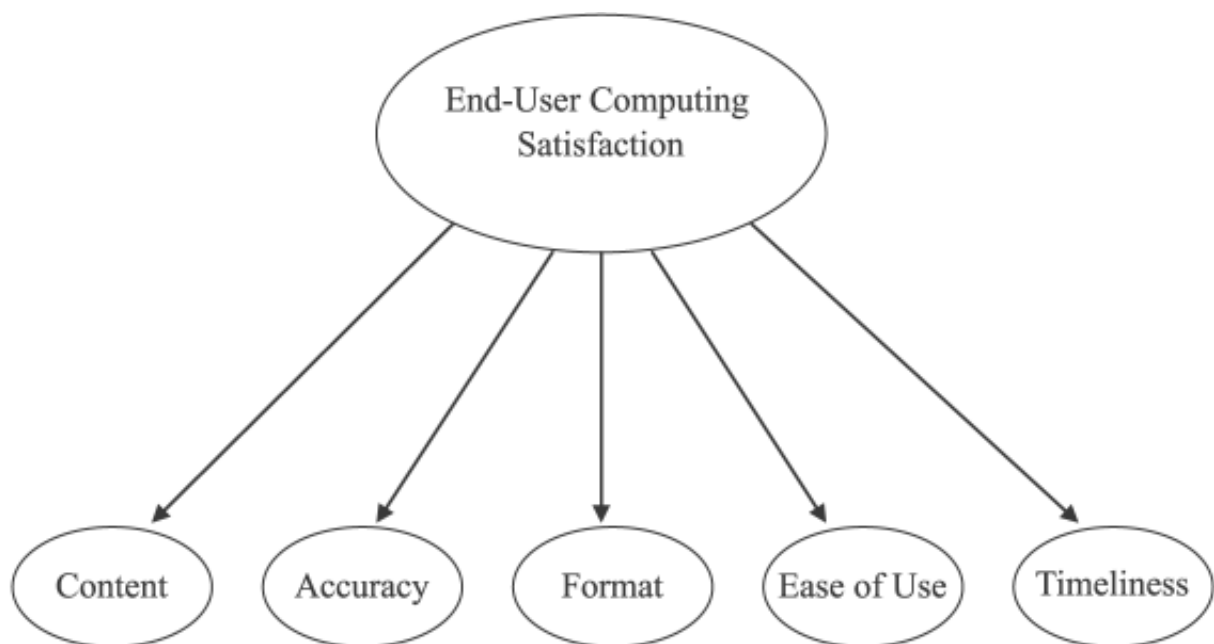


Figure 2.3: Determinants of End-User Computing Satisfaction, Source: Pikkarainen et. al. (2006)

2.5 CUSTOMER LOYALTY AND WORD OF MOUTH COMMUNICATION

Several definitions do exist for Customer Loyalty. First and foremost, loyalty concerns all the positive attitudes towards a brand or a provider that are accompanied by repeated and affirmative purchasing behaviour (Kotler and Keller, 2005). Loyalty consists of a certain relationship between repeated patronage behaviour and a relative attitude towards an entity (Zeithaml et. al., 2008). In addition, loyalty is a status of customer preference associated with a psychological bond (Oliver, 1997). In other words, customer loyalty occurs when customers 1) have guided their wish to steadily purchase a brand over time and 2) retain positive attitudes about a brand, or a service provider (Wong and Sohal, 2003). On the other hand, word of mouth communication concerns every positive referral made by existing customers to their friends, colleagues or relatives (Kotler and Keller, 2005). Word of mouth communication is the best promotion in favor of the company, since it is the most reliable source of information as soon as potential consumers start their buying procedure (Kotler and Keller, 2005). As a result, satisfied customers are considered to be the best salespersons of a business (Oliver, 1997). Intention to suggest is the best scale to measure the likelihood a consumer suggests a provider or a service brand to potential customers (Wong and Sohal, 2003).

Unlike customer satisfaction that is only an attitude, customer loyalty is purchase behavior accompanied by attitude (Svensson, 2006). Customer loyalty and customer retention are one and the same. The only exception occurs when customers are forced to buy a product by a monopolistic or oligopolistic provider or manufacturer. A loyal customer is the one that presents a great deal of likelihood of returning, providing word of mouth communication and building referrals and positive publicity (Kotler and Keller, 2005). As a result, loyalty is strongly connected with the least possible brand switching behavior (Walker et. al., 2006). Even when competitors try to entice the firm's customers by reducing their prices, loyal customers keep on purchasing their preferred brands comparing to the less loyal customers.

Whilst it is true that literature on customer loyalty is focused on FMCG's (Fast Moving Consumable Goods), this concept has a wide application in business to business marketing (Vendor Loyalty), in services (Service Loyalty) as well as in retailing business (Shop Loyalty) (Wong and Sohal, 2003). As it is already mentioned before, marketing orientation is primarily concerned with the objective of marketing management that is to find the most profitable segments of customers, understand their needs, satisfy them to make them loyal so that they provide the best referrals to potential customers.

Moreover, customer loyalty is considered to be a cause-and-effect construct (Svensson, 2006). On the other flip of the coin, some authors argued that there is a vast number of research applied only for measurement as well as for the facilitation of segmentation process (Wong and Sohal, 2003). Indeed, loyalty should be checked by applying the theory of marketing. As a result, there should be a framework combining not only behavioral but also attitudinal scales (Walker et. al., 2006) The latter ones should consider and measure the degree of attachment or psychological bond of customers with a brand or a service provider and on the other hand, behavioral scales should measure the repeated preference over the service (Wong and Sohal, 2003). Figure 2.5 that follows refers to the 4 basic levels of customer loyalty. As a result, there are 4 levels of loyalty; Premium loyalty, Latent Loyalty, Spurious Loyalty and No Loyalty at all).

| Relative attitude | Repeat patronage | |
|-------------------|------------------|----------------|
| | High | Low |
| High | Premium loyalty | Latent loyalty |
| Low | Spurious loyalty | No loyalty |

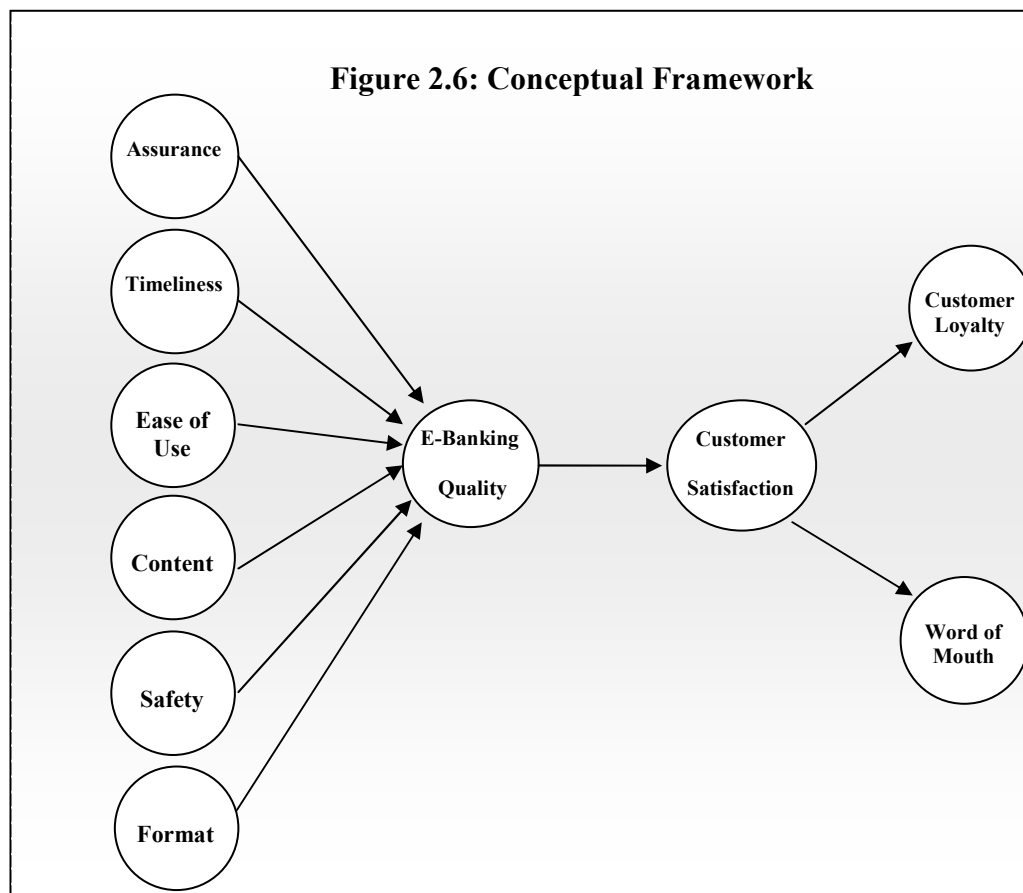
Figure 2.5: Customer Loyalty Schemes, Source: Wong and Sohal (2003)

2.6 RESEARCH QUESTIONS & CONCEPTUAL FRAMEWORK

According to the abovementioned literature review, the researcher will focus on the following research questions:

- 1) Which dimensions of the e-banking services are the most crucial for determining Perceived Quality?
- 2) What is the impact of Perceived Quality of internet services on Customer Satisfaction?
- 3) What is the impact of Customer Satisfaction of internet services on both Customer Loyalty and Word Of Mouth Communication?

Figure 2.6 that follows represents the Conceptual Framework for this project.

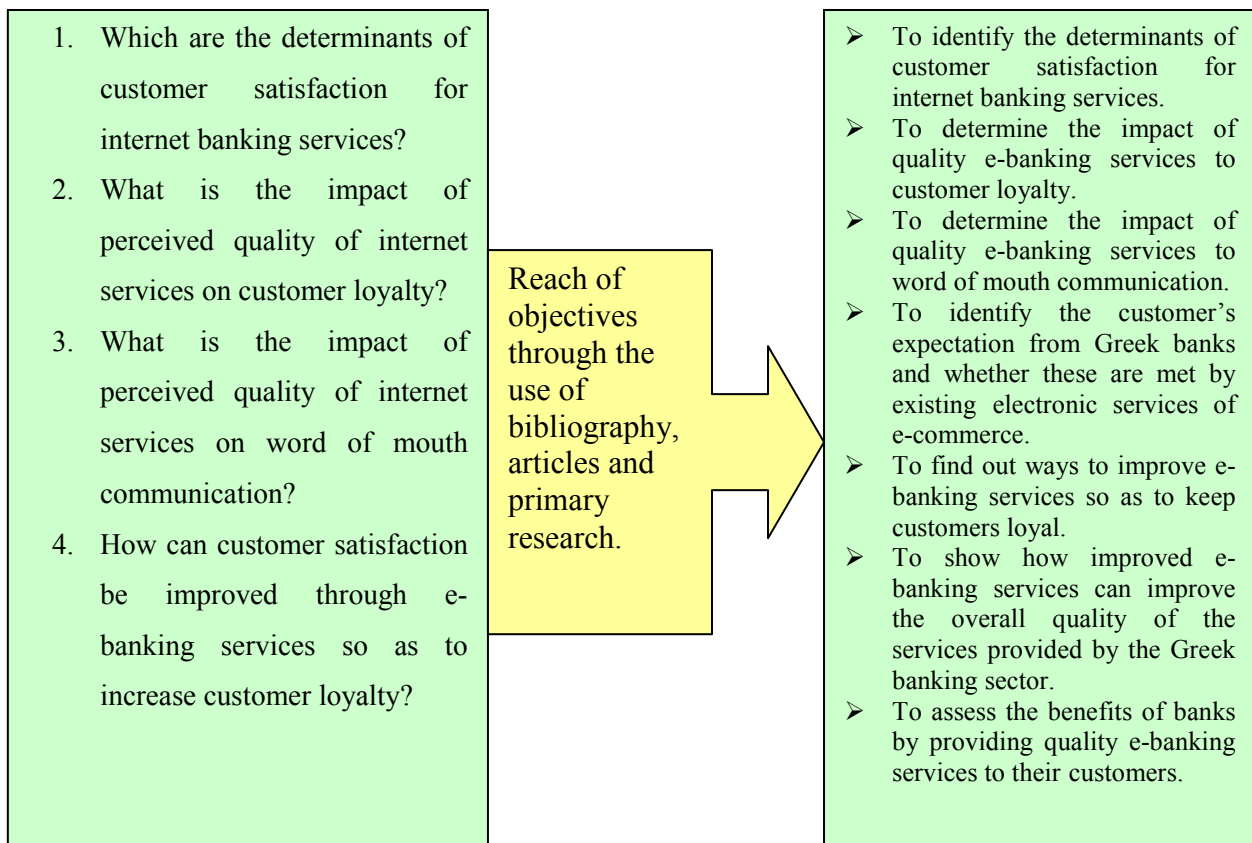


The basic aim of the research is to find out which factors impact the most and the least the customer satisfaction of Greek e-banking services. Through this aim rise the following objectives:

- To demonstrate the determinants of customer satisfaction for internet banking services.
- To show the impact of quality e-banking services to customer loyalty.
- To show the impact of quality e-banking services to word of mouth communication.
- To identify the expectation of the customer by Greek banks and if it can be covered through the existing electronic services of e-commerce.
- To find out ways to improve e-banking services so as to keep customers loyal.
- To show how improved e-banking services can improve the overall quality of the services provided by the Greek banking sector.
- To assess the benefits of banks by providing quality e-banking services to their customers.

Figure 1

Research questions and objectives



3. METHODOLOGICAL FRAMEWORK

The methodological framework is a critical factor for the success of the research. The level in which a scientific research is successful depends on the way in which the writer understands the sense of methodology of the research. In this particular essay the researcher will analyze the methodology used to decide on the way of conducting the research and the steps that led to it. Furthermore, he will analyze separately the literature review, methodology and the primary research methodology. Finally, the research ethics of this dissertation will be confirmed.

After having decided on the research questions and objectives, the researcher started to define the parameters to the research question and objectives. After having generated key words and conducted a secondary research, there was a list of references to authors who have published on the subject of e-banking and customer satisfaction. The next step was to read and evaluate these methods and start drafting the review. After this, the researcher redefined the parameters more precisely and undertook further searches, keeping in mind the research question and objectives. After this, throughout the research he updated and revised draft redefined parameters and has written a critical review of the literature.

As far as the primary research is concerned, it will be conducted through the use of a questionnaire following the quantitative method. This method requires less skills comparing to the qualitative method (e.g. interviews, focus groups etc) and minimizes the danger of manipulation and subjective analysis. It is also faster and can be reinforced by statistical inference. Thus, quantitative method is the best one for this case. A questionnaire is a form that consists of a series of questions that have to be

answered in a written way. The main advantage of this method is that it is easy to analyze its results and categorize them. Below is presented briefly the methodology of building up a questionnaire. Questionnaires are the most commonly used type of quantitative marketing research and social research in general (Dimitriadi, 2000). They are a valuable method of collecting a wide range of information from a large number of respondents. Good questionnaire construction is critical to the success of a survey. Inappropriate questions, incorrect ordering of questions, incorrect scaling, or bad questionnaire format can make the survey valueless. A useful method for checking a questionnaire for problems is to pretest it. This usually involves giving it to a sample of respondents, then interviewing the respondents to get their impressions and to confirm that the questions accurately captured their opinions. In our survey the types of questions that will be used will be two: scaled questions and closed ended questions. The questions will be based on Likert scale and will be based on the basic theme-target of the research-the evaluation of the customer satisfaction in e-banking sector. Furthermore, through these results we expect to achieve the other goals of the research. Moreover, according to the three stage theory (also called the sandwich theory), initial questions should be screening and rapport questions (Gall et al., 2002). Then in the second stage you ask all the specific questions. In the last stage you ask demographic questions. Following this theory, the writer constructed his questionnaire on customer satisfaction by e-banking services provided in the Greek market.

A problem in this research that may arise will be the denial of answer by the customers asked as they may not understand the need of this research and the advantages that it will have for them. In order to overcome this, the writer sent the questionnaires along with a letter explaining the theme of the survey and how their personal data will remain anonymous. A second problem could be the denial of answer in the questionnaires due to lack of time, but this can be solved by the design of the questionnaire which will be only with closed questions that will only take a few minutes. Last but not least, a problem will be the lack of literature for e-banking customer satisfaction in the Greek market. However, this obstacle will be overcome through the study of articles in the global market and their application in Greek reality.

As for the first part of the research tool (or questionnaire), the variables proposed in the scale of Chien-Ta Bruce Ho and Wen-Chuan Lin (2009) were used. These variables on a Likert Scale (1=Strongly Disagree – 5=Strongly Agree) help on measuring the customers' level of agreement/disagreement about a series of statements determining service quality of internet banking. The components of Service Quality in internet banking services as proposed by these authors were 1) Assurance, 2) Friendliness of use 3) Graphic aesthetics 4) Responsiveness, 5) Customization, 6) Safety, 7) Availability, 8) Value for Money and 9) Information. In the second part of the research tool, there was the customized scale of measuring End-User Computing satisfaction as proposed by Pikkarainen et. al. (2006). The variables used in a 5 point Likert-scale included the basic components of the end-user

computing satisfaction that are Content, Accuracy, Format, Ease of Use and Timeliness.

In the third part of the questionnaire, there were used several variables for measuring consumer attitudes and behaviors as proposed by Wong and Sohal (2003) that are 1) overall on-line services satisfaction, 2) intention to continue using e-services in the future, 3) intention for word of mouth communication, 4) Conventional Banking satisfaction and 5) customer loyalty. In the last part of the questionnaire, there were asked some demographic variables like gender, age, income etc. For more information about the questionnaire as a research tool, please refer to the appendices of the current study.

A main stage in conducting a research is to identify the population and sample of the research. Population is defined as a basic sum of elements that is going to be studied for one or more of its characteristics. In order to decrease the cost of the research we choose only a small part of the population that fits our needs and we call it a “sample”. In the research conducted the sample was 320 customers coming from the majority of the banks using e-banking services out of about 1000 that were totally asked to participate. The research took on the whole 15 working days during which the researcher was outside of some banks in Karditsa asking people if they use the e-banking. Those that were users answered the questionnaire.

In order to carry on with the research we should generalize the results of our research into the population in order to have high internal validity (meaning accuracy of results) and reliability (meaning having the same results no matter how many times the same processes are going to be carried out) (Gall et al., 2002). Trying to analyze

the variables and the results given from the survey and make them functional, we are going to use the SPSS statistic program. At last, having done all the above we are going to reach conclusions as to the findings of the research and generalise them concerning the complete Greek market.

Ethics is defined as the moral principles, norms or standards of behavior that guide moral choices about our behavior and our relationships with others (Gall et al., 2002). Research ethics therefore, relates to questions about how we formulate and clarify our research topic, design our research and gain access, collect data process and store our data, analyze data and write up our research findings in a moral and responsible way. As far as general ethical issues are concerned, the researcher should try and think of privacy, voluntary nature, consent, deception, confidentiality, anonymity, embarrassment, stress, harm, discomfort, pain, objectivity and quality of research. In each stage of the research specific ethical issues may arise. In the stage of designing the research and gaining access, the ethical issues that arose were the participant's right to be fully informed, the participant's right to privacy and the right to quality research. In the stage of collecting data rise the most ethical issues than in any other stage. More specifically, there is the researcher's right to safety, the participant's right to informed consent, to withdraw and to confidentiality and anonymity. In the stage of processing and storing data there is the participant's right as an individual to the processing and storing of their data. In the final stage, which is the analysis of data and report of the findings, the ethical issues that arose were the rights of organizations to confidentiality and anonymity and the participant's right to quality research.

4. PRIMARY RESEARCH – DATA ANALYSIS

Primary research consists of every resource coming out from experiments, observation, or even from surveys (Dimitriadi, 2000). As referred in the part of methodology, the prominent method of this dissertation is the quantitative one using the research instrument of the questionnaire. These variables composing the questionnaire can be analyzed by using either descriptive or inferential statistics. Descriptive statistics' purpose (means, ranges, standard deviations, frequencies, modes, medians) is to describe the sample according to the variables' scale type (Gall, et. al., 2002). Whereas in Inferential analysis researchers try to answer certain research questions or even to accept/reject any hypothesis stated in the Literature Review (Dimitriadi, 2000). In addition, inferential analysis purpose is to statistically deduct the results or relationship between two or more variables.

4.1 DESCRIPTIVE ANALYSIS

4.1.1 E-Service Quality

Questions 1-22 compose of the perceived quality of the internet banking portal. As far as the basic descriptive statistics of questions 1-6 are concerned, participants demonstrated satisfactory level of agreement both to the statement that “services provided on the Bank's Internet banking portal are available” (mean = 3,72) and to the statement that “as soon as a problem occurs the Internet banking portal guides customers to solve it” (mean = 3,67). They also pointed out satisfactory level of agreement to the statements that “there is efficient and fast correspondence when they make requests via mail or service line” (mean = 3,59) and also to the statement that

“the service is being performed correctly at the first time by the portal” (mean = 3,59). Participants also demonstrated satisfactory level of agreement both to the statement that “my on-line transactions are accurately performed” (mean = 3,70) and to the fact that “my internet banking provide them with enough customized services” (mean = 3,62).

Figure 4.1 and the respective Table 4.1 that follow display the basic descriptive measures of the sample from Questions 1 to 6.

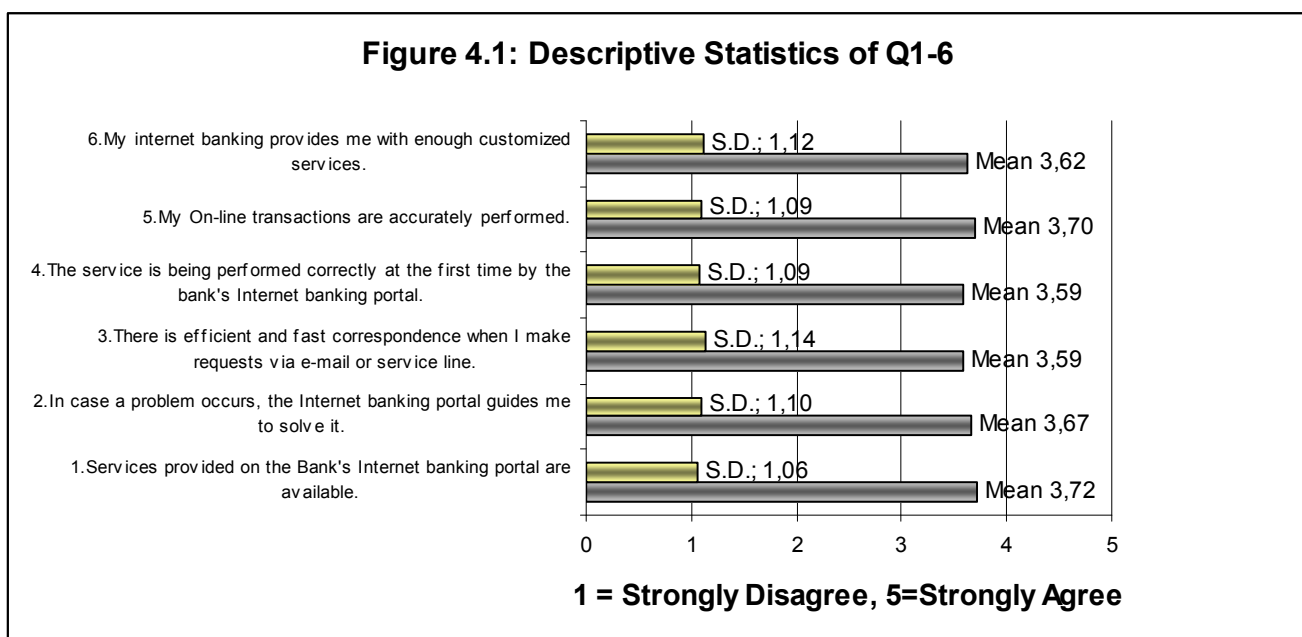


Table 4.1. Basic Descriptive Statistics of Q1-Q6

| | N | Min. | Max. | Mean | Std. Dev. |
|--|-----|------|------|------|-----------|
| 1. Services provided on the Bank's Internet banking portal are available. | 324 | 1 | 5 | 3,72 | 1,06 |
| 2. In case a problem occurs, the Internet banking portal guides me to solve it. | 324 | 1 | 5 | 3,67 | 1,10 |
| 3. There is efficient and fast correspondence when I make requests via e-mail or service line. | 324 | 1 | 5 | 3,59 | 1,14 |
| 4. The service is being performed correctly at the first time by the bank's Internet banking portal. | 324 | 1 | 5 | 3,59 | 1,09 |
| 5. My On-line transactions are accurately performed. | 324 | 1 | 5 | 3,70 | 1,09 |
| 6. My internet banking provides me with enough customized services. | 324 | 1 | 5 | 3,62 | 1,12 |

As for Questions 7-12, users of internet-banking portals showed satisfactory levels of agreement on a 5-point Likert scale that correspond to values of means between 3,51 and 4,44 (rounded at 4,00). In question 7 with a mean of 3,71 , participants pointed out that they agree to the statement that “my internet banking site is fast and easy to be used”. On question 8 at a mean of 3,77, users demonstrated satisfactory levels of agreement to the statement that “both navigation and site map of my portal are clear with user-friendly content”. On question 9 at a mean of 3,78, participants also showed satisfactory level of agreement to the fact that “I have easily found all the available functions in this internet banking portal”. In addition, in Question 10 at a mean of 3,91 users also agreed to the statement that “Service's information is widely and sufficiently communicated to users”. In Question 11, users also agreed that “The bank has secured all its transactions and sensitive personal data” (mean = 3,78). In Question 12, at a mean of 3,75, participants also agreed to the fact that “This internet banking portal is characterized by good reputation and image”. Figure and table 4.2 analytically represent descriptive measures from Question 7 to 12.

Figure 4.2: Descriptive Statistics of Q7-12

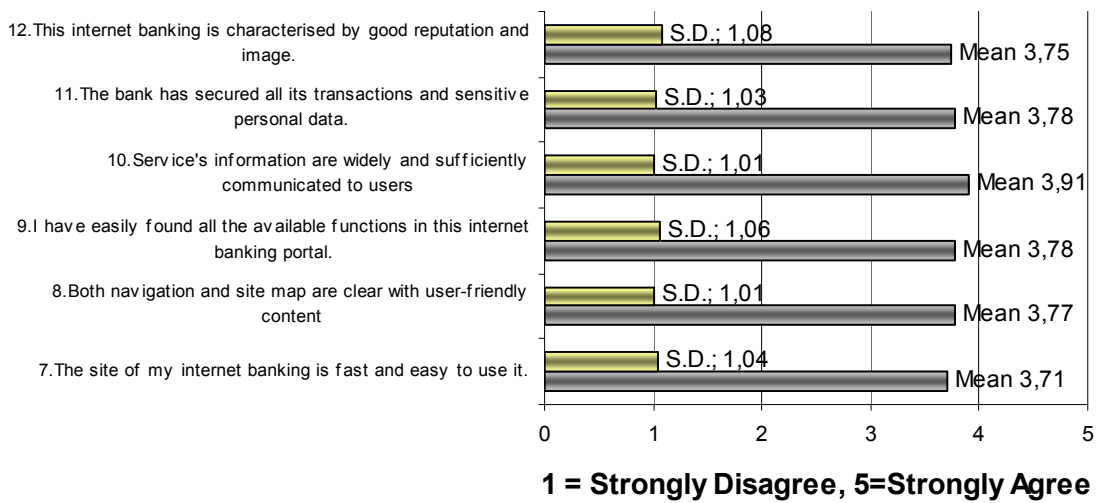


Table 4.2. Basic Descriptive Statistics of Q7-Q12

| | N | Min. | Max. | Mean | Std. Dev. |
|---|-----|------|------|------|-----------|
| 7. The site of my internet banking is fast and easy to use it. | 324 | 1 | 5 | 3,71 | 1,04 |
| 8. Both navigation and site map are clear with user-friendly content | 324 | 1 | 5 | 3,77 | 1,01 |
| 9. I have easily found all the available functions in this internet banking portal. | 324 | 1 | 5 | 3,78 | 1,06 |
| 10. Service's information are widely and sufficiently communicated to users | 324 | 1 | 5 | 3,91 | 1,01 |
| 11. The bank has secured all its transactions and sensitive personal data. | 324 | 1 | 5 | 3,78 | 1,03 |
| 12. This internet banking is characterised by good reputation and image. | 324 | 1 | 5 | 3,75 | 1,08 |

Concerning Questions 13-17, a similar degree of agreement on the same 5-point Likert scale was found. More analytically, at an average of 3,70, users agreed to the statement of Question 13 “This internet banking portal provides strict privacy policy against fraud and viruses”. Similarly, at an average of 3,55, participants showed a satisfactory degree of agreement to the statement of question 14 “This internet site protects my transactions and personal data”. The same degree of agreement

experienced in the statements of Questions 15 “When transact on this internet banking portal I feel relieved” and 16 “I am clearly informed about the result of my transactions” (arithmetic means 3,78 and 3,78 respectively). With regards to the statement of the easy log in the portal of the Question 17, there was an agreement at a mean of 3,84. Figure as well as Table 4.3 is quite illustrative.

Figure 4.3: Descriptive Statistics of Q13-17

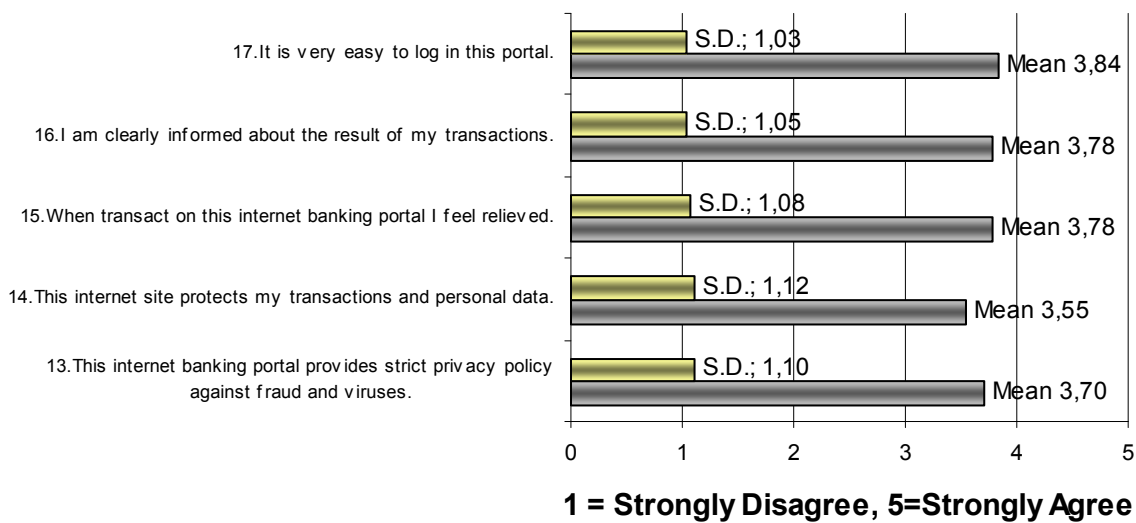
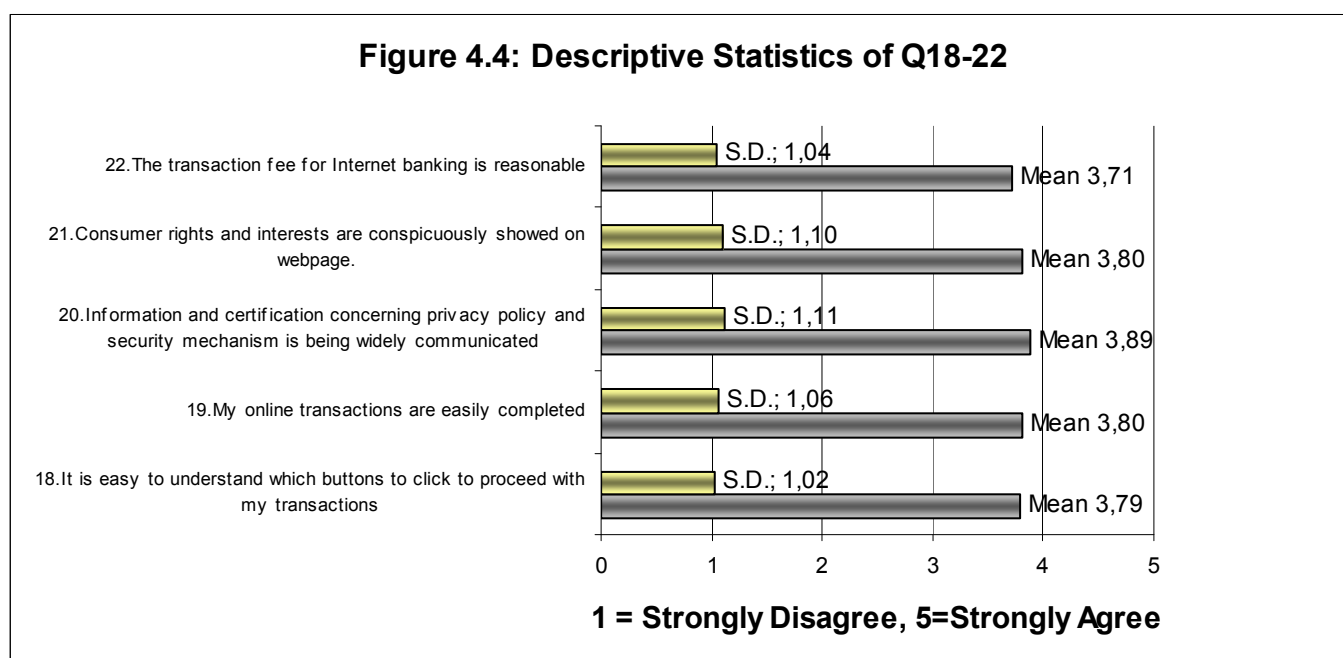


Table 4.3. Basic Descriptive Statistics of Q13-Q17

| | N | Min. | Max. | Mean | Std. Dev. |
|--|-----|------|------|------|-----------|
| 13. This internet banking portal provides strict privacy policy against fraud and viruses. | 324 | 1 | 5 | 3,70 | 1,10 |
| 14. This internet site protects my transactions and personal data. | 324 | 1 | 5 | 3,55 | 1,12 |
| 15. When transact on this internet banking portal I feel relieved. | 324 | 1 | 5 | 3,78 | 1,08 |
| 16. I am clearly informed about the result of my transactions. | 324 | 1 | 5 | 3,78 | 1,05 |
| 17. It is very easy to log in this portal. | 324 | 1 | 5 | 3,84 | 1,03 |

As far as Questions 18-22 are concerned, participants requested to state on a 5-point Likert their degree of agreement/disagreement to statements concerning information, ease of use and internet banking fees. As the results indicate, at an

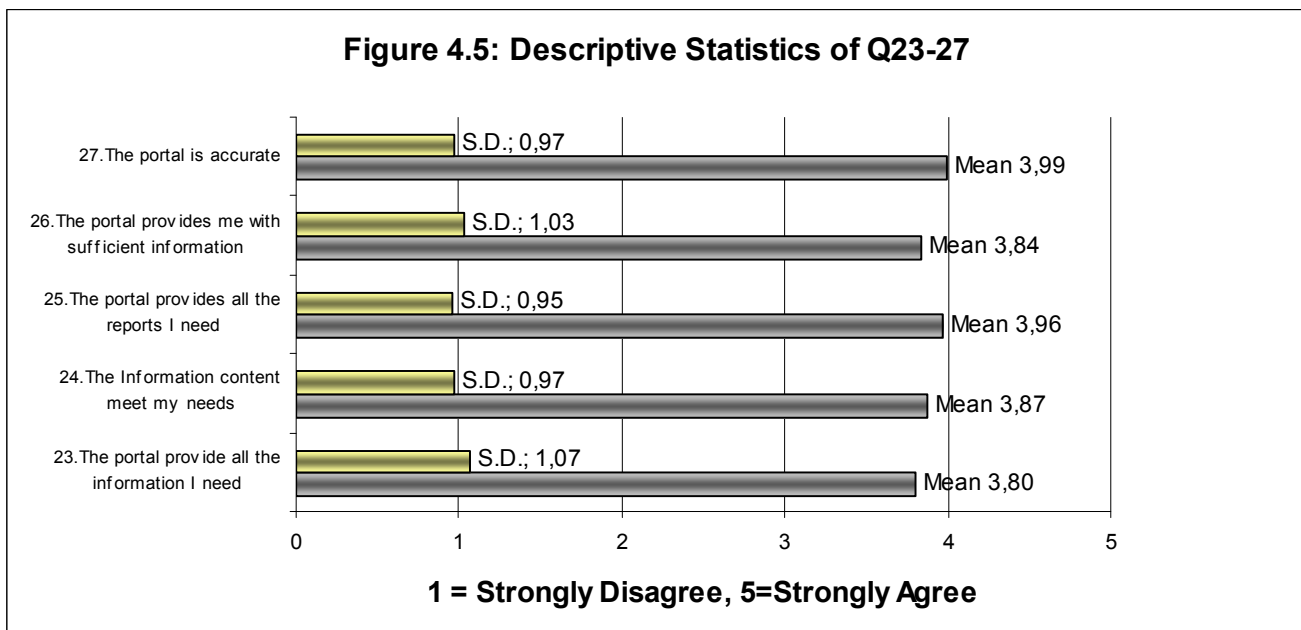
average there was found a satisfactory degree of agreement to the statements of Question 18 “It is easy to understand which buttons to click to proceed with my transactions” (mean = 3,79), of Question 19 “My online transactions are easily completed” (mean = 3,80), of Question 20 “Information and certification concerning privacy policy and security mechanism is being widely communicated” (mean = 3,89) and to the statement of Question 21 “Consumer rights and interests are conspicuously showed on webpage”. Moreover, there was found agreement to the statement of Question 22 “The transaction fee for Internet banking is reasonable” (mean = 1,04). Figure 4.4 and Table 4.4 are very illuminative.



| Table 4.4. Basic Descriptive Statistics of Q18-Q22 | | | | | |
|---|-----|------|------|------|-----------|
| | N | Min. | Max. | Mean | Std. Dev. |
| 18. It is easy to understand which buttons to click to proceed with my transactions | 324 | 1 | 5 | 3,79 | 1,02 |
| 19. My online transactions are easily completed | 324 | 1 | 5 | 3,80 | 1,06 |
| 20. Information and certification concerning privacy policy and security mechanism is being widely communicated | 324 | 1 | 5 | 3,89 | 1,11 |
| 21. Consumer rights and interests are conspicuously showed on webpage. | 324 | 1 | 5 | 3,80 | 1,10 |
| 22. The transaction fee for Internet banking is reasonable | 324 | 1 | 5 | 3,71 | 1,04 |

4.1.2 End-User Computing Satisfaction

Questions 23-33 are part of the End-User Computing Satisfaction scale. With regards to Questions 23 to 27, participants agreed with the respective statements. More specifically, customers of every bank in the area of our study, stated they generally agree to the fact that the portal they use actually provides all the information they needed, with a mean of 3,80. Also they agreed that the information content met their needs, with the equal to 3,87. In addition, customers stated they agree to the Likert question that the portal they use provides all the reports they needed at a mean of 3,96. Moreover, customers agreed to the statement of Question 26 that their portal provided them with sufficient information at a mean of 3,84. Finally, in Question 27, participants stated they agree that the portal they use for internet banking is accurate at a mean of 3,99. Figure 4.5 and Table 4.5 are quite helpful to acquire more details.



| | N | Min. | Max. | Mean | S.D. |
|---|-----|------|------|------|------|
| 23.The portal provide all the information I need | 324 | 1 | 5 | 3,80 | 1,07 |
| 24.The Information content meet my needs | 324 | 2 | 5 | 3,87 | 0,97 |
| 25.The portal provides all the reports I need | 324 | 2 | 5 | 3,96 | 0,95 |
| 26.The portal provides me with sufficient information | 324 | 1 | 5 | 3,84 | 1,03 |
| 27.The portal is accurate | 324 | 2 | 5 | 3,99 | 0,97 |

As for Question 28, participants declared they agree that they are satisfied with the accuracy of the portal at a mean of 3,72. With Regards to Question 29, users revealed they agree to the statement “The format of the portal's outputs is presented in a useful manner” at a mean of 3,84. In addition, in Question 30, users agreed that the information presented on the portal’s output was clear with a mean of 3,93. As far as Question 31 is concerned, participants indicated they agree to the statement that the portal was user friendly at an average of 3,87. Moreover, in Question 32, there was a similar level of agreement to the statement “I get all the information I need from the portal on time” at an average of 3,82. As for Question 33 statement “The portal provides up-to-date information”, it was experienced more or less the same level of agreement at a mean of 3,75. The following Figure 4.6 and Table 4.6 are quite illuminative.

Figure 4.6: Descriptive Statistics of Q28-33

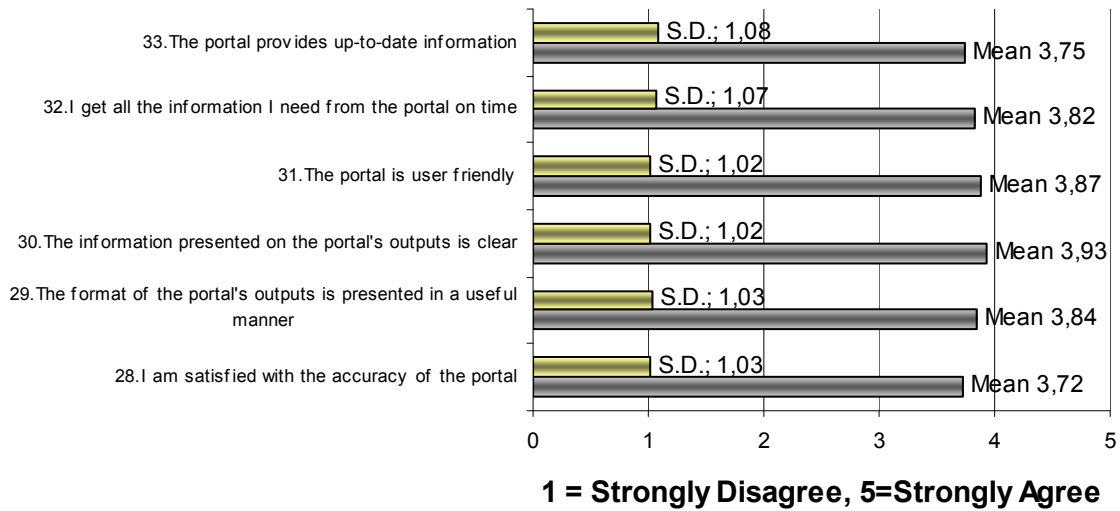


Table 4.6. Basic Descriptive Statistics of Q28-Q33

| | N | Min. | Max. | Mean | S.D. |
|--|-----|------|------|------|------|
| 28. I am satisfied with the accuracy of the portal | 324 | 1 | 5 | 3,72 | 1,03 |
| 29. The format of the portal's outputs is presented in a useful manner | 324 | 1 | 5 | 3,84 | 1,03 |
| 30. The information presented on the portal's outputs is clear | 324 | 1 | 5 | 3,93 | 1,02 |
| 31. The portal is user friendly | 324 | 1 | 5 | 3,87 | 1,02 |
| 32. I get all the information I need from the portal on time | 324 | 1 | 5 | 3,82 | 1,07 |
| 33. The portal provides up-to-date information | 324 | 1 | 5 | 3,75 | 1,08 |

4.1.3 Customer Satisfaction

With regards to the satisfaction measure, Questions 37 & 34 was up to it. The sample of internet banking users stated in Question 34 that they agree with the fact they are satisfied with the bank's internet banking services at a mean of 3,79 out of 5. Whereas in Question 37, they demonstrated the same level of satisfaction at a mean of 3,92 using a similar Likert scale. Figure 4.7 and Table 4.7 indicate that customer satisfaction is better in conventional banking services than in internet banking services. This shows us that banks should ameliorate the internet banking experience.

Figure 4.7: Descriptive Statistics of Q34 & 37

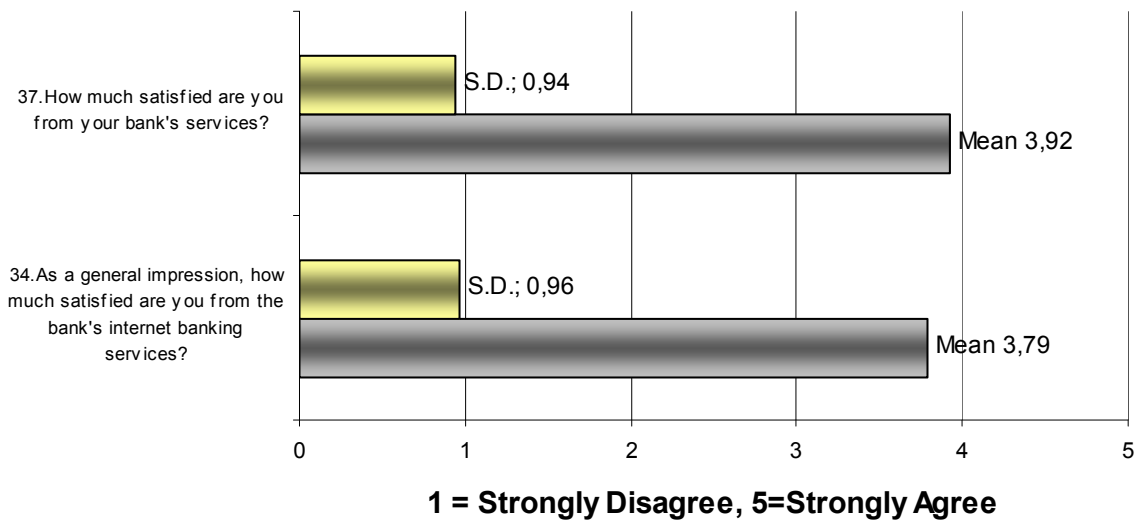


Table 4.7. Basic Descriptive Statistics of Q34 & Q37

| | N | Min. | Max. | Mean | S.D. |
|--|-----|------|------|------|------|
| 34. As a general impression, how much satisfied are you from the bank's internet banking services? | 324 | 2 | 5 | 3,79 | 0,96 |
| 37. How much satisfied are you from your bank's services? | 324 | 1 | 5 | 3,92 | 0,94 |

4.1.4 Customer Loyalty

Customer Loyalty intention scale included Questions 35-36 and 38-39 (11 point scale 1=0% - Not at all, 2=10%, 3=20%...11=100% - Surely I would). In Question 35, customers indicated they would continue to use the internet banking website of their bank in the near future at a mean likelihood of 67,38%. Also, according to Question 36, users would suggest their internet banking portal to their friends at a mean of 57,90% and, according to the Question 38, users stated that at a mean of 59,26% they would continue to be customers of the bank generally. Lastly, according to the scale of the Question 39, users stated at an average of 49,57% they would suggest their bank to friends or colleagues. As a general impression, Banks should always work to

succeed the highest level of customer satisfaction (100% satisfaction) to retain their customers more likely. Figure 4.8 and Table 4.8 are quite helpful.

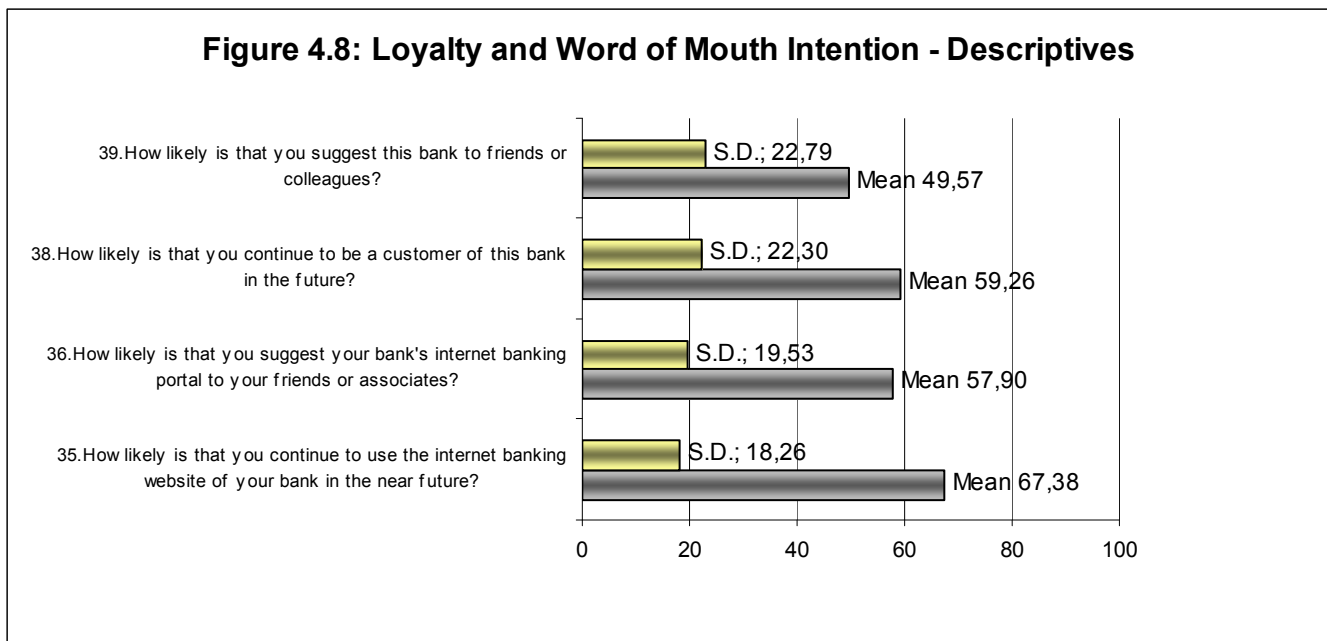


Table 4.8. Loyalty and Word of Mouth Intention scale's Descriptives

| | N | Min. | Max. | Mean | S.D. |
|--|-----|------|------|-------|-------|
| 35. How likely is that you continue to use the internet banking website of your bank in the near future? | 324 | 20 | 100 | 67,38 | 18,26 |
| 36. How likely is that you suggest your bank's internet banking portal to your friends or associates? | 324 | 0 | 100 | 57,90 | 19,53 |
| 38. How likely is that you continue to be a customer of this bank in the future? | 324 | 0 | 100 | 59,26 | 22,30 |
| 39. How likely is that you suggest this bank to friends or colleagues? | 324 | 0 | 100 | 49,57 | 22,79 |

4.1.4 Perceived Quality

Questions 40 and 41 help on measuring the total Perceived Quality of the internet banking services using a 5-point Likert scale. In Question 40, participants stated at a mean of 4,35 that the quality of internet banking is more than important to decide upon which bank to use instead of a different one. In addition, users agreed on the statement that the Quality of the on-line banking services of the banking portal

met their expectations at a mean of 3,89 (Question 41a) and also at the same mean customers agreed that the offering of the bank was very attractive and fulfilled their needs (Question 41b). Figure and Table 4.9 that follow are very illustrative.

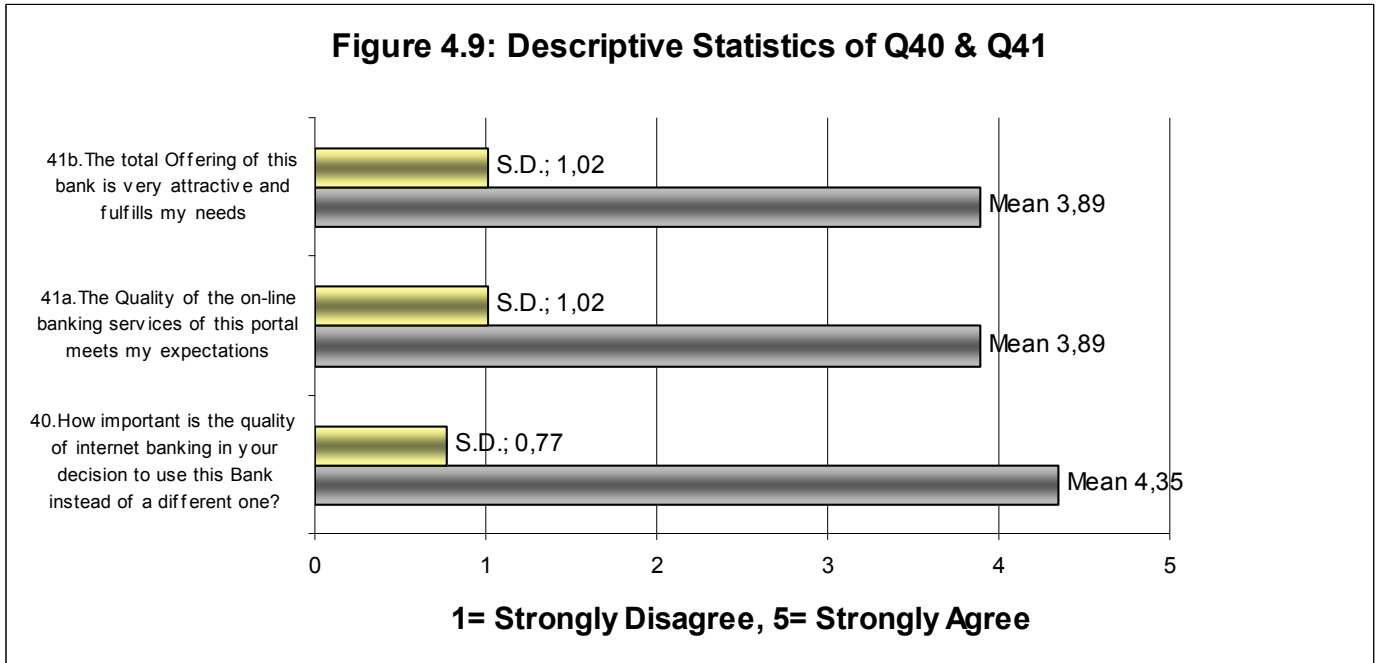


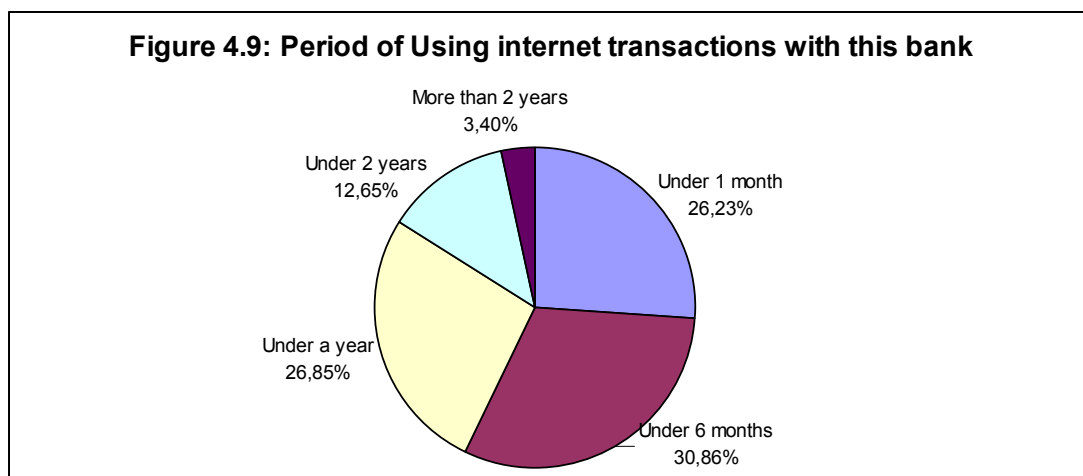
Table 4.9. Basic Descriptive Statistics of Q40-Q42

| | N | Min. | Max. | Mean | S.D. |
|--|-----|------|------|------|------|
| 40. How important is the quality of internet banking in your decision to use this Bank instead of a different one? | 324 | 2 | 5 | 4,35 | 0,77 |
| 41a. The Quality of the on-line banking services of this portal meets my expectations | 325 | 2 | 5 | 3,89 | 1,02 |
| 41b. The total Offering of this bank is very attractive and fulfills my needs | 325 | 2 | 5 | 3,89 | 1,02 |

4.1.5 Demographics

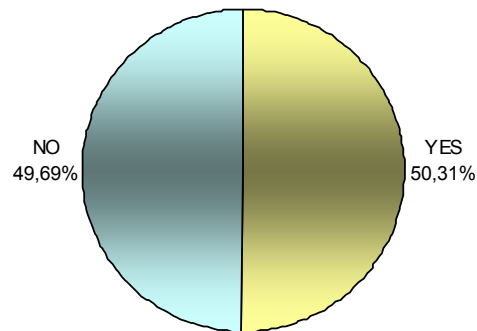
Concerning the frequencies by period of using internet banking transactions on behalf of customers, this was measured by using Question 42. The 26,23% of the sample stated they had been using internet transactions with their bank for less than a month. A 30,86% of the participants been asked, replied that they had been using the

bank's internet transactions for less than 6 months and a 26,85% for under a year. Users retained for under than 2 years comprised of the 12,65% of the total sample and finally, only a 3,40% of the total users were retained as e-banking customers for more than 2 years. This fact indicates that users are either vastly increasing in the last year or simply Greek banks are unable to satisfy and retain their customers for long period. Figure 4.9 that follow depict the frequencies by period of use within the same e-banking portal.



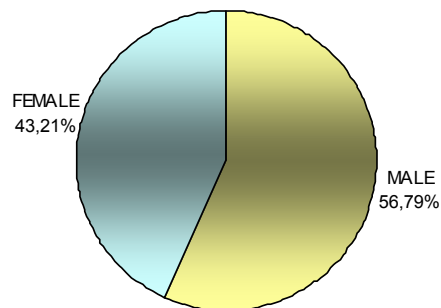
As far as Question 43 is concerned, participants stated whether or not they had previous experience over the internet banking services. The 49,69% of the users stated they hadn't been using the internet banking services of another Bank presently or in the past and a 50,31% answered they had.

Figure 4.10: Previous Experience of E-Banking Services



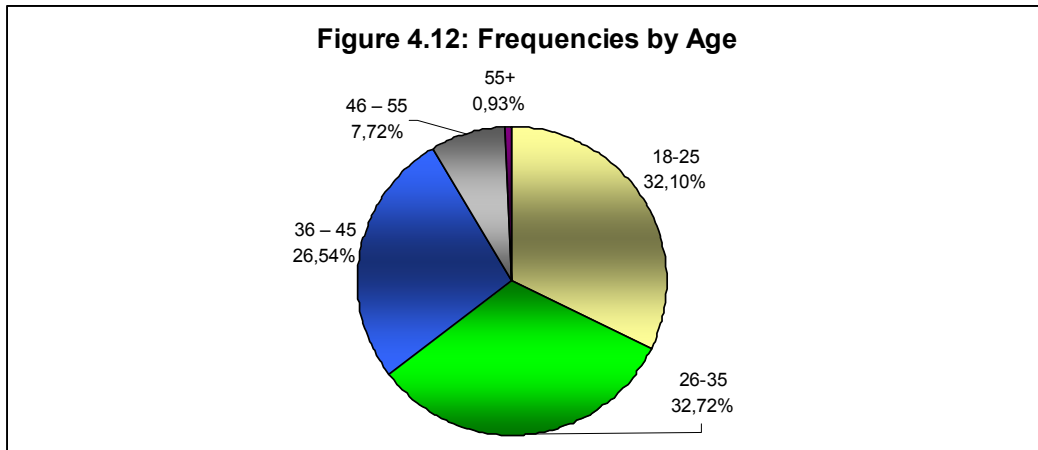
In Question 44, participants were asked about their gender. Men seem to use internet banking services in favor of the traditional banking, since 56,79% of the participants were males and only a 43,21% of the users proved to be women. This indicates that internet banking portals should be very user-friendly in order to attract female customers. Figure 4.11 is illustrative.

Figure 4.11: Frequencies by Gender

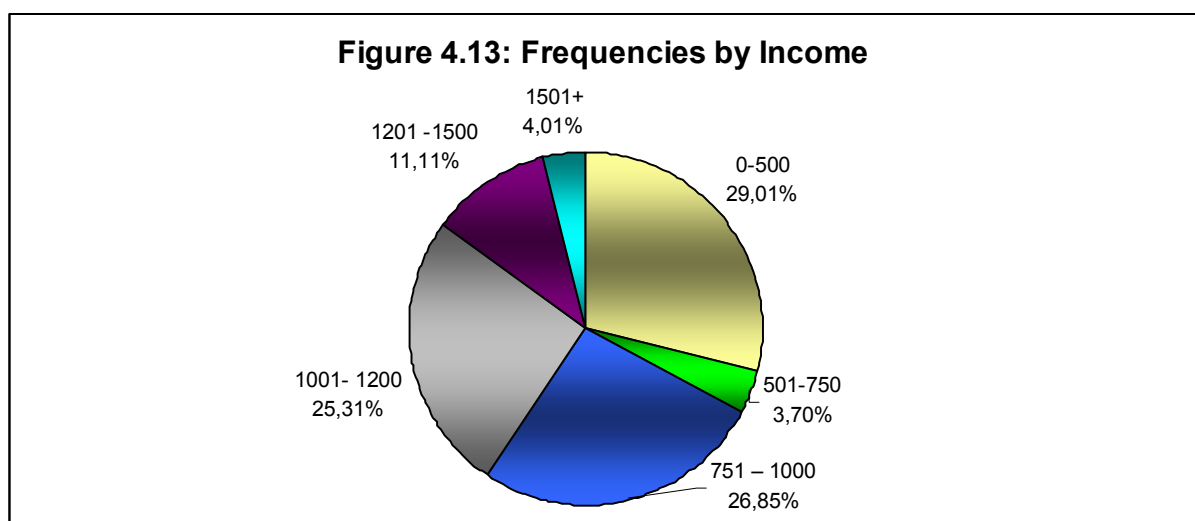


With regards to participants' age (Question 45), approximately 1/3 of the total sample belonged in the age group of 18-25, whereas about 1/3 belonged in the group of 26-35. Moreover, a further 26,54% were aged between 36 and 45 years old. About an 8% of users were between 46 and 55 years old. Finally, only a 0,93% were older

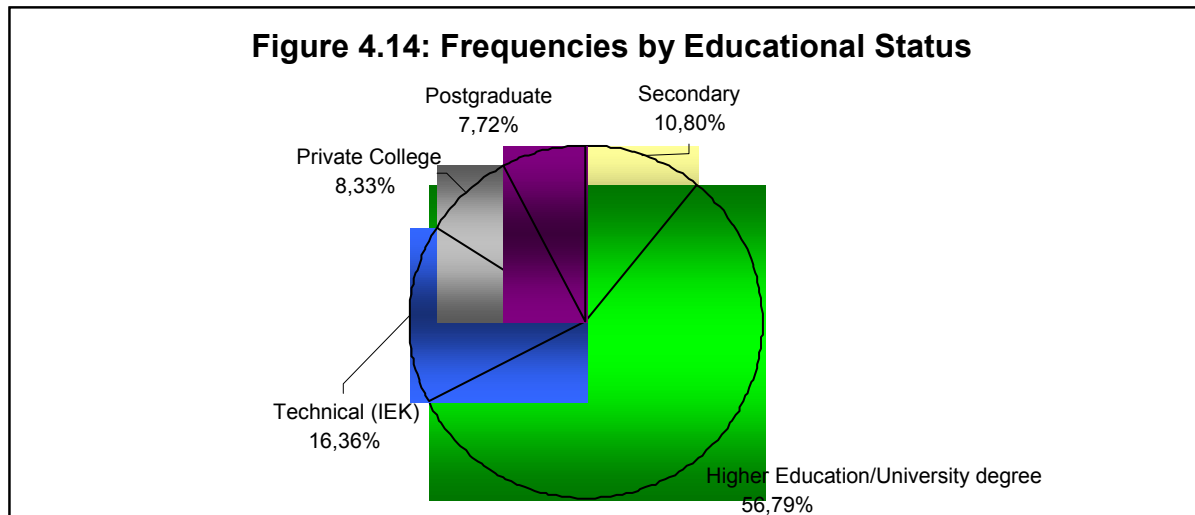
than 55. The latter fact indicates that older customers are reluctant to use internet banking services. Again, banks should design both their services and sites in order to better attract older segments in age. Figure 4.12 that follows represents the frequencies by age.



As for the demographic composition monthly income (Question 46), a 29,01% of the total sample had income of less than 500 Euros. About 3,70% earned between 501 and 750 Euros, whereas a 26,85% had income between 751 and 1.000 Euros. Approximately a quarter earned between 1001 and 1200 Euros and 11,11% between 1201 and 1500 Euros. Finally, only a 4,01% earned more than 1.501 Euros.



As far as the Educational Status of the sample is concerned (Question 47), a 56,79% were university degrees. A further 16,36% had a Technical degree, a 10,80% graduated high school and a 8,33% had a degree in a Private College. Finally, a 7,72% were postgraduates.



4.2 INFERENTIAL ANALYSIS

4.2.1 Data Reduction – Factor Analysis Approach

Both the scales of E-Quality and End-User Computing Satisfaction measures were reduced to form separate groups of variables using the method of Factor Analysis. This analysis will help researcher to build better and easier to understand and explain forecast models. The first component created from factor analysis dealt with “Assurance”, that is the ability of the service production system to provide reliable and good services. Table 4.10 clearly shows that every item correlates to each other, thus justifying the reduction to one scale that is “Assurance”. The descriptive statistics of every e-quality component are being presented on Table 4.19 and Figure 4.15 at the end of this section.

Component Matrix(a)

| Table 4.10: The Assurance Scale | Component |
|---|-----------|
| | Assurance |
| Services provided on the Bank's Internet banking portal are available. | ,916 |
| In case a problem occurs, the Internet banking portal guides me to solve it. | ,921 |
| The service is being performed correctly at the first time by the bank's Internet banking portal. | ,905 |
| My On-line transactions are accurately performed. | ,923 |
| I am clearly informed about the result of my transactions. | ,914 |
| The portal is accurate | ,935 |
| I am satisfied with the accuracy of the portal | ,933 |

Extraction Method: Principal Component Analysis.

a 1 components extracted.

The second component, as already discussed in the Literature Review chapter, is “Timeliness”, the ability of the service production system to provide services and up-to-date information and reports on the expected time. Table 4.11 successfully indicates that each item is closely correlated to each other to form the new variable called “Timeliness”.

Component Matrix(a)

| Table 4.11: The Timeliness Scale | Component |
|---|------------|
| | Timeliness |
| There is efficient and fast correspondence when I make requests via e-mail or service line. | ,917 |
| I get all the information I need from the portal on time | ,934 |
| The portal provides up-to-date information | ,976 |

Extraction Method: Principal Component Analysis.

a 1 components extracted.

The third determinant of Perceived E-Banking Services Quality, as already mentioned in the theoretical part is “Friendliness of Use”. Below, on Table 4.12, the items included could be reduced into one to form the “Friendliness of Use” scale.

Component Matrix(a)

| Table 4.12: The Friendliness of Use Scale | Component |
|--|---------------------|
| | Friendliness of Use |
| The site of my internet banking is fast and easy to use it. | ,948 |
| Both navigation and site map are clear with user-friendly content | ,957 |
| I have easily found all the available functions in this internet banking portal. | ,931 |

| | |
|---|------|
| It is very easy to log in this portal. | ,874 |
| It is easy to understand which buttons to click to proceed with my transactions | ,958 |
| My online transactions are easily completed | ,884 |
| The portal is user friendly | ,922 |

Extraction Method: Principal Component Analysis.

a 1 components extracted.

As far as the fourth element of the perceived quality in e-banking services is concerned, there were some items extremely correlated (please see Table 4.13). These items could be merged in one to form the scale of “Content” as described in the End-User Computing Satisfaction scale.

Component Matrix(a)

| Table 4.13: The Content Scale | Component |
|---|-----------|
| | Content |
| Service's information are widely and sufficiently communicated to users | ,921 |
| Consumer rights and interests are conspicuously showed on webpage. | ,902 |
| The portal provide all the information I need | ,906 |
| The Information content meet my needs | ,943 |
| The portal provides all the reports I need | ,932 |
| The portal provides me with sufficient information | ,927 |

Extraction Method: Principal Component Analysis.

a 1 components extracted.

With regards to the fifth element of e-banking services, we have distinguished “Safety” items. These items could also be reduced to form the “Safety” scale. Table 4.14 indicates the close relationship between these variables.

Component Matrix(a)

| Table 4.14: The Safety Scale | Component |
|---|---------------|
| | Safety |
| This internet banking portal provides strict privacy policy against fraud and viruses. | ,928 |
| This internet site protects my transactions and personal data. | ,940 |
| When transact on this internet banking portal I feel relieved. | ,946 |
| Information and certification concerning privacy policy and security mechanism is being widely communicated | ,870 |

Extraction Method: Principal Component Analysis.

a 1 components extracted.

Concerning the sixth determinant of e-banking services and according to the Literature Review, the “Format” dimension is prominent as well. The format dimension deals with the presentation of information, reports and outputs as developed in the End-User Computing Satisfaction scale. The two items included in

the model developed a great deal of correlation (please refer to Table 4.15), thus a new variable of “Format” was built.

Component Matrix(a)

| Table 4.15: The Format Scale | Component |
|--|---------------|
| | Format |
| The format of the portal's outputs is presented in a useful manner | ,984 |
| The information presented on the portal's outputs is clear | ,984 |

Extraction Method: Principal Component Analysis.

a 1 components extracted.

Finally, the items developed for Perceived Quality, Customer Satisfaction and Loyalty could be reduced accordingly to form the respective variables. Tables 4.16 to 4.18 explain the creation of new variables due to the great deal of correlation between the items.

Component Matrix(a)

| Table 4.16: Perceived Quality Scale | Component |
|--|-----------|
| | 1 |
| The Quality of the on-line banking services of this portal meets my expectations | 1,000 |
| The total Offering of this bank is very attractive and fulfils my needs | 1,000 |

Extraction Method: Principal Component Analysis.

a 1 components extracted.

Component Matrix(a)

| Table 4.17: Customer Satisfaction Scale | Component |
|--|-----------|
| | 1 |
| As a general impression, how much satisfied are you from the bank's internet banking services? | ,885 |
| How much satisfied are you from your bank's services? | ,885 |

Extraction Method: Principal Component Analysis.

a 1 components extracted.

Component Matrix(a)

| Table 4.18: The Customer Loyalty Scale | Component |
|--|-----------|
| | 1 |
| How likely is that you continue to use the internet banking website of your bank in the near future? | ,968 |
| How likely is that you suggest your bank's internet banking portal to your friends or associates? | ,963 |
| How likely is that you continue to be a customer of this bank in the future? | ,970 |
| How likely is that you suggest this bank to friends or colleagues? | ,966 |

Extraction Method: Principal Component Analysis.

a 1 components extracted.

As a result from the previous analysis, new variables under the names of “ASSURANCE”, “TIMELINESS”, “FRIENDLINESS OF USE”, “CONTENT”, “SAFETY”, “FORMAT”, “PERCEIVED QUALITY”, “CUSTOMER SATISFACTION” and “CUSTOMER LOYALTY” were accordingly computed. This computation entailed the arithmetic mean of each scale using the following formula. **New Variable = (item a + item b +...+item n) / n**. Figure 4.15 and Table 4.19 that follow represent the basic descriptive statistics of the dimensions of e-banking quality that were computed.

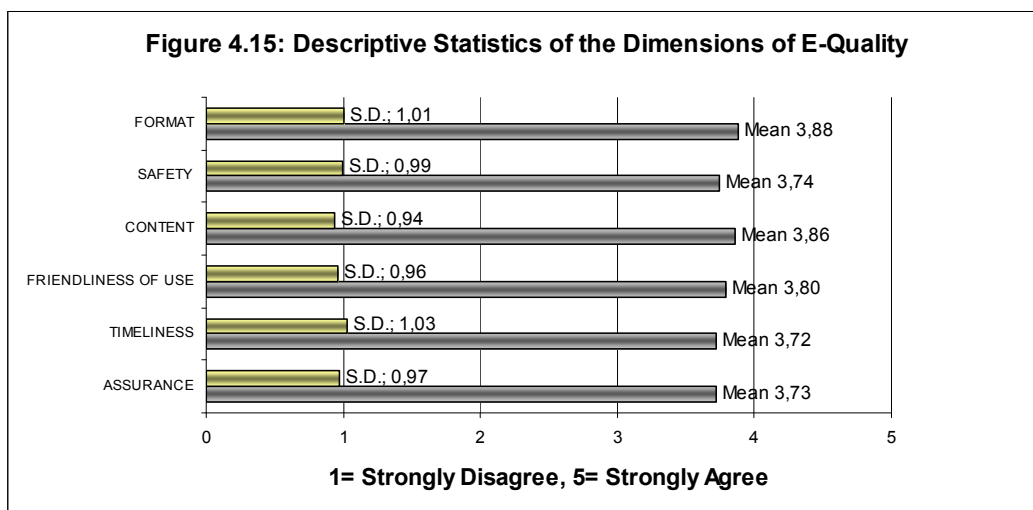


Table 4.19. Basic Descriptive Statistics of the dimensions of E-Quality

| | N | Min. | Max. | Mean | S.D. |
|---------------------|-----|------|------|------|------|
| ASSURANCE | 324 | 1,33 | 5 | 3,73 | 0,97 |
| TIMELINESS | 324 | 1,33 | 5 | 3,72 | 1,03 |
| FRIENDLINESS OF USE | 324 | 1 | 5 | 3,80 | 0,96 |
| CONTENT | 324 | 1,67 | 5 | 3,86 | 0,94 |
| SAFETY | 324 | 1,4 | 5 | 3,74 | 0,99 |
| FORMAT | 324 | 1 | 5 | 3,88 | 1,01 |

Last but not least, and according to the previous factor analysis, the descriptive statistics of Perceived Quality, Customer Satisfaction and Customer Loyalty are being presented on the following Table 4.20.

| | N | Min. | Max. | Mean | S.D. |
|-----------------------|-----|------|------|-------|-------|
| PERCEIVED QUALITY | 325 | 2 | 5 | 3,89 | 1,02 |
| CUSTOMER SATISFACTION | 324 | 2 | 5 | 3,85 | 0,84 |
| CUSTOMER LOYALTY | 324 | 7,5 | 100 | 58,53 | 20,04 |

4.2.2 The Determinants of Perceived Quality in E-Banking

The aforementioned factor analysis served on categorizing items into groups with internal homogeneity in terms of their correlation. The determinants of Perceived Quality for the E-Banking services were then computed as single variables that are the following:

- 1) ASSURANCE
- 2) TIMELINESS
- 3) FRIENDLINESS OF USE
- 4) CONTENT
- 5) SAFETY
- 6) FORMAT

These variables are to be used as independent ones (x's) in a multiple regression model to predict certain values for the computed variable of "Perceived Quality" (Y). As a result, Perceived Quality works as a dependent variable in a linear model. The

model summary that follows shows that the total variation of “Perceived Quality” is being explained 95,50% by these determinants (R Square =0,955). In other words these determinants are valid, since they explain a great deal of the Perceived Quality’s values.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | ,962 ^a | ,926 | ,926 | ,27747 |
| 2 | ,973 ^b | ,948 | ,947 | ,23329 |
| 3 | ,976 ^c | ,953 | ,952 | ,22217 |
| 4 | ,977 ^d | ,955 | ,955 | ,21629 |

- a. Predictors: (Constant), FRIENDLINESS OF USE
- b. Predictors: (Constant), FRIENDLINESS OF USE, SAFETY
- c. Predictors: (Constant), FRIENDLINESS OF USE, SAFETY, FORMAT
- d. Predictors: (Constant), FRIENDLINESS OF USE, SAFETY, FORMAT, TIMELINESS

The following table illustrates that the model 4 is the prominent one. The significant determinants of Perceived Quality in the final model on a descending ranking importance are: 1)“Safety” ($\beta=0,377$), 2)“Friendliness of Use” ($\beta=0,291$), 3)“Format” ($\beta=0,210$) and 4)“Timeliness” ($\beta=0,148$). The constant of the predictive formula is $a=0,007$. Thus, the formula predicting “Perceived Quality” of the e-banking services is the one that follows:

$$\text{PERCEIVED QUALITY (Y)} = 0,007 + 0,377*\text{SAFETY} + 0,0291*\text{FRIENDLINESS OF USE} + 0,210*\text{FORMAT} + 0,148*\text{TIMELINESS}$$

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|---------------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | ,013 | ,063 | | ,204 | ,839 |
| | FRIENDLINESS OF USE | 1,021 | ,016 | ,962 | 63,374 | ,000 |
| 2 | (Constant) | ,007 | ,053 | | ,133 | ,894 |
| | FRIENDLINESS OF USE | ,561 | ,042 | ,529 | 13,397 | ,000 |
| | SAFETY | ,468 | ,040 | ,458 | 11,597 | ,000 |
| 3 | (Constant) | -,009 | ,051 | | -,173 | ,863 |
| | FRIENDLINESS OF USE | ,356 | ,053 | ,335 | 6,678 | ,000 |
| | SAFETY | ,420 | ,039 | ,411 | 10,675 | ,000 |
| | FORMAT | ,252 | ,043 | ,249 | 5,827 | ,000 |
| 4 | (Constant) | ,007 | ,049 | | ,141 | ,888 |
| | FRIENDLINESS OF USE | ,291 | ,054 | ,274 | 5,386 | ,000 |
| | SAFETY | ,377 | ,040 | ,369 | 9,540 | ,000 |
| | FORMAT | ,210 | ,043 | ,208 | 4,869 | ,000 |
| | TIMELINESS | ,148 | ,034 | ,150 | 4,316 | ,000 |

a. Dependent Variable: PERCEIVED QUALITY

The value of the beta for each variable predicts that a change of plus one unit of the predictor results in $b \cdot 1$ Units of Y. For example a Unit of improvement in SAFETY has an impact of $0,377 \cdot 1 = 0,377$ units of PERCEIVED QUALITY. Accordingly, In case the value of each predictor is 5, the PERCEIVED QUALITY will be $PQ = 0,007 + 0,377 \cdot 5 + 0,0291 \cdot 5 + 0,210 \cdot 5 + 0,148 \cdot 5 = 4,40$

The following table reveals the variables that were excluded as of non-statistically significant by the model that are “Assurance” and “Content”.

Excluded Variables

| Model | | Beta In | t | Sig. | Partial Correlation | Collinearity Statistics |
|-------|------------|--------------------|--------|------|---------------------|-------------------------|
| | | | | | | Tolerance |
| 1 | ASSURANCE | ,360 ^a | 6,640 | ,000 | ,348 | ,069 |
| | TIMELINESS | ,291 ^a | 7,567 | ,000 | ,389 | ,133 |
| | CONTENT | ,082 ^a | 1,694 | ,091 | ,094 | ,098 |
| | SAFETY | ,458 ^a | 11,597 | ,000 | ,543 | ,105 |
| | FORMAT | ,346 ^a | 7,109 | ,000 | ,369 | ,085 |
| 2 | ASSURANCE | ,100 ^b | 1,782 | ,076 | ,099 | ,051 |
| | TIMELINESS | ,188 ^b | 5,359 | ,000 | ,287 | ,121 |
| | CONTENT | ,054 ^b | 1,326 | ,186 | ,074 | ,097 |
| | FORMAT | ,249 ^b | 5,827 | ,000 | ,310 | ,081 |
| 3 | ASSURANCE | ,060 ^c | 1,115 | ,266 | ,062 | ,051 |
| | TIMELINESS | ,150 ^c | 4,316 | ,000 | ,235 | ,115 |
| | CONTENT | ,013 ^c | ,325 | ,745 | ,018 | ,094 |
| 4 | ASSURANCE | -,014 ^d | -,252 | ,801 | -,014 | ,045 |
| | CONTENT | -,004 ^d | -,096 | ,924 | -,005 | ,093 |

a. Predictors in the Model: (Constant), FRIENDLINESS OF USE

b. Predictors in the Model: (Constant), FRIENDLINESS OF USE, SAFETY

c. Predictors in the Model: (Constant), FRIENDLINESS OF USE, SAFETY, FORMAT

d. Predictors in the Model: (Constant), FRIENDLINESS OF USE, SAFETY, FORMAT, TIMELINESS

e. Dependent Variable: PERCEIVED QUALITY

4.2.3 The Impact of Perceived Quality on Customer Satisfaction

The impact of Perceived Quality of the E-Banking services on Customer Satisfaction may be also found using the tool of Linear Regression. Perceived Quality is considered to be an independent variable and on the other hand, Customer Satisfaction will be held as a dependent one. The model summary of the analysis indicated that Perceived Quality is not only important, but also a significant factor influencing Customer Satisfaction in Banking. The R Square at the rate of 0,782 reveals that 78,20% of the Customer Satisfaction's variability is being explained by Perceived Quality.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | ,885 ^a | ,783 | ,782 | ,39218 |

a. Predictors: (Constant), PERCEIVED QUALITY

The algebraic formula that predicts CUSTOMER SATISFACTION derives from the following table, which shows that there is a Constant of 1,011 and a beta coefficient of PERCEIVED QUALITY that is $\beta=0,731$. Thus, we have the following equation deriving from the following table:

$$\text{CUSTOMER SATISFACTION}(Y) = 1,011 + 0,731 * \text{PERCEIVED QUALITY}$$

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-------------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | 1,011 | ,086 | | 11,719 | ,000 |
| | PERCEIVED QUALITY | ,731 | ,021 | ,885 | 34,082 | ,000 |

a. Dependent Variable: CUSTOMER SATISFACTION

The aforementioned formula suggests that in case Perceived Quality is 4, the total Customer Satisfaction will be $1,011 + 0,731 * 4 = 3,92$.

4.2.4 The Impact of Customer Satisfaction on Loyalty and Word of Mouth Communication

In order to answer this Research Question two linear regression analyses were conducted. Both of them considered Customer Satisfaction as an independent variable, whilst as a dependent ones there was Customer Loyalty and Word Of Mouth Communication respectively.

Customer Satisfaction -> Loyalty

As it is seen on the following model summary, Customer Satisfaction as an independent variable explains the 62,60% of the total variability of Customer Loyalty that is very satisfactory.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | ,791 ^a | ,626 | ,625 | 12,27300 |

a. Predictors: (Constant), CUSTOMER SATISFACTION

The predictive formula stemming out from the following table indicates a Constant of -14,194 as well as a beta coefficient $\beta=18,864 \rightarrow$ **CUSTOMER LOYALTY = -14,194 + 18,864*CUSTOMER SATISFACTION**. The latter formula indicates the importance of customer satisfaction in order for a firm to have Loyal Customers as possible. This indicates that as soon as customer satisfaction is 5 on a 5-point scale, Loyalty intention will be:

$$\text{CUSTOMER LOYALTY} = -14,194 + 18,864 * 5 = -14,194 + 94,32 = 80,13\%$$

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-----------------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -14,194 | 3,205 | | -4,428 | ,000 |
| | CUSTOMER SATISFACTION | 18,864 | ,812 | ,791 | 23,218 | ,000 |

a. Dependent Variable: CUSTOMER LOYALTY

Customer Satisfaction -> Word Of Mouth

By conducting Regression Analysis, “customer satisfaction” explained a 61,80% of the total variability of Word of Mouth Communication. The following table is quite illuminative.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | ,786 ^a | ,618 | ,617 | 12,64693 |

a. Predictors: (Constant), CUSTOMER SATISFACTION

The forecast model of the following table revealed a constant at the value of -19,933 and a beta of Customer Satisfaction at the value of 19,110. **WORD OF MOUTH = -19,933 + 19,110*CUSTOMER SATISFACTION**. As a result, the more customers are satisfied, the stronger the intention of customers to suggest the firm or service to friends or colleagues

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|-----------------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -19,933 | 3,303 | | -6,035 | ,000 |
| | CUSTOMER SATISFACTION | 19,110 | ,837 | ,786 | 22,825 | ,000 |

a. Dependent Variable: WORD OF MOUTH

5. CONCLUSIONS

5.1. The Determinants of Perceived Quality regarding E-Banking Services

The analysis of the primary researches data revealed that safety of the e-banking transactions, user friendly navigation, format of the reports, as well as timeliness counts the most for the users/customers of these electronic based services. The following predictive formula explains every assessment about the Perceived Quality of the E-Banking Services being made by users.

$$\text{PERCEIVED QUALITY (Y)} = 0,007 + 0,377*\text{SAFETY} + 0,0291*\text{FRIENDLINESS OF USE} + 0,210*\text{FORMAT} + 0,148*\text{TIMELINESS}$$

Commending on this formula, safety is found to be the most critical success factor of internet banking, since customers feel very suspicious, because of various incidents of fraud, viruses and other hacker-related techniques. As a result, functional as well as financial risk is a huge cost other than the fees that banks charge their customers with. These findings reinforce Zeithaml et al. (2002), who proposed an e-service quality scale (e-SQ) that included safety of use as well as friendliness of use in their model to assess perceived quality. Zeithaml et. al. (2002) in their research also indicated that safety of transactions along with friendliness of use work as the most critical indicators of Perceived Quality. Besides, Pikkarainen et. al. (2006) suggested that e-commerce including e-banking end-user computing satisfaction should measure the Format of the outputs and reports along with the Timeliness of the electronic based information systems. The aforementioned professors reported that Format and

Timeless concerning the portal services of the bank are very important for customer satisfaction and loyalty. Timeliness is the speed at which users acquire the desired and up-to-date information. This research project also presented that Format and Timeliness are of big impact since they affect the Perceived Quality of every e-banking service.

5.2. The Impact of Perceived Quality of the E-Banking services on Customer Satisfaction

Customer Satisfaction was closely related to Perceived Quality of the E-Banking services. This is better understood by observing the following equation.

$$\text{CUSTOMER SATISFACTION}(Y) = 1,011 + 0,731 * \text{PERCEIVED QUALITY}$$

An increase of one Unit in Perceived Quality is forecasted to bring 0,731 more units in Customer Satisfaction. Thus, the more the Perceived Quality the better the Customer Satisfaction. These findings are consistent to many authors like Mayer et. al. (2003), Walker et. al. (2006) and Ribbink et al. (2004). As a result, in order to have satisfied customers, banks should aim on designing the safest portals, with the most user-friendly environment, at the clearest format and to provide their customers with fast and reliable information.

5.3. The Impact of Customer Satisfaction on Loyalty and Word of Mouth Communication concerning the E-Banking services

The inferential analysis of the previous section unveiled that both Customer Loyalty as well as Word Of Mouth communication are highly influenced by Customer

Satisfaction. More specifically speaking, an improvement of a Unit in terms of Customer Satisfaction will increase Customer Loyalty Intention by 18,86%. It is a fact that consumers even at a satisfaction of 5 (or 100%) will not be 100% sure that they will continue to remain customers of a certain Bank (using the equation $CL = -14,194 + 18,864 * 5 = 80,13\%$). This shows that consumers are simply butterfly customers; they like to try new experiences and new services. However, Customer Satisfaction brings positive outcomes in terms of both Loyalty and Word Of Mouth. As for the latter term, an increase of a unit for satisfaction brings 19,11% improvement for Word Of Mouth Intention (please refer to the following formulas).

$$\text{CUSTOMER LOYALTY} = -14,194 + 18,864 * \text{CUSTOMER SATISFACTION}$$

$$\text{WORD OF MOUTH} = -19,933 + 19,110 * \text{CUSTOMER SATISFACTION}$$

These results are in accordance to the research of Mayer et. al. (2003) and Walker et. al. (2006), who mentioned that Customer Satisfaction works as an antecedent of Customer Loyalty and Words of Mouth Communication. As a result, Customer Satisfaction works as an important customer driven marketing performance metric that firms should adopt to control their marketing plans.

6. RECOMMENDATIONS

The basic conclusions is that safety of e-banking transactions, user friendly navigation, the format of the reports, as well as timeliness are very significant for the users/customers of these electronic based services when assessing Quality.

As a consequence, the banks' marketing management should adopt more policies and tactics for ensuring the safety of the e-banking transactions. IT technologies should cooperate towards these policies to protect their customers and respectively design a safe portal. Marketing, could propose new processes for reducing customers' perceived risk. For instance, customers should be informed about any log-in activity in their account via sms or email and this process that reduces risk should be well communicated via advertising or other promotional tactic.

With regards to Friendliness of Use, the management of the Bank should aim on conducting more qualitative research (focus groups or in-depth interviews) when designing or improving their portals so that they ensure that every group of customers of every age and gender understands every functionality of these on-line services. In order for every target group to adopt e-banking services quite fast, Banks should develop distance learning portals to educate their customers or even to build promotional kiosks in order for customers to get involved with e-banking services and understand the portal's functionalities. Moreover, marketing management should propose the creation of enough hot-lines. The latter services solve every problem of users and educate customers to increase the effectiveness of the e-banking services.

As far as the Format is concerned, marketing management should be extremely aware that exaggeration of information and graphics included in reports results in undesired results since they reduce speed and bring confusion to users when they try to use services, acquire and understand any information given. Confusion could be easily reduced by providing only the necessary information with the most proper way to get understood using the required graphics only. Thus, market research to have a view on how to design balanced reports is also crucial to build services of high perceived quality. Furthermore, and in combination with the Format determinant, managers should struggle on increasing the speed of transactions along with providing up-to-date information. In order to increase speed and quality of information managers should check the quality of information provided to customers and also they should check on any technological requirement to increase the portal's speed. And as already mentioned above, any exaggerations on graphics hamper speed of navigation.

All the aforementioned tactics are capable of leading to the amelioration of Customer Satisfaction Indexes, which in turn means that users feel they can trust the bank's portal and develop positive attitudes towards the brand or e-banking services. These positive attitudes lead to the formation of enhanced customer value. The latter equity means that company worth more, since customers are Loyal and deny developing brand switching behaviours. Moreover, users of e-banking services function as the banks' best salesperson since they recommend the internet-based services to potential customers bringing more income, stability and profits especially during the hard times of the Greek Financial Crisis.

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8. APPENDICES

8.1 QUESTIONNAIRE'S COVER LETTER

Dear Respondent,

This questionnaire is part of my dissertation which will help me to receive my post-graduate degree in business administration. The questions deal with the satisfaction of your bank's internet banking services. Please fill in the question accordingly.

To fill out the questionnaire of my survey will take only few minutes and the participation is voluntary.

Lastly, I would also like to remind you that this survey is anonymous and any personal information given is strictly confidential.

Sincerely yours,

8.2 RESEARCH TOOL

PART A: PERCEIVED QUALITY OF THE INTERNET BANKING PORTAL

| ① | ② | ③ | ④ | ⑤ |
|-------------------|----------|---------|-------|----------------|
| Strongly disagree | Disagree | Neutral | Agree | Strongly agree |

| | | | | | | |
|----|---|---|---|---|---|---|
| 1 | Services provided on the Bank's Internet banking portal are available. | ① | ② | ③ | ④ | ⑤ |
| 2 | In case a problem occurs, the Internet banking portal guides me to solve it. | ① | ② | ③ | ④ | ⑤ |
| 3 | There is efficient and fast correspondence when I make requests via e-mail or service line. | ① | ② | ③ | ④ | ⑤ |
| 4 | The service is being performed correctly at the first time by the bank's Internet banking portal. | ① | ② | ③ | ④ | ⑤ |
| 5 | My On-line transactions are accurately performed. | ① | ② | ③ | ④ | ⑤ |
| 6 | My internet banking provides me with enough customized services. | ① | ② | ③ | ④ | ⑤ |
| 7 | The site of my internet banking is fast and easy to use it. | ① | ② | ③ | ④ | ⑤ |
| 8 | Both navigation and site map are clear with user-friendly content | ① | ② | ③ | ④ | ⑤ |
| 9 | I have easily found all the available functions in this internet banking portal. | ① | ② | ③ | ④ | ⑤ |
| 10 | Service's information are widely and sufficiently communicated to users | ① | ② | ③ | ④ | ⑤ |
| 11 | The bank has secured all its transactions and sensitive personal data. | ① | ② | ③ | ④ | ⑤ |
| 12 | This internet banking is characterised by good reputation and image. | ① | ② | ③ | ④ | ⑤ |
| 13 | This internet banking portal provides strict privacy policy against fraud and viruses. | ① | ② | ③ | ④ | ⑤ |
| 14 | This internet site protects my transactions and personal data. | ① | ② | ③ | ④ | ⑤ |
| 15 | When transact on this internet banking portal I feel relieved. | ① | ② | ③ | ④ | ⑤ |
| 16 | I am clearly informed about the result of my transactions. | ① | ② | ③ | ④ | ⑤ |
| 17 | It is very easy to log in this portal. | ① | ② | ③ | ④ | ⑤ |
| 18 | It is easy to understand which buttons to click to proceed with my transactions | ① | ② | ③ | ④ | ⑤ |
| 19 | My online transactions are easily completed | ① | ② | ③ | ④ | ⑤ |

| | | | | | | |
|----|---|---|---|---|---|---|
| 20 | Information and certification concerning privacy policy and security mechanism is being widely communicated | ① | ② | ③ | ④ | ⑤ |
| 21 | Consumer rights and interests are conspicuously showed on webpage. | ① | ② | ③ | ④ | ⑤ |
| 22 | The transaction fee for Internet banking is reasonable | ① | ② | ③ | ④ | ⑤ |

PART B: END-USER COMPUTING SATISFACTION

| | | | | |
|-------------------|----------|---------|-------|----------------|
| ① | ② | ③ | ④ | ⑤ |
| Strongly disagree | Disagree | Neutral | Agree | Strongly agree |

| | | | | | | |
|----|--|---|---|---|---|---|
| 23 | The portal provide all the information I need | ① | ② | ③ | ④ | ⑤ |
| 24 | The Information content meet my needs | ① | ② | ③ | ④ | ⑤ |
| 25 | The portal provides all the reports I need | ① | ② | ③ | ④ | ⑤ |
| 26 | The portal provides me with sufficient information | ① | ② | ③ | ④ | ⑤ |
| 27 | The portal is accurate | ① | ② | ③ | ④ | ⑤ |
| 28 | I am satisfied with the accuracy of the portal | ① | ② | ③ | ④ | ⑤ |
| 29 | The format of the portal's outputs is presented in a useful manner | ① | ② | ③ | ④ | ⑤ |
| 30 | The information presented on the portal's outputs is clear | ① | ② | ③ | ④ | ⑤ |
| 31 | The portal is user friendly | ① | ② | ③ | ④ | ⑤ |
| 32 | I get all the information I need from the portal on time | ① | ② | ③ | ④ | ⑤ |
| 33 | The portal provides up-to-date information | ① | ② | ③ | ④ | ⑤ |

PART C: OVERALL CUSTOMER SATISFACTION, LOYALTY AND WORD OF MOUTH COMMUNICATION

(Please encircle the choice that represents you better)

34. As a general impression, how much satisfied are you from the bank's internet banking services?

| | | | | |
|-------------------|--------------|---------|-----------|----------------|
| ① | ② | ③ | ④ | ⑤ |
| Very dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied |

35. How likely is that you continue to use the internet banking website of your bank in the near future?

| | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|-----|
| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| % | % | % | % | % | % | % | % | % | % | % |

36. How likely is that you suggest your bank's internet banking portal to your friends or associates?

| | | | | | | | | | | |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 0% | 10% | 20% | 30% | 40% | 50% | 60% | 70% | 80% | 90% | 100% |
|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|

37. How much satisfied are you from your bank's services?

| | | | | |
|-------------------|--------------|---------|-----------|----------------|
| ① | ② | ③ | ④ | ⑤ |
| Very dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied |

38. How likely is that you continue to be a customer of this bank in the future?

| | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|-----|
| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| % | % | % | % | % | % | % | % | % | % | % |

39. How likely is that you suggest this bank to friends or colleagues?

| | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|-----|
| 0 | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 |
| % | % | % | % | % | % | % | % | % | % | % |

40. How important is the quality of internet banking in your decision to use this Bank instead of a different one?

| | | | | |
|----------------------|-------------|---------|-----------|----------------|
| ① | ② | ③ | ④ | ⑤ |
| Not at all Important | Unimportant | Neutral | Important | Very Important |

41. Please state the level of your agreement/disagreement concerning the overall quality of the online banking services of your bank

| | | | | |
|-------------------|----------|---------|-------|----------------|
| ① | ② | ③ | ④ | ⑤ |
| Strongly disagree | Disagree | Neutral | Agree | Strongly agree |

| | | | | | |
|---|---|---|---|---|---|
| a. The Quality of the on-line banking services of this portal meets my expectations | ① | ② | ③ | ④ | ⑤ |
| b. The total Offering of this bank is very attractive and fulfills my needs | ① | ② | ③ | ④ | ⑤ |

PART D: DEMOGRAPHICS

42. How long you have been using internet for your banking transactions with this bank?

| | | | | |
|---------------|----------------|--------------|---------------|-------------------|
| ① | ② | ③ | ④ | ⑤ |
| Under 1 month | Under 6 months | Under a year | Under 2 years | More than 2 years |

43. Have you been using the internet banking services of another Bank presently or in the past?

Yes
 No

44. Gender Male
 Female

45. Age 18-25
 26-35
 36 – 45
 46 – 55
 55+

46. Monthly personal income (in €) 0-500

- 501-750
- 751 – 1000
- 1001- 1200
- 1201 -1500
- 1501 +

47. Education

- Secondary

- Undergraduate
- Technical (IEK)
- Private College
- Postgraduate