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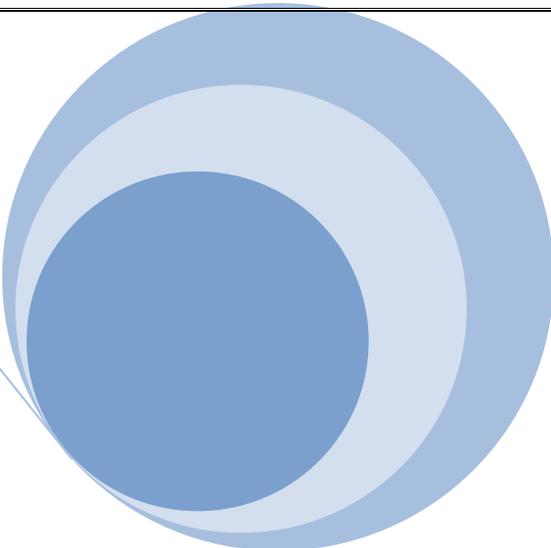
Service quality of Greek cooperative society of Pafos

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***Service quality of GREEK COOPERATIVE
SOCIETY OF PAFOS***

“Gap and possible solutions”

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A thesis

Submitted to the Neapolis University

In Partial Fulfillment of the Requirements

***for the degree of Master in Business
Administration***

Neapolis University

September 2012

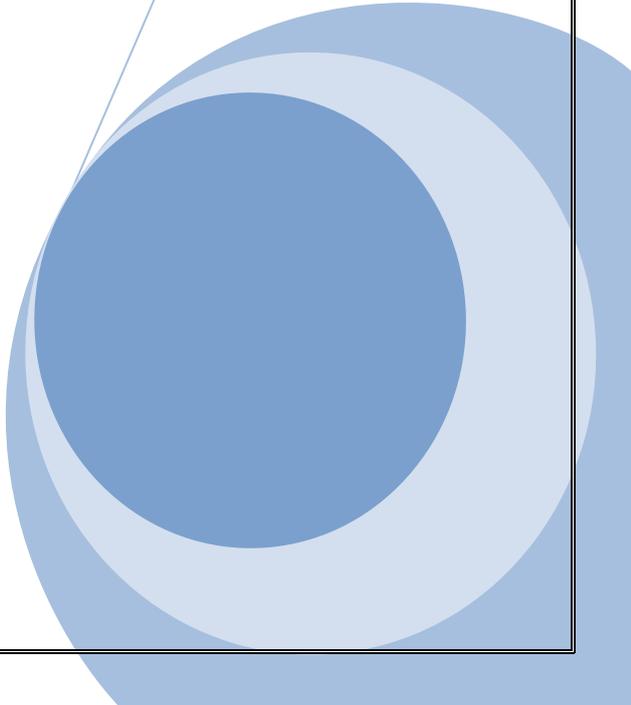


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1. ABSTRACT

The paper aims to find the gap between perceptions and expectations of services quality in Greek Cooperative Society of Pafos (COOP bank). The degree of business success is based on the ability to maintain loyal customers and good relations with customers and employees because as it is known the cost of taking a new customer is five to seven times higher than to retain an existing. Also with an increase in customer retention by 5% you can increase your profit by 25% to 95%. Maintaining no gap between customer expectation and perception is very important because if the customer knows what you offer then he/she is satisfied and doesn't get surprised (Tea and sympathy-short case, William J. Stephenson 2009).

The research used the method of SERVQUAL model. During this study a limitation of this method is deriving, empirically we can say that is not easily understandable. Specifically the scoring of expectation is not given hierarchically, people usually ask for the perfect, the way the questionnaire was build did not help them to avoid this mistake. From the results we can see that all dimensions received high expectation scores from most customers, the mode for three dimensions has average expectation scores of 7, 6.25 and 5.75. This is may be an area for future studies.

The methodology used to analyse the results includes the following:

- Calculation of the unweighted average SERVQUAL scores.
- Calculation of the weighted average SERVQUAL scores.
- Calculation of the gaps and
- Calculation of the Mode
- Importance Performance analysis

For additional information also KANO Model it could be used.

The overall unweighted average SERVQUAL score is 6.233 out of seven or 89% of performance and the weighted average scores is 6.253 out of seven, or 89.33%. Both seem to be satisfactory scores. However, all five dimensions have a negative gap. The average gap is 0.827; this shows that the quality of service that is given to customers is 11.08% lower than their expectations. Based on the average gap scores of each dimension and on the results of Importance Performance Analysis, "Assurance" and "Tangibles" seem to need the most attention by management, while the least attention should be given to "Responsiveness" which has the lower gap, (17%).

Management must train the employees to inspire assurance to customers. Employees must be able to answer all customers' questions and make them feel confidence during their transactions. Also guidelines must be given to improve the use of equipment and the aesthetic of the branches.

2. INTRODUCTION

Especially in these days, the best profit strategy is having an excellent service, because it results in gaining more new customers, expands business with existing customers, and reduces customers who leave the company, protects the company from price competition and reduces mistakes. All those will reduce cost of complains and cost of repeating works that was not offered correct from the first time and also increase profitability of the business. TQM is a good method to improve quality of services and avoid mistakes.

The research concentrates during the summer of 2012 and aims to measure the gap between Perceived Service Quality and Expected Service Quality; this combination shows the degree of customers' satisfaction. The study is specifically for COOP bank services' that is based in Pafos Cyprus with eight branches and five thousand customers. COOP Bank, in the last two years, bought a new building for their Head Office and employed new staff, for those reasons this study is giving useful information regarding those changes as customers, through the questionnaires, have the ability to give their subjections and comments. Management can also compare the results of this research with the results of a similar research done 10 years ago.

The process of SERVQUAL is used and is focused on measuring reliability, tangibles, responsiveness, empathy and assurance which are the five dimensions regarding SERVQUAL. A random sample of customer was selected. The degree of satisfaction of the customers' was measured by asking them about their perception and expectation of the service offered regarding those five dimensions. Customers were asked to make suggestions to improve service quality and we tried to identify if gender and age affected their way of scoring.

In 1985 A. Parasuraman, VA Zeitham and LL Berry introduces the gap theory - SERVQUAL. Several studies were done in the past years focusing on what is service quality, how it can be measured, the nature of customer's expectations and the sources of these expectations and what can organizations do to improve service quality and the regarding the variability of SERVQUAL model. According to Carman 1990 there is little theoretical or empirical evidence supporting the relevance of the expectations-performance gap as the basis for measuring service quality.

Studies gave many different opinions. A recent study which reviews the 20 years (1988-2008) of research on the suitability of SERVQUAL scale for measuring service quality (Ladhari, 2009a), identified and examined numerous selected theoretical and empirical criticisms of the SERVQUAL scale and concluded that SERVQUAL remains a useful instrument for service quality research.

The main limitations of this process appear to be the objectivity of the weights and the small sample size. Also the fact that the research took place in the branches and sometimes in the offices of branch managers affects the customers' scoring.

It has to be mentioned that employees did not give their opinion in this research although their perception is important in delivering quality services and find the areas in which training is needed.

3. LITERATURE REVIEW

It is important for professionals to understand how quality helps to provide superior value to customers. Quality is one of the three elements of superior quality. Especially, in these days, the competition is very high and quality is an important aspect for the future of the business. It is a way to gain a competitive advantage. Global economy is under recession and this affect customer's willingness to buy and increase their requirements, quality is a driving factor for their decision. That's why each organization must try to offer high quality to their customer. Service quality is more difficult to be define, it is intangible (Kano, 1996; Ladhar, 2009), and so is also more difficult to be measure.

Each company can have its own definitions for quality:

- Smith – *“Performance to the standards expected by customers”*
- Boeing – *“Providing our customers with products and services that consistency meet their needs and expectations”*
- General Service Admission – *“Meeting the customer needs the first time and every time”*
- U.S. Department of Defense – *“Doing the right thing right the first time, always trying for improvement and always satisfying the customer”*

According to literature, quality is a dynamic state associated with products, services, people, process and environment, that meet or exceed expectations and help produce superior value.

The academics have their own opinion about quality:

- Juran states that the word quality has two different meanings that are spelled the same way.
 1. "Quality" means those features of products which meet customer needs and thereby provide customer satisfaction. In this sense, the quality increases the income because it increases sales. However, providing more or better quality features usually requires an extra investment and so may also result in increases in costs. Higher quality in this sense usually "costs more".
 2. "Quality" means freedom from deficiencies-freedom from errors that require doing work over again (rework) or that results in field failures, customer dissatisfaction, customer claims and so on. In this sense, the meaning of quality is oriented to costs, and higher quality usually "costs less".

The second definition is also supported by Total Quality Management technique.

These two different meanings of quality have caused confusion since some people assume you are using one definition of quality rather than the other. This is an example of the confusion of the word quality that was taken from Juran's Quality Control Handbook. *"At one bank the upper managers would not support a proposal to reduce waste because it had the name "quality improvement." In their view, higher quality also meant higher cost. The subordinates were forced to revise the proposal "productivity improvement" in order to secure approval."*

- William Edwards Deming, states that the customer's definition of quality is the only one that matters. So, who is the customer and what is important for him/her?

3.1. Aims and objectives of the study

This study will be an empirical study in a service industry, specifically, in the Greek Coop Society of Pafos (Coop Bank). The main objective of the study is to identify any possible gaps between perceived quality and expected quality of services in COOP Bank regarding 5 variables (tangibles, reliability, assurance, empathy and responsiveness) and their importance from the customers' point of view. Specifically, the aims are to find answers on the following questions:

- Are there any gaps between perceived quality and expected quality of services?
- If yes, where is the most important gap?
- Which variable is the most important from the customers' point of view?
- Do the age and gender affect customers' preferences?

For this purpose the SERQUAL model and gap theory developed by Parasuraman, Zeithaml, and Berry (1985).

Also, through this study, the aim is to prove to the management of COOP Bank that quality is a driving factor for the success of the Bank and introduce to them the concept of Total Quality Management for total improvement in the bank overall activities/areas/departments, to improve people, process and product/Service.

3.2. The Total Quality (TQ) and Total Quality Management (TQM)

Total quality is a customer focus technique. According to David L. Goetsch & Stanley B. Davis (Book), *"Total Quality is an approach to doing business that attempts to maximize the competitiveness of an organization through the continual improvement of quality of its products, services, people, processes and environments."*

The key elements of total quality are the following:

- Strategically based
- Customer focus (internal and External)
- Obsession with quality
- Scientific approach to decision making and problem solving
- Long-term commitment
- Team work
- Continual process improvement
- Education and Training
- Freedom through control
- Unity of purpose
- Employee involvement and empowerment

The total quality is a totally different approach from the traditional way of understanding the word “quality”. It is important to have appropriate management when applying the total quality approach.

A definition about TQM given by Dale H. Besterfield, Carol Besterfield-Michna, Glen H. Besterfield and Mary Besterfield-Sacre is as follows: “TQM is the art of managing the whole to achieve excellence”.

Because of the importance of quality, lots of studies have taken place concerning total quality management (TQM). From the studies many different opinions about this technique were derived, some people believe that TQM is very important in achieving competitiveness and related with company’s success (US GAO, 1991; Becker,1993; Ghobadian and Galleary,1996), on the other hand some believe that TQM doesn’t exist and that many companies have failed to implement it. Ulrika Hellsten and Bengt Klefsjo (2000) stated that there are a few reasons that lead to this fact. Specifically, *“One is that the gurus, who often are seen as fathers of TQM, do not like the concept. Another one is that there are several similar names for roughly the same idea. A third one, which, maybe, is the most severe, is that there are many vague descriptions and few definitions of what TQM really is”*. Because management system consisting of those three components: values, techniques and tools, believe that this definition will help managers to understand and implement TQM.

3.3. The relationship between service quality -customer satisfaction, loyalty and profitability

It is no more questionable that customer satisfaction affected by quality. A company's success is driven by service quality which helps maximize benefits and reduce non-price burdens such as inconvenient location, unfriendly employees or an unattractive service facility. High quality generates satisfied and loyal customers, so it increases customer retention, profitability and improves business image. Both are key drivers of financial performance (Buttle, 1996; Jiang et al., 2003). Also quality of services and especially cumulative satisfaction, affect the customers' willingness to pay. Christian Homburg, Nicole Koschate and Wayne D. Hoyer (Apr., 2005), provide evidence for the stronger impact of cumulative satisfaction rather than on transaction- satisfaction on willingness to pay.

Quality services are those that exceed customer expectations Bloom et al. (2002). Also numerous empirical studies show a positive relationship between customers satisfaction (affected from quality) and profitability (e.g Anderson, Fornell, & Lehman, 1994; Eklof, Hackl, & Westlund, 1999; Ittner & Larcker, 1998). An empirical study of Lars Gronholdt, Anne Martensen & Kai Kristense (2000) shows the relationship between customer satisfaction and loyalty and what is the different according to the industry in which the company operates. G.S. Sureshchandar, Chandrasekharan Rajendran, R.N. Anantharaman, (2002) investigate the nature of the exact relationship between service quality and customer satisfaction, a part of the study states: *"The present study adopts a different approach and views customer satisfaction as a multi dimensional construct just as service quality, but argues that customer satisfaction should be operationalized along the same factors (and the corresponding items) on which service quality is operationalized. Based on this approach, the link between service quality and customer satisfaction has been investigated. The results have indicated that the two constructs are indeed independent but are closely related, implying that an increase in one is likely to lead to an increase in another"*.

3.4 Perceive and expected service quality measurement

During the last decade lots of studies have taken place in America focusing on what is service quality, how it can be measured, the nature of customer's expectations and the sources of these expectations and what can organizations do to improve service quality (Leonard L. Berry A. Parasuraman and Valarie A. Zeithaml, 1994).

In 1985 A. Parasuraman, VA Zeitham and LL Berry introduces the gap theory. They identify five major gaps that face organizations seeking to meet customer's expectations of the customer's experience. See fig. 1 bellow.

ServQual

Source: Zeithaml, Parasuraman & Berry. Delivering Quality Service

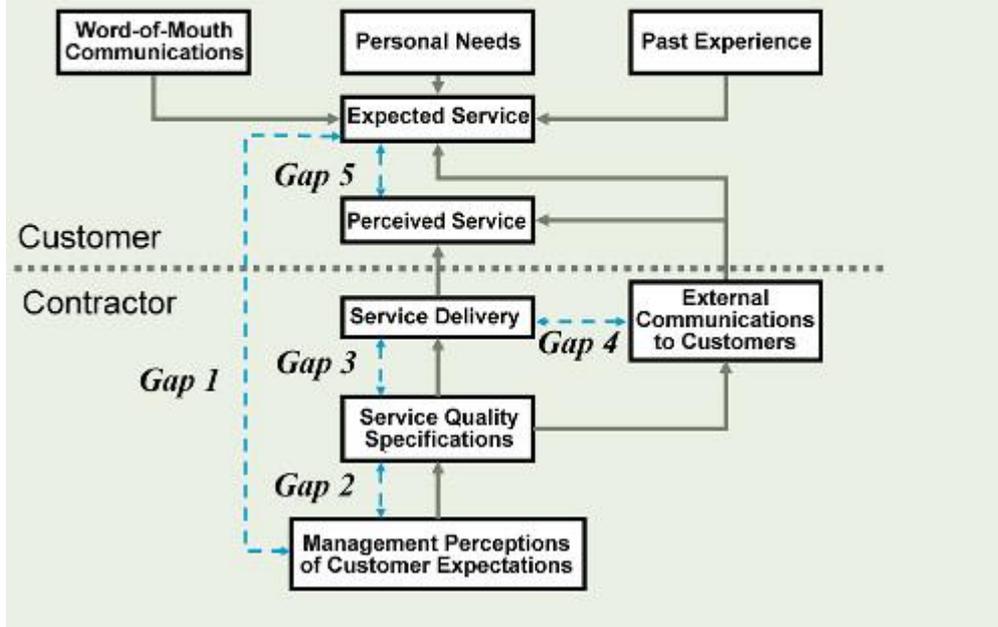


Fig. 1 SERVQUAL

SERVQUAL scale was developed based on those five gaps. In this study concentrates on GAP 5 which compares Expected Service with Perceived Service. Expected service quality is what customer believes that service's provider should offer and Perceive service quality is the customer's judgment about service provider overall excellence (Parasuraman *et al.*, 1988). This theory suggests that consumer's expectations drive the perception of service quality and affected from the following three factors:

1. Word of mouth
2. Personal needs
3. Past experience.

Through this research (A. Parasuraman, VA Zeitham and LL Berry,1985) three main aspects are investigated:

1. the way service quality be conceptualized and measured,
2. the casual order of the relationship between service quality and consumer satisfaction,
3. the impact of service quality and consumer satisfaction on purchase intentions.

The research and literature revealed that service quality should conceptualize as an attitude and SERVPERF approach is supported instead of SERVQUAL. Also the relationship between service quality and consumer satisfaction remains questionable, and finally satisfaction seems to have stronger relationship with purchase intentions than service quality.

Because, according to Carman 1990 there is little theoretical or empirical evidence supporting the relevance of the expectations-performance gap as the basis for measuring service quality, J. Joseph Cronin Jr. and Steven A. Taylor (1992), did a research on two issues:

- Suggest that current conceptualization and operationalization of service quality (SERVQUAL) is inadequate.
- Examine the relationship between service quality consumer satisfaction and purchase intentions.

Service quality is difficult to measure objectively, since services have been described as intangible, heterogeneous and inseparable (Zhao et al., 2002). Service quality can be measured using a number of different scales Zhao et al., (2002). In many studies on different issues concerning service quality, in a variety of different industries and cultural settings, SERVQUAL scale has been used. It also has been widely tested for its validity and reliability (Babakus and Boller, 1992; Bolton and Drew, 1991; Brown and Swartz, 1989; Carman, 1990; Cronin and Taylor, 1992, 1994). Although, some of these studies failed to support the five dimensional factor structure, Parasuraman et al. (1994) defended the framework on conceptual and practical grounds.

An empirical study done in India's banking industry, by Madhukar G. Angur, Rajan Natarajan, John S. Jahera Jr, (1999), Examines if alternative measures of service quality is applicable in the developing economy and also assesses other related issues, conclude the following: "*Based on data gathered from customers of two major banks, overall results support a multidimensional construct of service quality and suggest that the SERVQUAL scale provides greater diagnostic information than the SERVPERF scale. However, the five-factor conceptualization of SERVQUAL does not seem to be totally applicable, and no significant difference was found in the predictive ability of the two measures. Further, although SERVQUAL and SERVPERF have identical convergent validity, SERVPERF appears to have higher discriminant validity than SERVQUAL. Based on data gathered from customers of two major banks, overall results support a multidimensional construct of service quality and suggest that the SERVQUAL scale provides greater diagnostic information than the SERVPERF scale. However, the five-factor conceptualization of SERVQUAL does not seem to be totally applicable, and no significant difference was found in the predictive ability of the two measures. Further, although SERVQUAL and SERVPERF have identical convergent validity, SERVPERF appears to have higher discriminant validity than SERVQUAL.*"

A latest study which reviews the 20 years (1988-2008) of research on the suitability of SERVQUAL scale for measuring service quality (Ladhari, 2009a), identified and examined numerous selected theoretical and empirical criticisms of the SERVQUAL scale and concluded that SERVQUAL remains a useful instrument for service quality research.

3.5 Summary of selected studies on bank service quality

Similar studies were also done in Greek Cypriot banking industry in the past but not specifically for Cooperative bank. One of this done by Huseyin Arasli, Salime Mehtap-Smadi, Salih Turan Katircioglu, (2005) with similar purpose as the current study with sample of 260 customers. The findings of this study stated as follows: *“The SERVQUAL scale proved to be of a three-dimensional structure in this study. Results revealed that the expectations of bank customers were not met where the largest gap was obtained in the responsiveness-empathy dimension. Reliability items had the highest effect on customer satisfaction, which in turn had a statistically significant impact on the positive word of mouth.”*

Other studies done in the past recording services quality in the banking industry is shown below:

Study	Country	Sample Size	Scale and Dimensions	Reliability Range
Huseyin Arasli <i>et.al.</i> 2005	Cyprus (North & South)	268	Scale 1-7, all 5 dimensions	Above 0.70
Karatepe <i>et al.</i> 2005	Cyprus	1220	20 items. Perception only. Scale 5. 4 dimensions (service environment, interaction quality, empathy and reliability)	0.81-0.92
Aldlaigan Buttle 2002	UK	975	Scale 1-7, all 4 dimensions (behavioural service quality, machine service quality, service system quality and service transactional accuracy)	0.80-0.93 (total sample)
Jabnoun & Al-Tamini 2003	United Arab Emirates	462	Scale 1-7, Perception-score only, 3 dimensions (human skills, tangibles and empathy)	0.77-0.93
Mukesh Kumar <i>et.al</i> (2010)	Malaysia	308	Scale 1-7, 4 dimensions (tangible, reliability, competence and convenience)	-

4. METHODOLOGY

This is an empirical study. Original data was collected through questionnaires surveys (SERVQUAL questioner) and the population was the customers of COOP Bank. The purpose was to find the answers on the questions analyzed above regarding quality of services in COOP Bank.

4.1 Sample and Data collection.

The first thought was to randomly select 500 customers aged 20 to 60 years old, using the audit program IDEA. The questionnaire would be send to customers by post with a letter explaining how the research works. After investigation, this idea was abandoned because there was a risk on the number of responses that would be received.

It was decided that data will be collected directly from bank customers in all branches. Questionnaires were available in all branches of Coop Bank. Branch managers were responsible to encourage people to participate in the research. Customer filled the questionnaire in their own time and dropped it in locked boxes available at each branch for this purpose. In this way, people felt more comfortable to say their opinion unbiased and to be sure that the research is anonymous. The research was running for 14 day (the last two weeks of July 2012).

The target sample size is 230 ($n=230$). This was decided based on general guidelines regarding the number of variables involve in the study. According to Nunnally,1978, sample size should be approximately ten times the variable, so for 22 variables minimum sample size is 220. The target was to gather 25-35 questionnaires from each of the 8 branches.

A research was contacted using the SERVQUEL questionnaire (see Appendix A). The questionnaire was also translated, by professors, in Greek so as to be sure that everybody understands the questions. Additionally, customers were also asked to hierarchy each variable according to how important it is for them. Furthermore they were asked for their gender and age range (20-30, 31-40, 41-50, 51-60 and above sixty). It is expected that the respondents are customers from different demographic profile. Respondents also had the option to give their subjections.

The questionnaire has three sections, one for the customers' experience from usage of bank services, the second related with customer expectations regarding service quality and the last one is for customer profile (age and gender) and subjections.

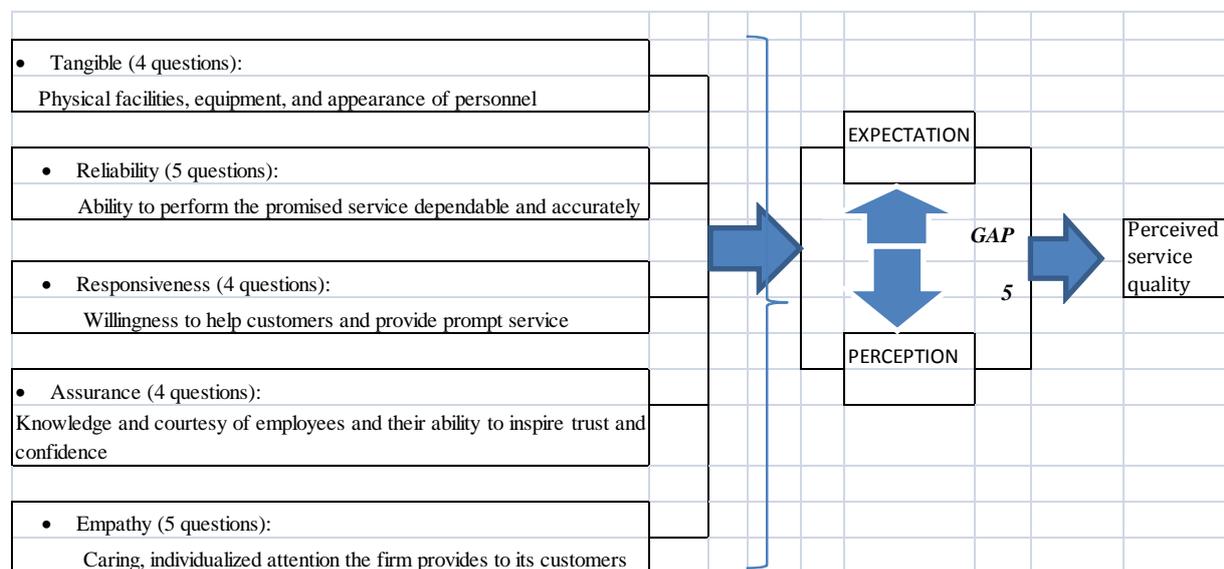
4.2 Measures

Service quality is an elusive construct that may be difficult to measure, unlike goods quality which can be measured objectively by such indicators as durability and number of defects.

The SERVQUAL questionnaire was selected for this purpose because is the most widely used measurement instrument in the service quality-literature and the gap scales was recognized as more useful than other scales.

In the current study used the SERVQUAL model and gap theory developed by Parasuraman, Zeithaml, and Berry (1985). The purpose was to measure the gap between expected service quality (ESQ) and perceived service quality (PSQ), “GAP5”. According to Parasuraman et al. (1988), expected service quality (ESQ) is client wishes or needs, or what service supplier should provide. Perceived service quality (PSQ) refers to services executed (Berry et al., 1990) at the very moment the consumer interacts directly with them (Bitner et al., 2000). So, the PSQ is a result of evaluation of the customer when interacting with the service at a specific moment in time (Cronin and Taylor, 1994).

The measurement of ESQ and PSQ done through SERVQUAL questionnaire which measure five dimensions, as follows:



These dimensions are described by twenty two questions as developed by Parasuraman et al. (1988) that are scaled from one to seven, 1= “strongly disagree” and 7= “strongly agree”. The respondents are asked to rate all 22 questions each on ESQ and as well on PSQ.

The PSQ rating are asked to be in a hieratical order so as to avoid similar rating for all dimensions (people usually want everything to be perfect, the possibility to rate all questions with 6 and 7 was highly expected) in this way it is also easier to see which dimension is more important from the customer’s point of view.

The demographical information would give a picture of how age and gender may affect customer's preferences.

4.3 Analysis

The descriptive statistics have been used to find the mean, mode and standard deviations of each SERVQUAL dimensions on both ESQ and PSQ.

The gap is calculated by comparing the ESQ average scores with the PSQ average scores (Gap score= Perception – Expectations). If the result is positive, it means the quality of services is above customer expectations; if the result is negative the quality of services is under customer expectations (see table 1, below, this table shows the “Unweighted Average Score”).

Then we proceed with the importance weighted method. Each of the five dimensions are weighted according to customer importance (Table 2 –below), and the score for each dimension multiplied by the weight to find the “Average Weighted Score” (Table 3 –below).

In order to help management to set the right priorities in customer satisfaction, result were analyzed further using Importance-performance analysis and KANO mode.

The importance-performance analysis (IPA)

An importance-performance analysis (IPA) was introduced by Martilla and James (1977) – see Fig. 2 below. The IPA model was applied to measure service quality. Based on their score, each dimension will be distributed in the appropriate point. This will show to management in which of the four Quadrants each dimension falls and as a result what action has to be take. The meaning (action) of these four quadrants in IPA are as follows: ([Daniels and Marion, 2006] and [Shieh and Wu, 2007]).

- Quadrant I- High important, High performance – Appropriate Service
- Quadrant II – Low importance, High performance – Excess service
- Quadrant III - Low importance, Low performance – Need improvement
- Quadrant IV - High importance, Low performance – Need argent action

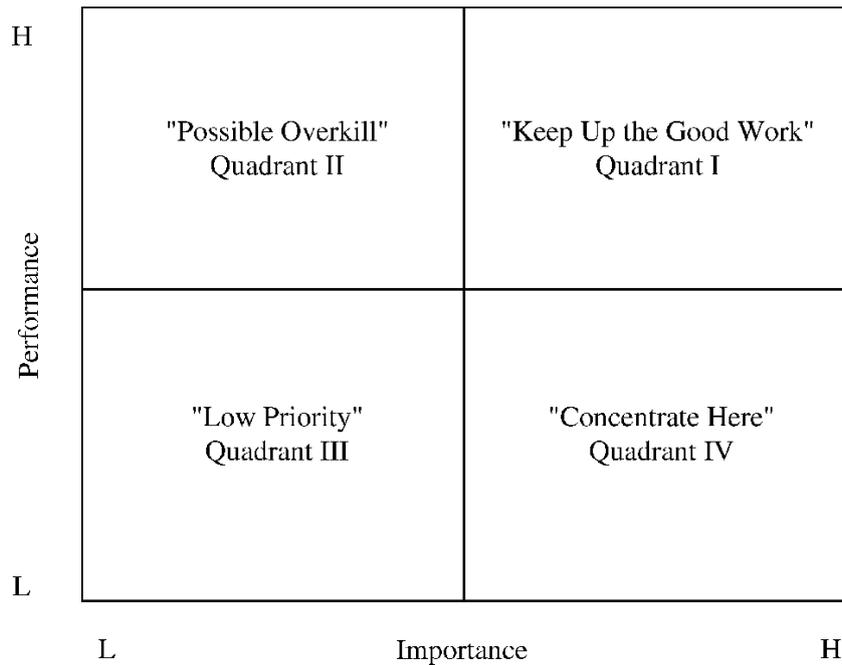
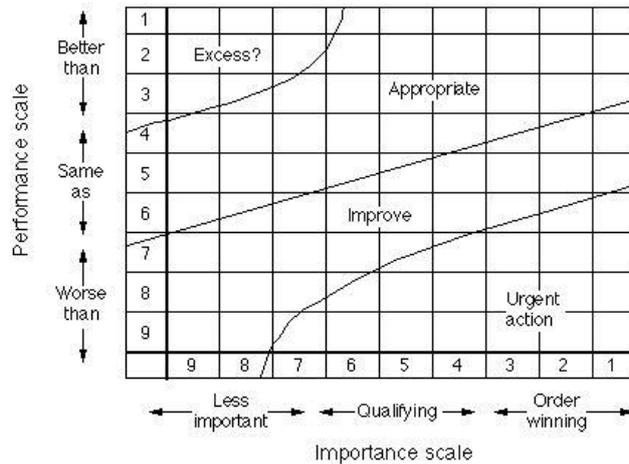


Fig. 2. Importance- Performance analysis (IPA)

IPA is similar to "Importance/Performance matrix" (see Fig.3) which has 9 scales.



Source: Institute for Manufacturing, University of Cambridge: <http://www.ifm.eng.cam.ac.uk/dstools/choosing/import.htm>

Fig. 3. Importance//Performance Matrix

The three-factor theory of Kano model.

Another commonly used theory is the Kano model that was proposed by Noriaki Kano and his colleagues (Kano *et al.*, 1984). It is the three-factor theory that provides a basic explanation for the structure of customer satisfaction. This theory claims that three independent satisfaction factors influence customer satisfaction in different ways ([Kano, 1984] and [Matzler and Sauerwein, 2002]).

Also, Matzler et al. (2004) analyses the relationship between Kano model and importance-performance analysis (IPA). The study confirmed empirically the nonlinear relationships between attribute-level performance and customer satisfaction.

The model shows that the customer's responses can be classified into three types as shown in Figure 3, 4 & 5 below, analytically:

- Basic factors – MUST BE (dissatisfiers) are minimum requirements for satisfaction, is the typical expected by the customer. Failure to achieve the minimum requirements causes high dissatisfaction, if achieved or exceed is has a limited effect – it does not necessarily lead to satisfaction. It is the prerequisite for satisfaction.
- Excitement factors- DELIGHT (satisfiers) increase customer satisfaction if delivered but do not cause dissatisfaction if not delivered. It is something unexpected by customers, so they can be a “surprise gift” that generates extra delight (Fuller and Matzler, 2008).
- Performance factors- LINEAR (hybrids) lead to satisfaction if performance is high and to dissatisfaction if performance is low (Fuller and Matzler, 2008). It is a critical competitive area and it is directly related with customer needs.

The horizontal axis indicates how the service quality is, good or poor. The vertical axis indicates how satisfied the customer is. The line going through the origin at 45 degrees represents the situation in which customer satisfaction is directly proportional to service quality. In other words, it represents the situation in which the customer is more satisfied with a higher service performance and less satisfied with a poorer services performance. (See fig. 4 below).

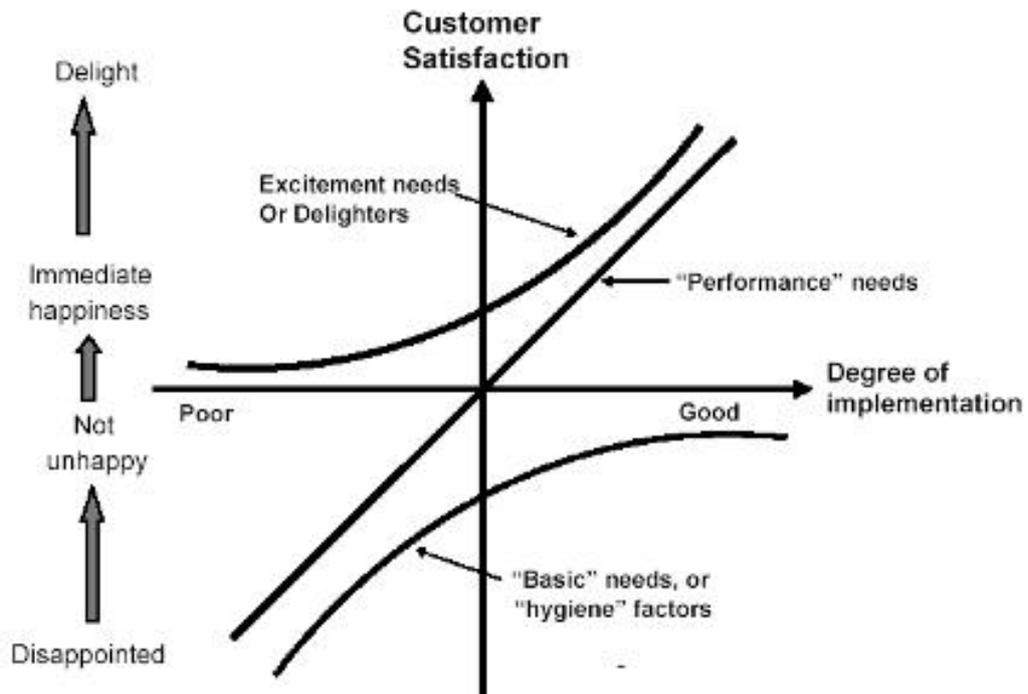


Fig. 3 The KANO MODEL

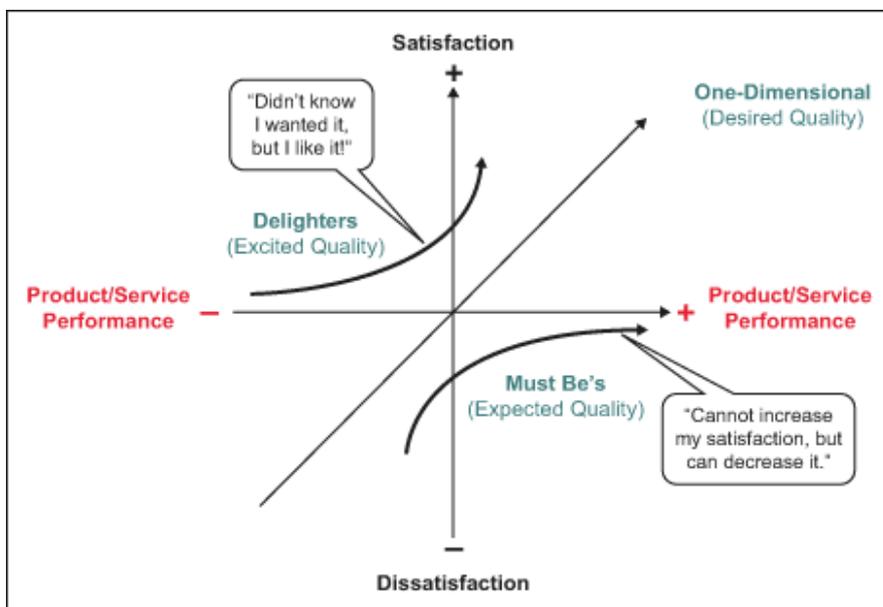


Fig. 4 The KANO MODEL

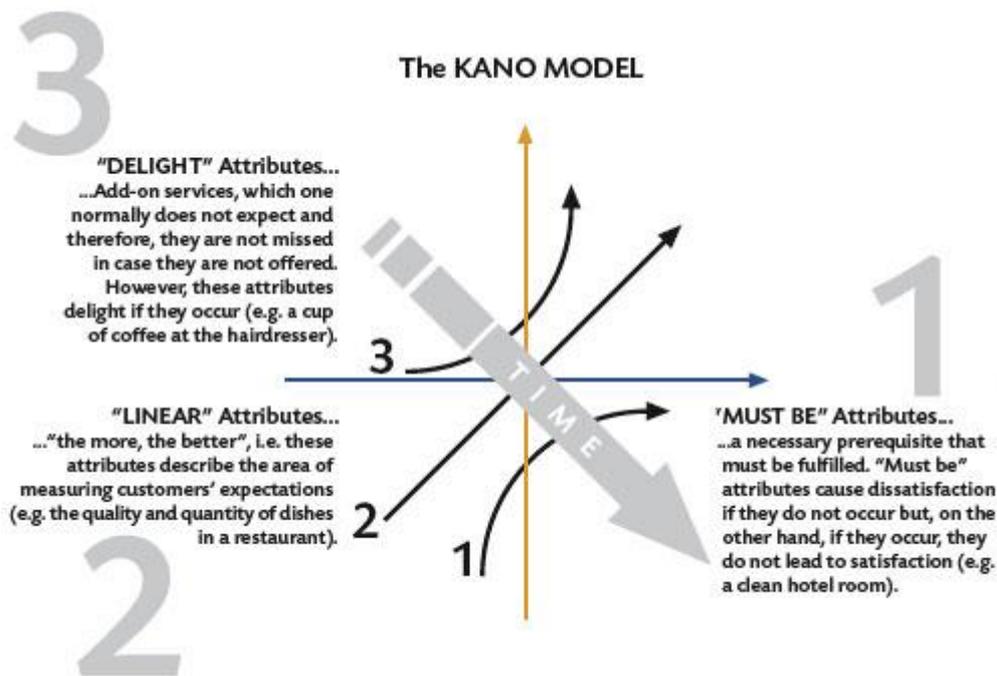


Fig. 5 THE KANO MODEL

Can help management to concentrate in o correct dimension because:

- Satisfying basic needs: Allows a company to get into the market.
- Satisfying performance needs: Allows a company to remain in the market.
- Satisfying excitement needs: Allows a company to excel, to be world class.

4.3 Restrictions/ Limitations

The limitation of this study is the sensitivity of the particular period. People psychologies are very sensitive because of the financial crisis and the banks' relation with that. The financial crisis make people negative regarding bank industry especially now that banks need government support and affect negatively the whole economy of Cyprus. Furthermore in the days in which the research was running, in Cyprus existed a great problem regarding securities issues by the two biggest banks of the island which now have expired and are not secured. People could not require any interest and the capital is under risk as TROIKA may ask up to 100% cut off of the value, something that happened in Spain also. This situation may affect the results in both ways, those who are generally negative about banking industry and cannot distinguish Commercial Banks from Cooperative and those that are much happier than in normal situations because they are very negative about Commercial Banks and feel more secured with Cooperative Banks.

The other problem is that the result may be affected because the manager of the branch will be involved in the survey and may people do not feel comfortable to give low valuation.

Another limitation is the event that the majority of the customers take part in the research is those that have a strong relationship with the bank because have transactions every day, those customers are usually more positive and give higher valuation as their psychological relationship with the bank and the staff is strong.

All above, affect the findings, conclusions and reliability of this research.

5. FINDINGS

Finally, the sample size is 96 customers, the target was 230 customers but this was very difficult as customer weren't willing to spend time to fill the questioner, they said that is too long and their time was limited. Some questionnaires given to customer to take with then so as to fill them at their own time but none of those were returned. So the results are based on a small sample and this is a limitation for the study as the possibility to be this sample representative for the whole population is limited.

- Demographical analysis of the sample

The responders are from both genders, 40 female (42%) and 56 male (58%) (see fig. 6 bellow). The age of the responders are from 20-60, specifically: from 20-30, 20 or 21% / from 31-40, 25 or 26% / from 41-50, 18 or 19% / from 51-60 24 or 25% / above 60, 8 or 8% and one responder doesn't indicate their age (see fig. 7 bellow).

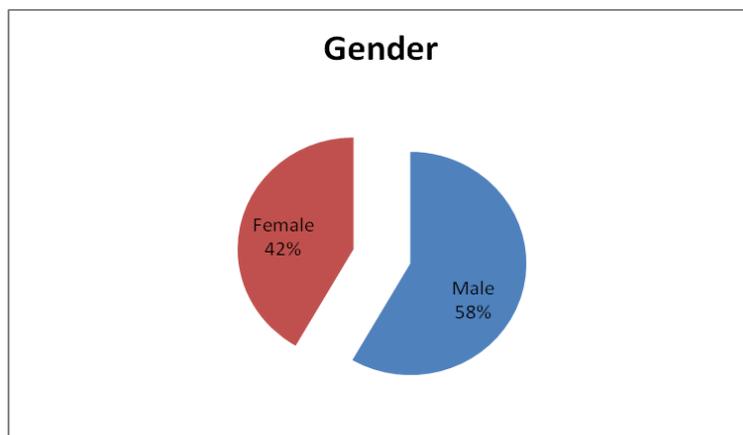


Fig. 6: Gender analysis

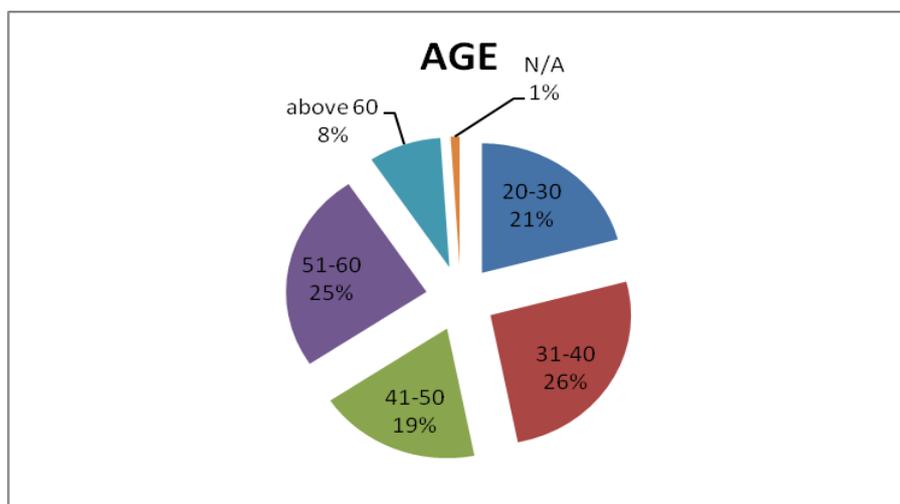


Fig. 7: Age analysis

As clearly indicated by the following chart (fig. 8) the average perceptions score of female responders is slightly higher than the score given by male responders. As it is reasonable to think that both genders got the same quality of services, this indicate that female are satisfied with less or are more elastic in their scoring. Males are more demanding and are more difficult to satisfy so as to give higher score regarding the services perception.

But on the other hand we can see (fig. 9) that females have also higher expectations than males. Females are more demanding about the standards of quality they expect from the organization. Finally, we can conclude that there are no important difference in the gap between of PQS and EQC.

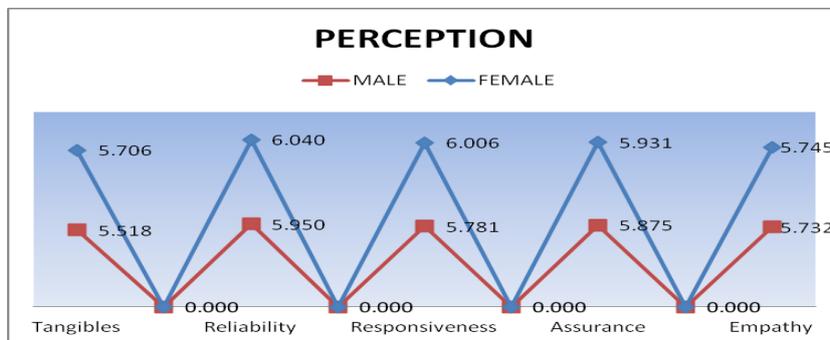


Fig. 8: Analyse of peception average score by gender

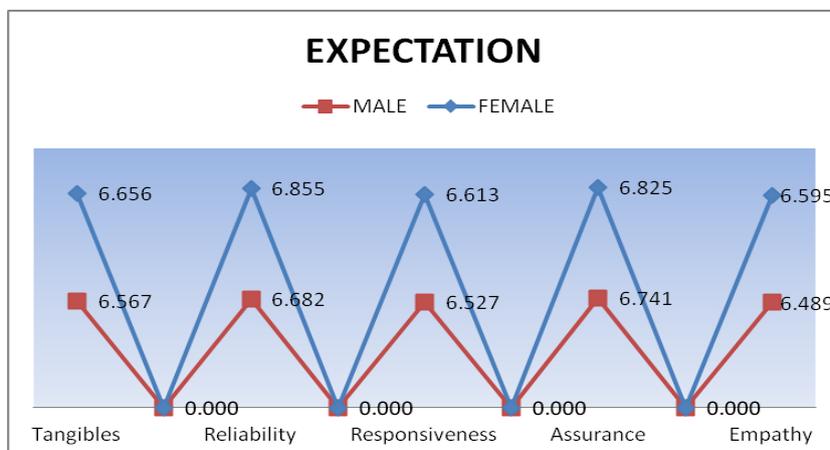


Fig. 9: Analyse of expectation average score by gender

We didn't find any other studies regarding this, so I cannot have an overall opinion if this result is generally applicable.

- Unweighted analysis

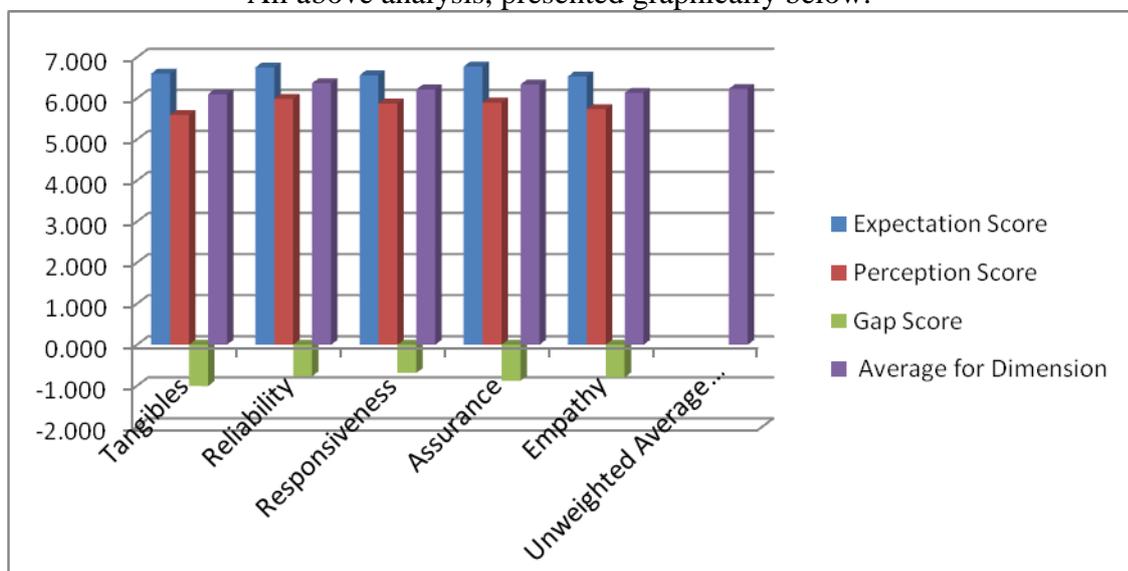
The overall unweighted average SERVQUAL score is 6.233 (see table 1 below) which seems to be a good score as the maximum is 7. Even though the services can be improved further. From the results below (table 1) we can see that all dimensions are important for customers as they all have an average expectation score above 6,5 with the higher score being 7. This also shows that customers do not find any dimension that is not important to them, they do not hierarchy them so as to give us a clear

indicator which dimension is more important to them and which is less important (i.e to have dimension with average score less than 2), with so high scores all dimensions are very important for the customers and it is difficult for the management to find where to concentrate to improve the service quality.

Table 1 - Unweighted SERVQUAL Scores

Dimension	Expectation Score	Perception Score	Gap Score	Average for Dimension
Tangibles	6.604	5.596	-1.008	6.100
Reliability	6.754	5.988	-0.767	6.371
Responsiveness	6.563	5.875	-0.688	6.219
Assurance	6.776	5.898	-0.878	6.337
Empathy	6.533	5.738	-0.796	6.135
Unweighted Average SERVQUAL score:				6.233

All above analysis, presented graphically below.



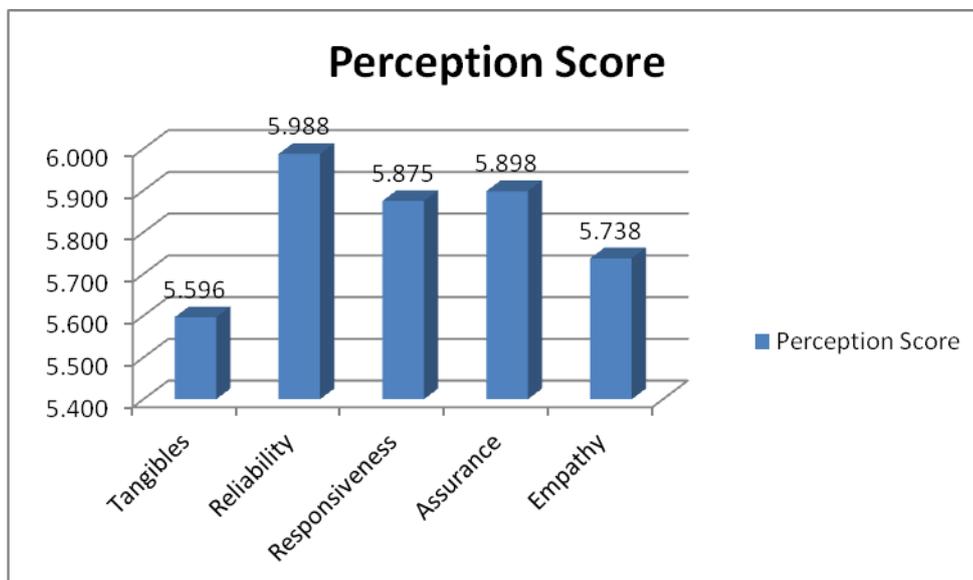
From the results we can see more analytical that the most important dimension is the dimension that has the higher expectation score, this is “Assurance” with an expectation score of 6.776, the second

one is “Reliability” with an expectation score of 6.754 and the least important is the “Empathy” with score 6.533 (see graph 1 below). COOP Bank must concentrate on those two dimensions first, to improve them if needed and then the other three.



Graph 1: Average Expectation score

The perception score is for all dimensions above 5.5 with the most of them having a score of almost 6. The lower perception score is the score of “Tangible” (5.596) this dimension also has the higher gap (1.008). “Reliability” has the higher perception score (5.988) and this shows that COOP Bank has the higher performance in this dimension and follow, Assurance then Responsiveness, then empathy and last Tangible (see graph 2 below).



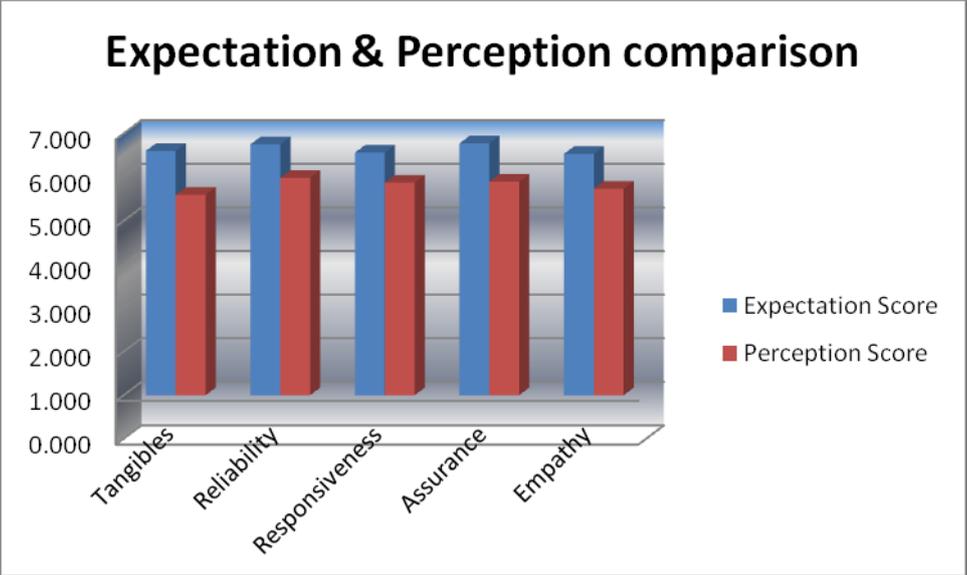
Graph 2: Average Perception score

All dimensions have a negative gap between what are the customer's expectations and what is the perceived quality of service (see graph 3, below). The average gap is 0,827, is below 1 and it seems to be a good score as this indicates that COOP Bank is not very far from the perfect. Gap range is between 1.008 (tangible) and 0,767 (reliability) (see graph 3, below). The event that "Reliability", which is the second most important dimension has the lower gap is a very good sign as COOP Bank will need little work to achieve the perfect or can decide to live it as it is as the perfect is not always beneficial for the business, since the cost to achieve the perfect may eliminate the benefit or even create a financial loss. "Assurance", which is the most important dimension, has the second higher gap, 0.878. The lower gap is on "Responsiveness", 0.688 which is the second less important, after "Empathy" according to customers' expectation score. All scores are shown clearly on the graph 4: Gap score.

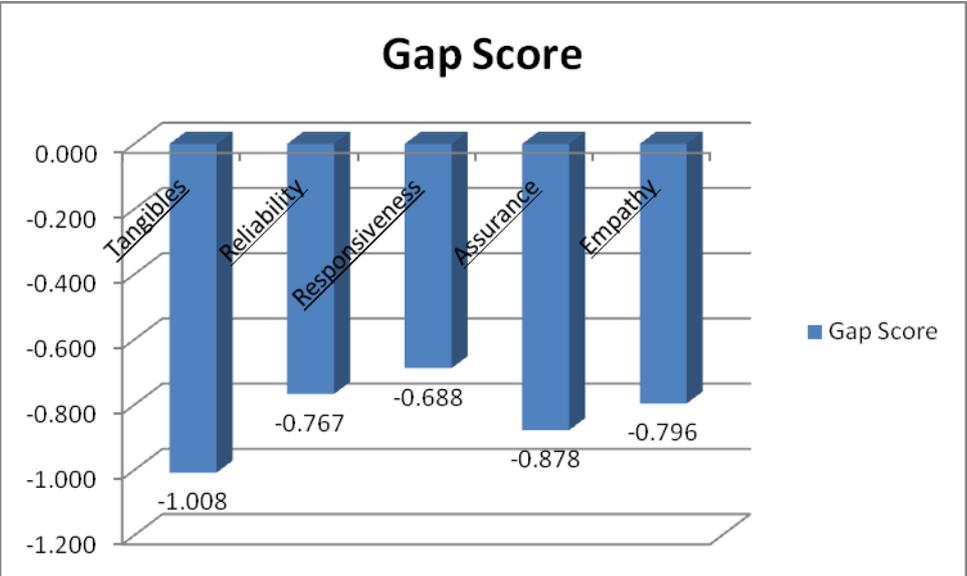
This shows that, COOP Bank may not need to invest in most of those areas (Reliability, "Responsiveness and empathy) in the near future. "Assurance" seems to be the first dimension that will need to be improved as it is important for customers and has the second higher gap. "Assurance" is an area that can be improved with relatively low investment.

Tangible which is the dimension with the higher budget from all 5 dimensions examined in this study is also the dimension with the higher gap (1,008) but this seems to need attention and further investigation from the management in order to decide if they must invest on this area or not. This is because of several reasons:

1. The score given in this area is very subjective, the aesthetic is something different from person to person, the valuation of equipment is also subjective (i.e. machineries – for example cannot be based on the speed of the computer because the speed can be affected from the operation program and from the speed of the user),
2. The COOP Bank has 8 branches; most of them are renovated and have a modern look, some need to be improved. The question is: Is the problem derived from those branches that actually need improvement or the new modern look given to the Bank's branches does not satisfy the customers' expectations?
3. A high investment is needed to improve this area and cost benefit analysis is needed before the final decision is taken.

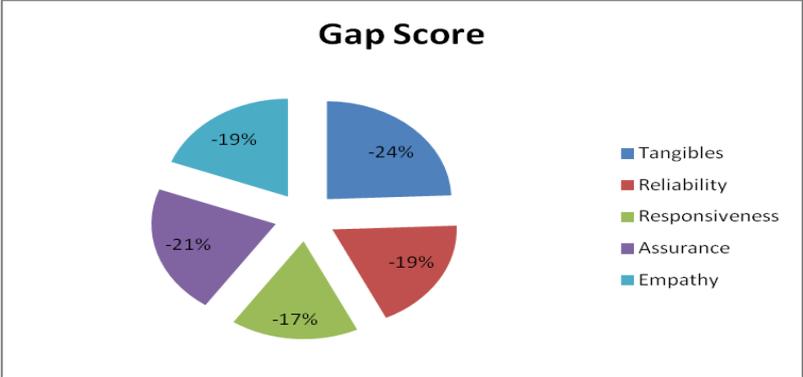


Graph 3: The comparison of expected and perceive score



Graph 4: Gap score

Following (graph 5) is the gap score as percentage, which show more clear the gap for each dimension.



Graph 5: Gap score as %

For more detailed information regarding the average expectations and average perceptions score for each of the 96 questionnaires for all five dimensions, there are relevant tables (see Appendix B – scatter plots) that are helpful to the identification of the out layer, which is useful information as affects the average score (negatively or positively). Below are presented (see table 4 below) the Mode (the most frequent number/score) for each of five dimensions for perception and expectations which can be compared with the number of out layers in order to extract useful conclusions.

For expectations the most frequent average score is 7 for all dimension, so most of the questionnaire responders ask for the maximum quality, even though in the four of five dimensions (except Assurance which all scores are 5 and above) we have some out layers (questionnaires with average score below 5). For “Tangible”, “Responsiveness” and “Empathy” there are 2 outlays for each one, with an average score of 3.75 & 4, 4.5 & 4.5 and 4 & 4.2 respectively. “Reliability” has only one with a score of 4. This is to show that almost all customers ask for the perfect (score 7).

For perception the most frequent average score for “Reliability”, “Assurance” and “Empathy” is 7. This is a perfect result as the customers gives the higher score for services taken. “Tangible” most frequent score is 6.25 and for “Responsiveness” the most frequent score is 5.75. This shows that most customers believe that the performance in those two areas need improvement, this doesn’t mean that management must invest in this area, as we already state, “Tangible”, with not so low score, is a costly investment and the valuation is subjective and according to each customer aesthetic. “Responsiveness” has the lowest score and can be improved with less investment, or even just training and supervision.

Table 4: The mode of average score for each of 5 dimensions - Perceptions & Expectations.

PERCEPTION	MODE	EXPECTATIONS	MODE
Tangible	6.25	Tangible	7
Reliability	7	Reliability	7
Responsiveness	5.75	Responsiveness	7
Assurance	7	Assurance	7
Empathy	7	Empathy	7

If you see hierarchically the average score for dimensions (the average of expectation and perception average score), the most important dimension is reliability and not assurance, we can say that these seem to be more accurate as it takes in to concatenation both aspects, perception and expectation so it is more clear how far are the service quality from the perfect (score 7)

<u>Dimension</u>	<u>Average for Dimension</u>
Reliability	6.371
Responsiveness	6.337
Tangibles	6.219
Empathy	6.135
Assurance	6.100

- Weighted analysis

The weights allocated based on the average expectation score (the importance) given by customer to each dimension, without any scientific method. “Assurance” has the higher average score (6.776) and weighed with 28% as it seems to be the most important dimension. “Reliability” has a slightly lower score (6.754) and weighed with 26%. The next one is “Tangibles” with an average score of 6.604 which is much lower than “Reliability” and weighed with 18%. Then is “Responsiveness” with an average score of 6.563 and a weight of 15% and the last one is “Empathy” with a slightly lower score (6.533) which appears to be the least important and takes a weight of 13% (see Table 2 below).

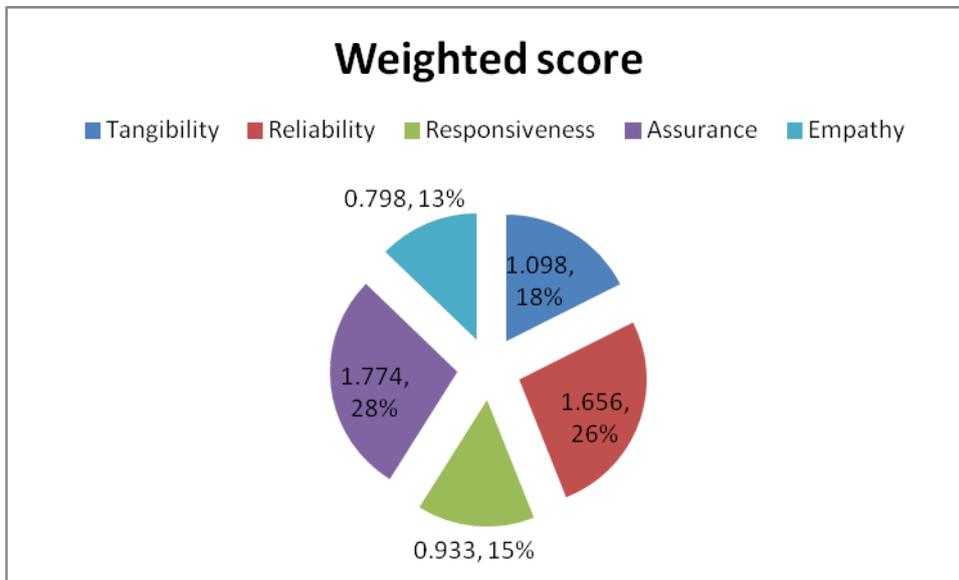
Table 2 - SERVQUAL Importance Weights

Features	Points
1. The appearance of the banks physical facilities, equipment, personnel and communication materials.	18%
2. The bank's ability to perform the promised service dependably and accurately	26%
3. The banks willingness to help customers and provide prompt service.	15%
4. The knowledge and courtesy of the bank's employees and their ability to convey trust and confidence.	28%
5. The caring individual attention the bank provides its customers.	13%
Total:	100%

Based on the above weights, was calculated the weighted average score for each dimension and the overall weighted score (see Table 3 below). Those calculations seem to be more accurate as the score is allocated according to the importance given to customer for each dimension and the existing performance according to customer perceptions. In our opinion, this method of analyzing the result seems to be more accurate and gives a clearer picture to the management on where to concentrate first. The limitation of this method, which affects the reliability of the results, is the subjective way that the weights are allocated to each dimension.

Table 3 - Weighted SERVQUAL Scores

SERVQUAL Dimension	Score from Table 1	Weighting from Table 2	Weighted Score
Tangibility	6.1	18%	1.098
Reliability	6.371	26%	1.656
Responsiveness	6.219	15%	0.933
Assurance	6.337	28%	1.774
Empathy	6.135	13%	0.798
Average Weighted score:			6.259



Graph 6: The weighted score with its weight

According to the Weighted SERVQUAL score method (see Table 3 above and Graph 7 below) the two most important dimensions is “Assurance” (1,774) and “Reliability” (1,656). The unweighted results give “Assurance” the lower score for each of the 5 dimensions but “Reliability” is the most important.

The third dimension, with much lower score than the second one is “Tangible” (1,098), “Tangible” is the also the third dimension and with unweighted method.

The fourth place taken by “Responsiveness” (0,933), this is second with unweighted method. The last one is “Empathy” (0.798) which is the fourth one with unweighted method.



Graph 7: The weighted score for each dimension in order

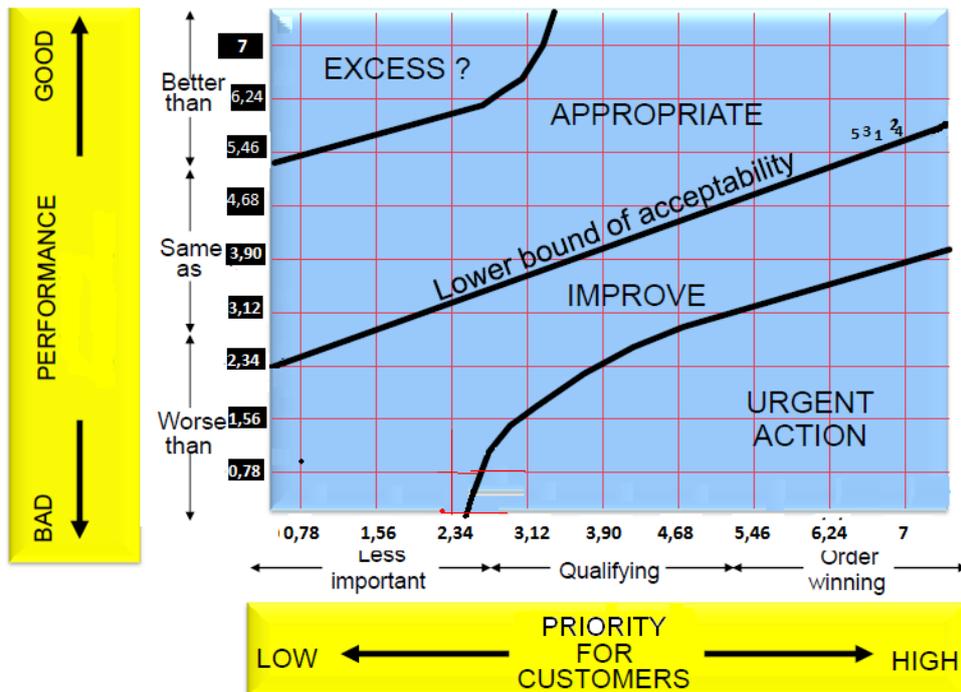
Conclusively, it has to be mentioned that weighted results are sensitive to the importance percentage that is given and also the weighted results have many differences from the unweighted results. Based on comparison of both methods it can be clearly identified that the management must concentrate on the “Reliability” first and that “Empathy” is the least important dimension.

A further analysis, using (IPA) will give as more accurately which dimensions need argent action, which need improvement, which are appropriate and on which have excess quality.

The importance-performance analysis (IPA)

The importance-performance analysis is a mapping of all dimensions based on the average score taken for performance (perceive value) and priority (expectations). The combination of those two scores gives us the indication that COOP Bank is in the appropriate area in all 5 dimensions, which means that it performs appropriately according to customers’ priority. When we studying the table 4 bellow, it is clearly identifiable that all dimensions are very close to falling in the area of improvement, this is an alarm, COOP Bank needs to improve their performance so as to be far from the improvement area, if no actions are taken, it seems that it can easily fail to offer the appropriate performance.

Table 4: IPA for all 5 dimensions



Note: To read the table 4 needs to know each number which dimension represent, so:
 1=Tangible, 2=Reliability, 3=Responsiveness, 4=Assurance, 5=Empathy

6. DISCUSSION OF FINDINGS

SERVQUAL model is a useful tool to identify gaps; it provides an invaluable approach to improving service quality. It provides detailed information about:

- customer perceptions of service
- performance levels as perceived by customers
- impressions from employees with respect to customers' expectations and satisfaction

On the other hand there have been a number of studies that doubt the validity of the five dimensions and if they can be applicable in all service sectors. According to an analysis by Thomas P. Van Dyke, Victor R. Prybutok and Leon A. Kappelman it appears that the use of different scores in calculating SERVQUAL contributes to problems with the reliability discriminate validity, convergent validity and predictive validity of the measurement. These findings suggest that caution should be taken in the use of SERVQUAL scores and that further work is needed in the development of measures for assessing the quality of information services.

Also in our research the sample size was very small in relation to the number of the bank customers which are more than 5000. Also any method of sampling used has inherent limitations and results may not be representative for the population. We don't have the confidence level that this size of sample is given for this size of population.

The research does not involve the employees' opinion on those dimensions which is an important aspect to identify if employees understand the importance of each dimension for the customers. This will be shown using Gap 1 analysis. This is a limitation for this research results as it would be helpful for the management to find the area that employees need training to understand the customer needs.

Another limitation is that SERVQUAL depends on assumptions. First of all the results of the research are accurate but the validity model is based around the results of empirical studies. A number of academics have since performed further empirical studies that appear to contradict some of the original findings. Moreover, it is assumed that customers can be documented and captured and they remain stable during the whole process.

Having in mind all of the above, the findings are questionable and we don't have the level of reliability of those findings but they can be used as an indicator, as a map, for the management to improve some areas that can be upgraded without much investment as assurance. Assurance is important for the customers and from the results of Importance performance Analysis is nearer to fall under the line of "Appropriate". "Tangibles" are also very close to falling below the line of "Appropriate" but because of the high investment cost and the subjectivity of aesthetic further investigation is needed to decide up on this.

7. CONCLUSIONS AND RECOMMENDATIONS

SERVQUAL is a well known model even though there are arguments about its reliability. First of all is the categorization of the questions in the five dimensions correct? Also is the scale from one to seven appropriate? In our opinion further investigation in those areas could be contacted. In addition, there is a small number of outliers who affect the results. Furthermore the sample size may not be representative to the customer population of the bank. In addition it has to be noticed that during the last two years new employees were hired in the bank that according to our records were not trained enough, affecting our results. Finally during 2005 another research was contacted for service quality delivered to the bank but due to the fact that lots of factors have been differentiate since then such as population of customers, buildings, number of branches and employees, a comparison couldn't be made due to asymmetry.

However, the results reveal that COOP bank delivers quite high quality services. This research is very significant for the managers of the bank because it gives a feeling about services delivered and how relevant they were to customers' expectations. Also it indicates the areas that need improvement.

Recommendations:

- employees training about the features of the products available and how to offer correct services from the first time in order to improve the level of customers' assurance
- stricter supervision should be contacted in order to avoid potential errors on delivering services which also will affect the level of assurance that customers feel
- gives specific instructions to all branches in order to improve the aesthetic of the place (clean, tidy etc)
- Training the staff to use the equipment of the Bank correctly and efficiently so as not to give to the customer the feeling that the computer or other equipment is not appropriate. As we find during investigation the COOP Bank have the latest technology and one of the better software in the Cyprus market.

In our opinion the quality of service of the bank is quite satisfactory because there are factors out of the bank's control. The customers that took part in the research have different psychological situations which affect their opinion and also their criteria vary.

During this study we faced a major problem regarding the scoring of "Expectations". In the way the questionnaire is build, customer to not give a score hierarchically so as to have a clear picture about the importance of each dimension according to customers' expectation. Most of the customers gave the score of 7 in all 5 dimensions. This area is an area of further study in order to find the way to take more useful and specific information regarding "Expectations". We didn't find any studies in this area and it seems to be useful subject for future studies.

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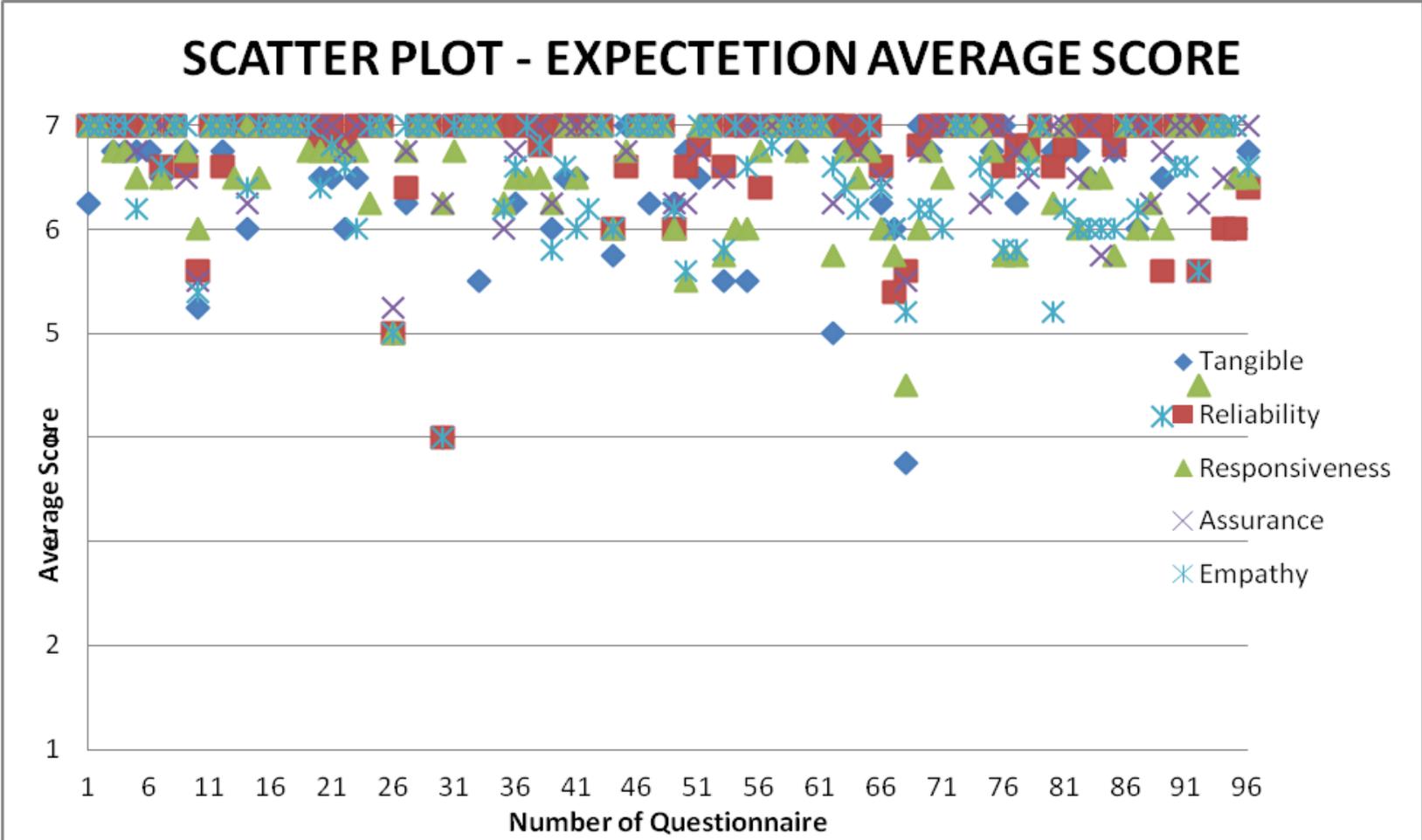
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Statement	Score
15. Customers of Coop Bank will feel safe in transactions.	
16. Employees of Coop Bank will be consistently courteous with customers.	
17. Employees of Coop Bank will have the knowledge to answer customers' questions.	
18. Coop Bank will give customers individual attention.	
19. Coop Bank will have operating hours convenient to all their customers.	
20. Coop Bank will have employees who give customers personal service.	
21. Coop Bank will have their customers' best interest at heart.	
22. The employees of Coop Bank will understand the specific needs of their customers.	

Statement	Score
20. Coop Bank has employees who give you personal attention.	
21. Coop Bank has your best interests at heart.	
22. The employees of Coop Bank understand your specific needs.	

APPENDIX B: SCATTER PLOT WITH ALL QUESTIONNAIRES AVERAGE SCORE – EXPECTATION & PERCEPTION

Expectation graphs



Perception graphs

