



THE EFFECTS OF SERVICE QUALITY DIMENSIONS ON CUSTOMER SATISFACTION IN BANKING: A STUDY IN TURKEY

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ABSTRACT

Purpose: The aim of this study is to investigate the effect of service quality on customer satisfaction in banking.

Design/methodology/approach: The paper includes the adoption of SERVQUAL (Parasuraman *et al.* 1991: 420) and compliance and tries to define their effects on customer satisfaction. Randomly defined, 149 responses are gathered by walk-in customers and the data is analyzed via descriptive statistics, reliability, ANOVA, correlation, regression and factor analyses.

Findings: The study revealed that customer satisfaction is being effected by empathy, reliability and responsiveness. No statistically significant result is observed in terms of tangibles, assurance and compliance.

Practical Implications: The study depicted that Turkish customers are not interested in the compliance of the services. They are more interested in trust and personal qualities. The researchers may adopt the research design and the practitioners can pay attention more on these dimensions in service development.

Originality/Value: This study includes valuable information as it has a detailed literature review on the effect of service quality on customer satisfaction and it is unique as it covers most of the Turkish literature on the topic.

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INTRODUCTION

At present, with the effect of globalization, enterprises should develop better services in order to sustain customer loyalty and satisfaction (Sangeetha and Mahalingam, 2011: 84). In order to do so, they continuously seek for ways of keeping their services up to date and try to convince their customers to effectuate their operations by using their products (Awan *et al.*, 2011: 221). With such a great challenge, firms are improving their service quality (Ozretic-Dosen and Zizak, 2015: 99).

In banking sector the number of actors are increasing day by day and rivalry is being scaled up with the introduction of better services (Amin and Isa, 2008: 192). Moving here, the present study aims to investigate the effect of service quality on customer satisfaction in a small scale. With this aim initially a detailed literature review is carried out and prior research are analyzed in terms of topic, context, methodology, findings and implications for the present work. Secondly, a questionnaire is adopted from the former studies and applied to a randomly defined sample of 149 banking customers. The data is analyzed via the use of descriptive statistics, reliability, correlation, regression and factor analyses.

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The results showed that most of the dimensions mentioned in SERVQUAL (Parasuraman *et al.*, 1991: 420) are affective in defining the customer satisfaction.

LITERATURE REVIEW

Former studies on the effect of service quality on customer satisfaction are rich in number. The present study aimed to depict the current studies in terms of topic, methodology, findings and implications for future research. By this way, many useful information is gathered in justification of the research, building the theory and supporting the eventual findings. The former studies are listed below;

First of all, Çınar *et al.* (2012: 103), conducted a research on the perceptions of academic staff on internet banking. They applied a survey on 140 academics and analyzed the data via the use of descriptive statistics. They concluded that academics are in favor of internet banking. Their findings are important as it reflects the perceptions of the users. Moving here, the present study used the same methodology by asking the perceptions of the users. Besides, Çınar (2007: 1) also mentioned this relationship.

Moreover, İraz *et al.* (2012: 201) studied the effects of public relations on banking performance. They used descriptive statistics and t tests for the analysis. They found that the methods used for public relations are not changing in time.

However, the needs of the customers are differing. So, the banks should develop more effective public relations tools. This study provides many useful information for the present study. The research design offers some analyses and the findings can be used in justifying the present study.

Furthermore, Kalyoncuoğlu and Faiz (2016: 67) investigated the effect of service quality on corporate image. They included the public and commercial banks and applied a questionnaire on 467 customers. They used descriptive statistics, factor and correlations analyses in their investigation. As a result, they conclude that the more the banks are good in service, the better they are being perceived in terms of corporate image. These findings are beneficial as they imply the importance of service quality. Also, the methodology of the research can be used in designing the present work.

Besides these, Eroğluer (2013: 29) also investigated the same topic. He used descriptive statistics, t tests, one sample ANOVA and regression in the analyses. He also implies that the service quality is decisive in the corporate image of the bank. Just as the former study, this one can also be used in defining the research model and justifying the present one.

Similarly, Toktaş and Gül (2016: 8) aimed to measure the service quality of a bank. They applied SERVQUAL methodology, which is developed by Parasuraman *et al.* (1991: 420), and asserted some advice on improving the service quality. They reached the result of more empathy can develop the service quality of the banks. This research contains useful information for justifying the actual study.

Moreover, Atış (2011: 1) studied on defining the effect of service quality on employee satisfaction. She used descriptive statistics and correlation analyses in the empirical data analysis. She claims that, the improvements in service quality can boost the satisfaction of the employees. Just like others, the present study can make use of the theory of this research.

Similarly, Şahin (2013: 34) searched for the differences among gender in perceiving the service quality in banking. He used SERVQUAL methodology just as Toktaş and Gül (2016: 8). He found that women have a higher perception on tangibles, reliability, assurance and empathy whereas men have a higher perception on responsiveness. This study provides useful information on the determiners of service quality in banking sector. These dimensions can be used in constituting the theory of the present study.

In addition to all of these, Şendoğdu (2014: 91) conducted a research on the customer satisfaction and loyalty in banking sector. He used the survey results of 321 customers and couldn't find a difference among commercial and participation banks. However, he proved that the perception of service quality effects the customer loyalty. These findings provide useful information on supporting the theory of the present work.

Once more, Çiçek and Doğan (2009: 199) studied on the effect of service quality on customer satisfaction in banking sector. He also used SERVQUAL methodology. The found that assurance is the highest dimension to have an effect on customer satisfaction. The study includes the dimensions to be used in measuring the service quality and this can make contribution to the theory of the present study.

Withal, Songur and Büyükkelik (2016: 103) investigated the service quality and customer satisfaction in cargo transportation. They used SERVQUAL methodology in the research design and gathered data from 116 questionnaire forms. They concluded that the perception of service quality is decisive in customer behavior. Although this study is not directly relevant to the topic, it includes the dimensions of customer satisfaction and service quality. These dimensions can be used in developing the theory of the present work.

Yet, Abdullah *et al.* (2011: 542) conducted a research on Bank Service Quality index. They used 1519 questionnaire forms. They assert that systemization, reliable communication and responsiveness are perceived to be higher in customers. This study includes an index which can be used in the scale development of the present work. The findings of this research can be used in comparing the eventual results of this one.

By the same token, Glaveli *et al.* (2006: 380) made a research on service quality in banking sector in Balkan countries. They used effectiveness, responsiveness, assurance, tangibles and reliability in order to measure the service quality. They found that Greek customers have the highest perception in service quality. The dimensions mentioned in this study can be used in developing the theory. Also, the methodology can be derived for the present study.

Besides these, Jenkins (2007: 523) also searched for the internet banking service quality in a small context. He investigated the banks in Northern Cyprus. He asserts that the internet services are increasing the expectations of the customers and the ones who are good in these services can develop the share in the market. The study is conducted in a small context. The present study is also planned to be applied in a similar context. This can be used in supporting the research design.

What's more, Sangeetha and Mahalingam, (2011: 83) made a review of service quality constructs in banking sector. They imply that SERVQUAL is the dominant methodology in measuring service quality in banking. This finding can be used in justifying the methodology of the present work.

Too, Awan *et al.* (2011: 203) conducted a research on service quality and customer satisfaction in Pakistan. They also used SERVQUAL scale and collected data from 200 customers. They used Analytical Hierarchy Process (AHP) for the analysis. They found that customers are in favor of the service quality of the banks rather than they are commercial or Islamic. This study provides many useful information for the research implications for the researchers.

Along with other studies, Gençtürk *et al.* (2011: 59) investigated the factors influencing the service quality in retail banking. They used descriptive statistics, correlations and factor analyses. They concluded that service quality has a statistically significant effect on customer satisfaction. The findings of this study can be used in supporting the eventual findings of the present study. Also, the methodology of this study can be used in developing the research design.

Furthermore, Koç and Kaya (2012: 189) also made a research on the effect of trust in customer satisfaction. They collected data from 255 customers and analyzed the data by the use of regression analysis. They found that trust is decisive in customer satisfaction. The study includes some dimensions

for measuring customer satisfaction which can be used in measure development.

On the other hand, Şekerkeya and Çelik (2015: 1) searched for the brand value and risk perceptions in banking. Their findings imply that banks should have higher brand values by providing superior service quality. They also imply that the risk perceptions can be lowered by improving the service quality. These findings can be used in supporting the theory of the present study.

What's more, Erdoğan and Aksoy (2014: 156) conducted a review of literature on measuring the service quality perceptions in banking just like Sangeetha and Mahalingam, (2011: 83). They also found that SERVQUAL is the dominant model in measuring service quality perceptions. This research can be used in supporting the research design of the present work.

Withal, Ozretic-Dosen & Zizak (2015: 98) also aimed to measure the service quality of banks in student context. Similar to the most of the prior studies, they have also used SERVQUAL methodology. The studies implies that the students pay more attention to reliability, assurance and responsiveness. The research design is applicable to the present study and the findings of this research can be used in supporting the probable findings of this attempt.

Moreover, Jun & Palacios (2016: 307) examined the key factors in defining the service quality of mobile banking. They have found 17 identifiers of mobile banking. Moreover, the study asserts that mobile banking service quality should be accepted different from other usual services. The study implies that specific research should be conducted in order to understand the quality of specific services. So, this information can be used in justifying the present work.

Similarly, Al-jazzazi & Sultan (2017: 275) focused on the demographic differences in perception of service quality in Jordanian banks. They have sent 2000 mails for measuring the Bank Service Quality (BSQ). They measured differences among gender, income, age, occupation, education and religion. Except from age and religion, they have found statistically significant differences in perceptions of the customers. The demographic features used in this study can be adopted in survey development of the present study.

Also, Kayeser *et al.* (2014: 367) aimed to measure the service quality and customer satisfaction in banking. They applied a questionnaire and gathered information from 212 customers. They used Structural Equation Modelling (SEM). They concluded that service quality boosts customer satisfaction. The methodology of this study can be adopted in the present study. Also, the findings of this study can be used in supporting the eventual findings of the current work.

Along with others, Şiker (2011: 35) also focused on the consumer adoption of internet banking services. The study applies Technology Adoption Model (TAM). She found that service quality perception of the customers can be affected by multi-criteria. So, banks should pay attention to these factors. The study includes information about how to assess the service quality perceptions of the users. Moving here, the present study can adopt these factors.

Yet, Yılmaz *et al.* (2007: 83) investigated the effect of perceptions on credit cards on customer satisfaction and

loyalty. They applied regression analysis. Like all of the prior studies, this study also revealed that people pay attention to the service quality on deciding on satisfaction and loyalty. The measures used in this study can be adopted in measure development of the present work. Yılmaz *et al.* (2007: 234) also compared the public and commercial banks in terms of the service quality.

Amin & Isa (2008: 191) also, examined the relationship between service quality and customer satisfaction. They applied SERVQUAL methodology and analyzed the data by using SEM. The study implies that there is a statistically significant relationship between service quality and customer satisfaction. The questionnaire items used in this work can be adopted in measure development of the present study. Also, the findings of this study can be used in supporting the eventual findings.

Likewise, Burucuoğlu (2011: 1) focused on customer complaints as a tool for increasing the customer satisfaction. He applied a semi-structured interview. He found that paying attention to customer complaints is an effective method for increasing the customer satisfaction. This study has another scope for customer satisfaction and the findings of this study can be recommended for further research.

Furthermore, Yücel (2013: 82) applied SERVQUAL to measure the total service quality of banks. He concludes that banks should pay attention to service quality. The research includes information about how to develop more effective service quality in banking. So, the present study can adopt some of them in theory building.

Additionally, Hussien & Abd El Aziz (2013: 557) investigated the service quality of electronic services provided by Egyptian banks. They applied a questionnaire to 113 customers. Similar to the former studies, they have also found statistically significant relationship between service quality and customer satisfaction. The research design may be adopted to the present study and the findings might be used in supporting the eventual findings.

On the contrary, Korkmaz *et al.* (2015: 113) focused on the effect of ATM problems on customer satisfaction. They applied a questionnaire to a large sum of sample (1250) and analyzed the data via multiple regression, ANOVA and factor analyses. They concluded that the quality of the service is decisive in customer satisfaction. The methodology can be adopted in the present work and their findings can also be used in supporting the theory.

Lastly, Arı and Yılmaz (2015: 121) applied SERVQUAL to identify the effect of service quality on customer satisfaction by applying a questionnaire to 285 students from faculty of economics and administrative sciences. They applied Confirmatory Factor Analysis (CFA) to the data. They found that the service quality in the ATMs effect the customer loyalty and satisfaction. The items used in the questionnaire can be adopted in measuring the customer satisfaction. Moreover, the research design can also be adopted.

To sum all up, there are many studies using SERVQUAL methodology (Toktaş and Gül, 2016: 8; Şahin, 2013: 34; Çiçek and Doğan, 2009: 199; Songur and Büyükkelik, 2016: 103; Sangeetha and Mahalingam, 2011: 83; Awan *et al.*, 2011: 203; Ozretic-Dosen & Zizak, 2015: 98; Amin & Isa, 2008: 191; Yücel, 2013: 82; Arı and Yılmaz, 2015: 121). The

descriptive statistics (Çınar *et al.*, 2012: 103; İraz *et al.*, 2012: 201; Kalyoncuoğlu and Faiz, 2016: 67; Eroğlu, 2013: 29; Atış, 2011: 1; Gençtürk *et al.*, 2011: 59), factor analyses (Gençtürk *et al.*, 2011: 59; Korkmaz *et al.*, 2015: 113; Arı and Yılmaz, 2015: 121), correlation (Kalyoncuoğlu and Faiz, 2016: 67; Atış, 2011: 1; Gençtürk *et al.*, 2011: 59), regression (Koç and Kaya, 2012: 189; Eroğlu, 2013: 29; Yılmaz *et al.*, 2007: 83; Korkmaz *et al.*, 2015: 113), ANOVA (Korkmaz *et al.*, 2015: 113; Eroğlu, 2013: 29) and t tests (İraz *et al.*, 2012: 201; Eroğlu, 2013: 29) are being used in the analyses. The size of the sample varies from small groups to larger ones. And most of the studies imply that service quality is decisive in defining the customer satisfaction (Eroğlu, 2013: 29; Songur and Büyükkelik, 2016: 103; Koç and Kaya, 2012: 189; Korkmaz *et al.*, 2015: 113)

Service Quality Dimensions

According to the literature, customers decide whether to continue using the same product or service again due to the satisfaction provided by the quality of the service (Awan *et al.*, 2011: 204). So, as mentioned in the literature review, former studies aimed to define the dimensions of service quality. As a result of these attempts many dimensions are uttered namely tangibles (Glaveli *et al.*, 2006: 380; Kalyoncuoğlu and Faiz, 2016: 67; Sangeetha and Mahalingam, 2011: 87), reliability (Glaveli *et al.*, 2006: 389; Kalyoncuoğlu and Faiz, 2016: 67; Amin & Isa, 2008: 191), responsiveness (Erdoğan and Aksoy, 2014: 163; Al-jazzazi & Sultan, 2017: 277; Kayeser *et al.*, 2014: 368), assurance (Eroğlu (2013: 31; Çiçek and Doğan, 2009: 200), empathy (Awan *et al.*, 2011: 203; Kayeser *et al.*, 2014: 368) and compliance (Jenkins, 2007: 526; Al-jazzazi and Sultan, 2017: 278). These dimensions look very similar to each other. So it is essential to look in depth for each.

Tangibles

The banks are proposed to provide services on physical facilities (Glaveli *et al.*, 2006: 387). These facilities are called as tangibles and summarized as the equipment and appearance of the personnel (Kalyoncuoğlu and Faiz, 2016: 72). Sangeetha and Mahalingam (2011: 92) asserts that people pay attention to the cleanliness and tidiness of the services. So, this dimension is proposed to have effects on other factors affecting the service quality. Then, these hypotheses are derived;

- H1: Tangibles have an effect on customer satisfaction.
- H2: Tangibles are related to the reliability of the services.
- H3: Tangibles are related to the responsiveness of the services.
- H4: Tangibles are related to the assurance of the services.
- H5: Tangibles are related to the perceived empathy by the customers.
- H6: Tangibles are related to the compliance of the services.

Reliability

Reliability of the bank is another issue that people pay attention on deciding on the service quality (Glaveli *et al.*, 2006: 387). Customers expect the bank to fulfill the amended contracts in time (Erdoğan and Aksoy, 2014: 163). Moving here, the reliability is expected to have an effect on customer satisfaction and to be related to the other dimensions of service quality. So, the following hypotheses are derived;

- H7: Reliability has an effect on customer satisfaction.
- H8: Reliability is related to the responsiveness of the services.
- H9: Reliability is related to the assurance of the services.

H10: Reliability is related to the empathy perceived by the customers.

H11: Reliability is related to the compliance of the services.

Responsiveness

Responsiveness of the employees on solving the problems of the customers is accepted to be another dimension on deciding the service quality (Kalyoncuoğlu and Faiz, 2016: 72). Employees should give a professional image to the customers by dealing with their problems (Sangeetha and Mahalingam, 2011: 90). Within this respect, responsiveness is proposed to have an effect on the customer satisfaction besides being relevant to the other dimensions of the service quality. Moving here, the following hypotheses are derived;

H12: Responsiveness has an effect on customer satisfaction.

H13: Responsiveness is related to assurance of the services.

H14: Responsiveness is related to empathy perceived by the customers.

H15: Responsiveness is related to compliance of the services.

Assurance

Assurance is defined as freeing the customer from any kind of hazard or danger and risk and suspicion (Ozretic-Dosen and Zizak, 2015: 106). Different from reliability, this dimension deals with the risks of the investment decisions. Reliability deals with obtaining the same results after application of the same procedures (Çiçek and Doğan, 2009: 205). Thus, this dimension is expected to be affective in customer satisfaction and relevant to the other dimensions. Accordingly, the following hypotheses are derived;

H16: Assurance has an effect on customer satisfaction.

H17: Assurance is related to the empathy perceived by the customers.

H18: Assurance is related to the compliance of the services.

Empathy

Empathy is expected to be another dimension of service quality (Kalyoncuoğlu and Faiz, 2016: 72). It reflects that the employee to be concerning of the situation of the customer. Many evidence can be gathered from the literature asserting that it has an effect on customer satisfaction and relevant to the other dimensions of service quality (Sangeetha and Mahalingam, 2011: 99). Thereof, the following hypotheses are derived;

H19: Empathy has an effect on customer satisfaction.

H20: Empathy is related to the compliance of the services.

Compliance

Aside from SERVQUAL, this dimension is used by Al-jazzazi and Sultan (2017: 278) and deals with the appropriateness of the banking services to the specific needs of the customers. This dimension is added as the participative banks are being used intensively in the Turkish context. This dimension is also thought to have an effect on customer satisfaction and relevant to other dimensions. Thus, the following hypothesis is derived;

H21: Compliance has an effect on customer satisfaction.

Customer Satisfaction

In today's economy, no one is the only provider of the service industry. Everyone tries to keep and develop their market share by providing superior service quality (Şahin, 2013: 34). As a consequence of globalization, enterprises need to plan and conduct facilities in other countries (Sangeetha and

Mahalingam, 2011: 84). Also, there is a huge literature asserting that people carry on their operations in banks as long as they are satisfied with the services of the banks (Glaveli *et al.*, 2006: 387).

Customer satisfaction is defined as the status of being satisfied for the provided banking services and to be relevant with service quality (Awan *et al.*, 2011: 203). This concept is depicted as the key to achieve customer loyalty (Şendoğdu, 2014: 91). So, there is need for further research on understanding the antecedents and consequences of this concept.

METHODOLOGY

By building the theory of the present work by conjoining the similar findings of the prior research (Atış, 2011: 1; Şahin, 2013: 34; Şendoğdu, 2014: 91; Çiçek and Doğan, 2009: 199; Songur and Büyükkelik, 2016: 103; Glaveli *et al.*, 2006: 380; Şeker kaya and Çelik, 2015: 1; Yücel, 2013: 82; Korkmaz *et al.*, 2015: 113), there is need for testing the hypotheses derived. So, former studies are re-analyzed and a questionnaire is applied to a randomly defined sample of 149. The data is analyzed via statistical analyses and the findings and the procedures are summarized below.

The design of the research is developed by adopting the methodology of some prior research (Jenkins, 2007: 523; Gençtürk *et al.*, 2011: 59; Erdoğan and Aksoy, 2014: 156; Ozretic-Dosen & Zizak, 2015: 98; Hussien & Abd El Aziz, 2013: 557; Arı and Yılmaz, 2015: 121). Data is obtained with randomly defined, volunteered, walk-in customers just like Awan *et al.* (2011: 203). The measure is developed by adopting items from many former studies (Koç and Kaya, 2012: 189; Yılmaz *et al.*, 2007: 83; Amin & Isa, 2008: 191; Abdullah *et al.*, 2011: 542). The questionnaire included items for measuring tangibles (3 items), reliability (5 items), assurance (4 items), empathy (5 items), compliance (4 items), responsiveness (4 items) and customer satisfaction (5 items). The items included a 5 point Likert scale (Şahin, 2013: 39; Songur and Büyükkelik, 2016: 108; Kayeser *et al.*, 2014: 371).

In the analysis, initially the frequency of the demographic features of the sample are analyzed (Al-jazzazi and Sultan, 2017: 275). These were the gender, income and age. The majority of the sample included males (%76,5; 114). The income of the respondents varied from 970 to 58000 ₺/month. In order to manage the data more accurately this feature is grouped into three categories, namely low (from the lowest through 2500), middle (from 2501 to 4600) and high (from 4601 to highest). This classification proved that the majority of the sample has low or middle monthly income. Lastly, the ages of the sample varied from 19 to 62. This feature is also grouped into three categories. These results showed that the sample carries the likely features of the universe as women are being represented as minority in the economy and the number of people with higher income are extinct. The results of this analysis are depicted in Table 1.

Table 1 Demographic Features of the Sample

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	114	76.5	76.5	76.5
	Female	35	23.5	23.5	100
	Low	66	44.3	44.3	44.3
Income	Middle	55	36.9	36.9	81.2
	High	28	18.8	18.8	100
Age	Min to 30	48	32.2	32.2	32.2
	31-35	47	31.5	31.5	63.8
	36 and more	54	36.2	36.2	100

Secondly, the descriptive statistics of the data are analyzed (Çınar *et al.*, 2012: 103; İraz *et al.*, 2012: 201; Kalyoncuoğlu and Faiz, 2016: 67; Eroğluer, 2013: 29; Atış, 2011: 1; Gençtürk *et al.*, 2011: 59). This analysis proved many useful information. Initially, the third item used for measuring the tangibles reported a lower mean. This means that bank managers should pay more attention to this dimension. The means and standard deviations for the items aimed to measure assurance, reliability and customer satisfaction were similar. Moreover, there are some items reporting lower means and higher standard deviations in empathy, compliance and responsiveness. This means that a factor analysis is crucial for the analysis. Besides these, Cronbach's Alpha scores are calculated for assessing the reliability of the data (Abdullah *et al.*, 2011: 549; Şendoğdu, 2014: 97; Kayeser *et al.*, 2014: 372). All of the dimensions used for measuring the service quality and the items used for customer satisfaction were higher than 0,80 which means that the scale is reliable (Şiker, 2011: 44). The results of these analyses are depicted in Table 2.

Table 2 Descriptive Statistics and Reliability Concerns of the Items

	Mean	Std. Deviation	Cronbach's Alpha
Tangible1	3.8121	1.14118	.817
Tangible2	3.7047	1.23848	
Tangible3	3.5839	1.19741	
Assurence1	3.8121	1.11118	.873
Assurence2	3.7450	1.19206	
Assurence3	3.7852	1.18871	
Assurence4	3.7248	1.15583	
Emphaty1	4.1007	1.16680	.886
Emphaty2	4.1007	1.03809	
Emphaty3	3.8322	1.23793	
Emphaty4	4.0067	1.08114	
Emphaty5	3.9866	1.12097	
Emphaty6	3.9128	1.17366	
Reliability1	3.7315	1.29777	.884
Reliability2	3.6913	1.27289	
Reliability3	3.7181	1.28967	
Reliability4	3.6644	1.28195	
Reliability5	3.8658	1.27691	
Compliance1	3.2282	1.61965	.976
Compliance2	3.1678	1.59984	
Compliance3	3.2148	1.60894	
Compliance4	3.4161	1.61120	
Response1	4.0403	1.13232	.856
Response2	4.1544	1.05731	
Response3	3.6107	1.45988	
Response4	3.7450	1.30568	
CusSat1	3.7785	.93610	.950
CusSat2	3.6644	1.13668	
CusSat3	3.6779	1.16983	
CusSat4	3.9530	.88023	
CusSat5	3.9799	.89646	

Thirdly, ANOVA analyses are conducted in order to see whether there are statistically significant differences between the demographic features of the sample (Korkmaz *et al.*, 2015: 113; Eroğluer, 2013: 29). The results revealed that the

perception of empathy and compliance differ according to gender. The perception of tangibles statistically significantly differ in terms of income. And lastly, compliance and responsiveness perceptions differ according to the age of the respondents.

At the following stage of the analysis the means for each dimension are computed analyzed in terms of correlation for testing some hypotheses (Abdullah *et al.*, 2011: 546; Jenkins, 2007: 525; Şendođdu, 2014: 97; Kayeser *et al.*, 2014: 372). The results of this analysis is presented in Table 3.

Table 3 Correlations

	TanMean	AssuMean	EmphMean	ReliaMean	CompMean	RespMean
AssuMean	,653**					
EmphMean	,286**	,412**				
ReliaMean	,558**	,526**	,569**			
CompMean	,020	,134	,406**	,160		
RespMean	,410**	,496**	,476**	,453**	,296**	
CusSatMean	,236**	,358**	,564**	,551**	,307**	,465**

** Correlation is significant at the 0.01 level.

The data summarized some useful information for testing the hypotheses of the present work. However, there are some hypotheses requires to make regression analysis as they include causality (Erođluer, 2013: 29; Koç and Kaya, 2012: 189; Yılmaz *et al.*, 2007: 83; Korkmaz *et al.*, 2015: 113). The R square result obtained in the analysis is 0,644 and the Durbin Watson statistics is 1,623 which means that the model fits to the data. Customer satisfaction is used as the dependent variable and the dimensions of the service quality are used as independent variables. The results of this analysis are depicted in Table 4.

Table 4 Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1,107	,308		3,600	,000
TanMean	-,143	,081	-,158	-1,761	,080
AssuMean	,055	,084	,059	,661	,510
EmphMean	,255	,087	,251	2,921	,004
ReliaMean	,317	,078	,365	4,087	,000
CompMean	,051	,042	,086	1,222	,224
RespMean	,168	,070	,190	2,407	,017

Table 5 Hypotheses Testing Results

Hypotheses	Analysis Method	Support
H1: Tangibles have an effect on customer satisfaction.	Regression	Not Supported
H2: Tangibles are related to the reliability of the services.	Correlation	Supported
H3: Tangibles are related to the responsiveness of the services.	Correlation	Supported
H4: Tangibles are related to the assurance of the services.	Correlation	Supported
H5: Tangibles are related to the perceived empathy by the customers.	Correlation	Supported
H6: Tangibles are related to the compliance of the services.	Correlation	Not Supported
H7: Reliability has an effect on customer satisfaction.	Regression	Supported
H8: Reliability is related to the responsiveness of the services.	Correlation	Supported
H9: Reliability is related to the assurance of the services.	Correlation	Supported
H10: Reliability is related to the empathy perceived by the customers.	Correlation	Supported
H11: Reliability is related to the compliance of the services.	Correlation	Not Supported
H12: Responsiveness has an effect on customer satisfaction.	Regression	Supported
H13: Responsiveness is related to assurance of the services.	Correlation	Supported
H14: Responsiveness is related to empathy perceived by the customers.	Correlation	Supported
H15: Responsiveness is related to compliance of the services.	Correlation	Supported
H16: Assurance has an effect on customer satisfaction.	Regression	Not Supported
H17: Assurance is related to the empathy perceived by the customers.	Correlation	Supported
H18: Assurance is related to the compliance of the services.	Correlation	Not Supported
H19: Empathy has an effect on customer satisfaction.	Regression	Supported
H20: Empathy is related to the compliance of the services.	Correlation	Supported
H21: Compliance has an effect on customer satisfaction.	Regression	Not Supported

The results of both correlations and regression analyses abled the researchers to decide on whether the proposed hypotheses

are supported or not. Table 5 depicts the results of these analyses.

According to these findings, the sample seems not to have statistically significant perceptions on the compliance of the services. So, the items used for this dimension should be revised in further researches. Moving here an Exploratory Factor Analysis (EFA) is conducted (Abdullah *et al.*, 2011: 546; Kayeser *et al.*, 2014: 371). The KMO test of sampling adequacy value was 0,842, which means that the size of the sample is adequate for factor analysis (Erođluer, 2013: 39; Şekerkaya and Çelik, 2015: 9). The total variance explained value was %78,792 and this means that the data has construct validity (Glaveli *et al.*, 2006: 388). This analysis reported 7 factors and varimax is used for rotating them (Gençtürk *et al.*, 2011: 69; Şiker, 2011: 42).

Table 6 Rotated Component Matrix

	1	2	3	4	5	6	7
Tangible1							,799
Tangible2							,833
Tangible3						,544	,533
Assurence1						,644	
Assurence2						,832	
Assurence3						,535	,634
Assurence4						,845	
Emphaty1		,672					
Emphaty2		,809					
Emphaty3		,681					
Emphaty4		,759					
Emphaty5		,713					
Emphaty6		,669					
Reliability1							
Reliability2				,619			
Reliability3				,716			
Reliability4				,783			
Reliability5				,791			
Compliance1			,951				
Compliance2			,929				
Compliance3			,956				
Compliance4			,919				
Response1							
Response2					,698		
Response3					,880		
Response4					,856		
CusSat1	,805						
CusSat2	,849						
CusSat3	,837						
CusSat4	,888						
CusSat5	,819						

This analysis revealed that some items are not listed under the same factor, some of them failed to fulfill the required threshold and lastly some of them reported values for more than one factor. Moving here, a Confirmatory Factor Analysis (CFA) is conducted (Abdullah *et al.*, 2011: 546; Awan *et al.*, 2011: 209; Amin and Isa, 2008: 195).

The model is depicted in Figure 1 and constructed by omitting the items reported values for more than one factor and the ones that are not listed under any factor (Al-jazzazi & Sultan, 2017: 283). The model seemed to have some little problems in fitting the data (CMIN/DF=2,348; NFI=, 849; RFI=,821; IFI= ,908; TLI= ,889 and CFI= ,906) (Kayeser *et al.*, 2014: 371). So, the discriminant and convergent validity issued are emerged. So, the Composite Reliability (CR), Average Variance Extracted (AVE), Maximum Shared Squared Variance (MSV) are calculated and the values showed that the data has discriminant and convergent validity (Kayeser *et al.*, 2014: 372; Abdullah *et al.*, 2011: 549) and the results are presented in Table 7.

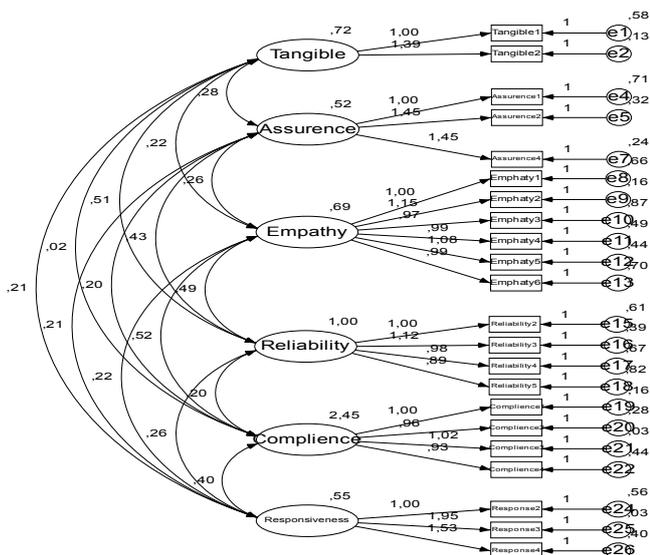


Figure 1 CFA Model

Table 7 The Discriminant and Convergent Validity Concerns

	CR	AVE	MSV	MaxR (H)	Compliance	Tangible	Assurance	Empathy	Reliability	Responsiveness
Compliance	0.976	0.912	0.158	0.990	0.955					
Tangible	0.844	0.734	0.361	0.991	,017	0.856				
Assurance	0.857	0.672	0.350	0.992	,181	,461	0.819			
Empathy	0.893	0.584	0.348	0.992	,398	,317	,441	0.764		
Reliability	0.865	0.618	0.361	0.993	,128	,601	,592	,590	0.786	
Responsive	0.898	0.749	0.150	0.996	,343	,333	,387	,363	,351	0.866

To sum all up, the analyses revealed many useful information for the practitioners and academics. The demographic features of the sample gave the image of representativeness and the KMO value showed that the size is good for factor analyses. The descriptive statistics gave an idea for the reliability of the data and the variance. The correlation and regression analyses are used for hypotheses testing. Some of the hypotheses are proved and some are not. These findings indicate that people in Turkey do not care much about the compliance of the services. Except from compliance, the all other dimensions of SERVQUAL is proved to be valid for the service quality of the banks. And lastly, the regression results prove that people in Turkey pay more attention to reliability and empathy provided by the banks. Besides these, responsiveness of the bank is being considered as another antecedent of service quality in banking sector.

CONCLUSIONS, LIMITATIONS AND IDEAS FOR FUTURE RESEARCH

This paper aimed to investigate the effect of service quality on customer satisfaction by using the dimensions of SERVQUAL (Parasuraman et al., 2011: 420) and compliance. In order to do so, initially a literature review is conducted and former studies are analyzed in terms of topic, context, methodology and findings. This review revealed many useful information for effectuating the present study.

Initially, the demography of the sample verified similar features of the universe. These results showed that the sample carries the likely features of the universe as women are being represented as minority in the economy and the number of people with higher income are extinct. Secondly, ANOVA results revealed that the perception of empathy and compliance differ according to gender. The perception of tangibles statistically significantly differ in terms of income. And lastly, compliance and responsiveness perceptions differ according to

the age of the respondents. However, the items used for measuring the compliance dimension should be revised as there is no statistically significant finding for this factor.

Besides these contributions, the present study has some limitations. Firstly, the context of this research includes a small region and this means that the results obtained may not be generalized. However, there are some researches which are conducted in small context and were able to verify the effect of service quality on customer satisfaction. Next, some items failed to define the theory of the research.

Despite all of these, the present study can be used in understanding the perceptions of banking customers in greater contexts and further research can be conducted. Some implications can be drawn by both practitioners and academics in developing the services. Lastly, researchers may prefer studying on the comparison of commercial banks and participation banks in Turkey.

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