

“Service quality, customers’ satisfaction, and profitability: an empirical study of Saudi Arabian insurance sector”

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SERVICE QUALITY, CUSTOMERS' SATISFACTION, AND PROFITABILITY: AN EMPIRICAL STUDY OF SAUDI ARABIAN INSURANCE SECTOR

Abstract

Financial performance is the fundamental aspect to test the performance of the companies. The performance of insurance sector, like any other service industry, is supposed to depend significantly on customers. When it comes to customers, it is an established fact that customer satisfaction would be an important element. Customer satisfaction primarily depends on the quality of service it gets. It can be safely hypothesized that better service quality would lead to higher satisfaction, which would ultimately lead to higher profits for the company. Studies on this relationship in the insurance sector for Saudi Arabia are missing. Hence, this study aims at studying both the profitability of companies and quality of service and tries to relate it to customer satisfaction. The results are quite surprising, as the study establishes that although the qualities of services are found wanting in many areas, companies are earning good profits. A probable reason could be the statutory nature of the services. Nevertheless, this study recommends improving the quality of services and differentiating services between age groups for further improvement.

Keywords

insurance, SERVQUAL, profitability, Saudi Arabia, customers' satisfaction

JEL Classification G22, L8

INTRODUCTION

The insurance sector of the Kingdom of Saudi Arabia is an important service sector industry. In it, health and vehicle insurance lines are the compulsory ones, which is 84% of the whole insurance market (52.1% health insurance and 31.9% vehicle insurance) and the rest of 16% market share comprises property, engineering, marine and others. Tawuniya and Bupa Arabia hold 22.5% and 22.2% share of insurance market. In health insurance, Tawuniya and Bupa Arabia captured 28.1% and 42.6% of whole health insurance market. Malath and Alrajhi takaful are the major players in the Saudi vehicle insurance sector facilitating 16.7% and 13.9% of whole Saudi insurance sector, respectively. The Saudi insurance sector is working on equity and manages its resources 26% from equity and 74% from liabilities. In Saudi Arabia, all insurance companies must be publicly listed joint stock companies and are governed by the rules of Capital Market Authority, Ministry of Commerce & Investment and other Companies Law. Health insurance was made mandatory under the co-operative Health Insurance Law in 1991 for all the private sector employees. Insurance Law is basically governed by the Royal Decree No. M/32 of 2003. Further, implementation regulations were provided by the Saudi Arabian Monetary Agency (SAMA) in 2004. Subsequently, regulations were issued at different times. The insurance sector experienced a strong growth in the Kingdom after the regulatory and structural reforms in 2005. Motor insurance was made mandatory by the government in 2003. Although motor and health insurance are the major

players in the insurance sector, even visitors to the Kingdom are now supposed to compulsorily have medical cover from 2016. Therefore, subscription to insurance services is almost statutory in nature.

Financial performance of a business organization reveals the efficiency of business activities. Expected or satisfied financial performance is an indication of smooth business activity with profitability, leading to strong financial position of the concern at the same time. Financial performance of the business organization can be measured in terms of profitability and it would reveal profit earning capacity of the business organization. Profitability is relative measurement and calculated with the logical relationship between profit and sales, profit and equity or profit and total assets and so on. Profitability of a service industry like insurance depends upon turnover. Turnover refers to net contribution earned by the insurer company from its insurance policy holders against risk coverage of their lives and assets. An important element for increasing this turnover is an increase in the customer base. The more the subscription to a company, the more will be the turnover and, subsequently, the profitability.

In the present era of saturated competition, retention and attraction of customers lead to the maximization of profit and wealth of insurance organization. An important element leading to retention of existing customers and attraction of new customers is the satisfaction of the services availed. Customer satisfaction is the outcome of appraisal of goods or services after buying or using them by the customers. So, customer satisfaction plays a very important role in service industries. The role of service quality is inevitable in customer satisfaction and it plays a key role in the enhancement of customer satisfaction. Responsiveness and empathetic behavior of the employees, physical and information resources, committed and assured services of the organization lead to maximum customer satisfaction. The present era of business is full of dynamism and expectations of customer services are increasing multi-dimensionally. Quality, quantity and price orientation behavior of customer are changing the profit pattern and governing the policy formulation for operational efficiency and financial soundness. So, the consideration of service quality and customer satisfaction is vital to the profitability and financial soundness of the insurance industry. This study would measure customer satisfaction in the insurance sector.

This paper aims at studying the overall performance of the Saudi Arabian insurance sector. The profitability of major companies providing insurance services is studied. Usually, it is assumed that profitability of a corporation is the outcome of satisfied customer response. So, financial tools would give only a partial picture of firm's performance (Kaplan & Norton, 1992). Rather a mix of financial and non-financial methods would be better (handy ad Ronald, 1994). Also, customer satisfaction is an important factor, which creates value (Marie et al., 2014). Generally, service quality is taken as a proxy for customer satisfaction. And one of the most common measures of service quality is SERVQUAL (Parasuraman et al., 1985). In light of this, the study has three objectives. The first objective is to study the profitability of insurance companies. The second is to assess the satisfaction level amongst insurance customers and the quality of service. And the third is to establish a relationship between service quality and profitability in the insurance sector of Saudi Arabia. This is in light of one of the ideas set forth by Vision 2030 which is to improve the delivery of services in Saudi Arabia.

1. LITERATURE REVIEW

Akotey et al. (2013) found in their research that there was a positive relationship between gross written premiums and sales profitability, but negative relationship with the invested income. Further, the well-resourced actuary department was recommended to minimize losses of underwriting due to overtrading and price undercutting.

Çekrezi (2015) revealed that there was a composite negative impact of leverage and risk of variability in sales on tangibility, but there was a positive impact on financial performance or return on total assets of insurance companies.

Satisfaction of customers is the main factor for profitability (Rust & Zahorik, 1993). As per Anderson et al. (1994), effects of quality on cus-

customer satisfaction ultimately lead to profitability. Satisfaction is the assessment of goods and services by the customer based on the extent of satisfying needs. Sureshchander et al. (2002) observed in their study that superior service quality and high level of customer satisfaction are basically considered by the service providers to enhance their business performance. Customer satisfaction positively affects turnover of an organization after attracting new customers and maintaining the existing ones. Sungip and Affiaine (2008) added that customer satisfaction is considered essential for customer retention and loyalty and leading to the achievement of economic objectives like profitability, return on investment and market share. If the customers are satisfied with the products and services of a particular organization, it will encourage them to repeat purchase and also create positive word of mouth. When a customer is satisfied, he tells it to others, which leads to increased sales. According to Karimi and Kashani (2012), technical and human factors, such as simplification of claims handling, personnel friendly treatment and communicating and relationship retention with the customers, are the most influential factors in attracting customers. In customer satisfaction, quality plays an essential role and is counted as survival and profitability of the organization (Pourkiani et al., 2014). Quality is the same as features and characteristics that must be present in goods or services to satisfy needs (Masoud Pourkiani et al., 2014). Ultimately, customer satisfaction affects the profitability of the organization (Arokiasamy, 2014). Jani (2016) conducted a study about consumers' perception regarding service quality of non-life insurance companies and advocated the technical advancement of insurance policies, improvements in tangibles, assurance of services and awareness program for prospective customers. Liu and Wang (2017) found that service quality affects customer loyalty positively and customer loyalty enhances performance of the insurance corporation.

There have been some studies on Saudi Arabia as well. Ansari (2012) concluded in his research paper that the main factor of purchasing insurance in Saudi Arabia is its legal obligation, while the discouraging factor is the Shariah provisions. Megeid (2013) has also advocated customer satisfaction to improve financial performance. Ishfaq

et al. (2015) observed that among all dimensions of service quality, reliability is the main factor of service structure and recommended to closely verify factors influencing quality. Al Nemer and Ansari (2016) found in their study that customers in Saudi Arabia are unaware of the advantages of protection and therefore feel a conflict between the Shariah law and the concept of insurance. They further added that price and behavior of employees do not influence the demand for insurance, while excess income, feeling for family security and government provisions governing demand for insurance do. Toukabri and Ibrahim (2016) found that the behavior of individual plays a vital role in buying insurance policies. The anxiety surrounding death attracts and forces individuals to seek insurance protection. Saad et al. (2016) found in his research that the awareness of benefits of insurance on the part of the customers of Saudi Arabia is necessary. Saaty (2012) advocated inviting people to awareness programs in order to make them aware of insurance benefits and added that the overall customer services should be improved for enhancing customer loyalty and customer retention. Alharbi (2017) found in his study that insurance policy premium, reward, and compensation are important factors for enhancing the level of customer satisfaction and argued that policy makers should use the information to improve the process and procedures before delivering the insurance services.

The literature on studying customer satisfaction and its impact on profitability and financial soundness regarding insurance industry in Saudi Arabia is missing. The present study endeavors to fill this void by studying the elements of service quality, customer satisfaction and its impact on profitability and financial soundness of the insurance industry. The study of the relationship between service quality and profitability would be certainly something new for the insurance sector of Saudi Arabia.

2. RESEARCH METHODOLOGY

Ratios are the best means to measure financial performance, i.e., profitability, operational performance or solvency of a corporation. Financial ratios of companies (from 2011 to 2016) are cal-

culated to understand the average financial performance or profitability of the insurance companies. Fixed base index numbers of respective years are calculated from the ratios, taking 2011 as the base, to get the average growth trend of the companies. The average of financial ratios and their index numbers reveal the average performance and growth in average performance. Profitability performance analysis is based upon secondary information and ratios are calculated on the basis of financial statements available on www.argam.com.

This study adopts a two-pronged strategy. One is the financial analysis using ratios discussed earlier. The other one is studying customer satisfaction and service quality. For studying satisfaction and service quality a convenience sample of the students and staff of the College of Business Administration, Al Kharj is taken. For measuring service quality, a questionnaire based on the GAP analysis of Parasuman (1998) is used. This scale measures the gap between the expectations and perceptions of customers based on five items, namely "Tangibles, Reliability, Responsiveness, Assurance and Empathy". Each of these components has four statements related to them. Hence, the questionnaire consists of twenty questions on a Likert scale of five. Apart from these, the questionnaire has general bibliographic questions on nationality, age, income and employment status. Further, there is one question in answer to which the respondent has to state whether he is satisfied with his insurance provider or not. This particular element is tested for the possible significant difference across nationality, age, income and employment status. For testing this significant difference, Students' *t*-test and analysis of variance are used. The hypothesis testing is done at 5% percent level of significance and results are drawn based on the *p*-values.

Simultaneously, the gap scores are calculated for each of the five components of SERVQUAL using performance minus expectations. Further, based on gap scores, it is verified whether individual service providers have significant differences amongst them. This is done through the analysis of variance. Wherever a significant difference is found amongst service providers, the companies are ranked according to their preference. Finally, a correlation is sought between the ranking of com-

panies with respect to SERVQUAL dimensions and the ranking of companies with respect to financial and accounting ratios. The correlation is calculated using Spearman rank correlation. The significance of this correlation is again measured using *p*-value given by the SPSS output sheet.

3. DATA INTERPRETATION AND ANALYSIS

Profitability is the reflection of expected and smooth running of business activities and it leads to strong financial position. In service industries, service quality and customer satisfaction govern the profitability of the concerns. Expected service quality and customer satisfaction improve profitability and financial performance.

3.1. Profitability of insurance corporations

Profitability is the relative measurement of profit earning ability of a company and it indicates the cost efficiency and operational activities' management effectively. Measurement methods of profitability of insurance companies are different from that of other financial service companies due to its unique nature of service. The following ratios are to be used in analyzing the profitability.

3.1.1. Loss ratio

Loss ratio is to be obtained by dividing incurred losses by earned premiums (Dorfman, 2005) and this ratio is the reflection of abilities of underwriting activities of the companies (Öner Kaya, 2015). The lower loss ratio of insurance companies is to be considered favorable and it indicates better operational efficiency. Generally, loss ratio amounts to 65% to 75% in insurance companies (Rejda & McNamara, 2014). The average of incurred losses for the period from 2011 to 2016 in a decreasing order was: Tawuniya (3869137 thousand SR), Bupa Arabia (3397489 thousand SR), Medgulf (2363301 thousand SR), Malath (858669 thousand SR) and Al Rajhi (595788 thousand SR), while the earned premiums for the period from 2011 to 2016 in a decreasing order was: Tawuniya (4847859 thousand SR), Bupa Arabia (4426984 thousand SR), Medgulf (2533028 thousand SR), Malath (950309 thousand SR) and Al Rajhi (741548 thousand SR).

Table 1. Loss ratio (ratios are in percentage)

Years	Name of the insurance company									
	Tawuniya	Fixed based index no.	Al Rajhi	Fixed based index no.	Bupa Arabia	Fixed based index no.	Malath	Fixed based index no.	Medgulf	Fixed based index no.
2011	67.63	100.00	71.16	100.00	80.46	100.00	60.57	100.00	73.39	100.00
2012	81.79	120.94	77.85	109.40	79.94	99.35	68.28	112.72	83.12	116.43
2013	103.27	152.69	84.47	118.71	68.21	84.78	84.41	139.36	101.30	141.90
2014	78.20	115.63	79.06	111.10	80.58	100.15	89.70	148.10	83.83	117.43
2015	73.15	108.16	77.64	109.11	80.41	99.94	86.30	142.48	132.48	185.57
2016	74.62	110.33	83.64	117.54	79.41	98.70	114.01	188.22	83.68	117.22
Average	80.81	117.96	78.97	110.98	78.17	97.15	83.88	138.48	92.97	129.76

Note: Ratios and absolute amounts are from the financial statements of the corporations available on www.argaam.com and fixed based index.

From the above, it is clear that the average loss ratio of insurance companies under consideration is either above or nearly equal to the maximum limit of the normally accepted loss ratio. The loss ratio of Bupa Arabia and Al Rajhi is according to the standard. Tawuniya, Malath, and Medgulf ratios are above the standard, which reveals the negativity of the underwriting activities of the corporation. The pattern is the same for average growth of loss ratio as well. There is a need to improve the underwriting activities to lower the loss ratio in all the insurance companies.

3.1.2. Sales profitability ratio

Sales profitability ratio is obtained by dividing net income before taxes by gross written premiums (Öner Kaya, 2015). Sales profitability ratio measures the profit earning capacity of a concern comparing its net income with the gross revenue. The high sales profitability ratio is considered better for the insurance company. The average of net income before tax for the period from 2011 to 2016

in decreasing order was: Bupa Arabia (344216 thousand SR), Tawuniya (309438 thousand SR), Medgulf (45425 thousand SR), Al Rajhi (6615 thousand SR) and Malath (35840 thousand SR), while the average of gross written premiums for the period from 2011 to 2016 in a decreasing order was: Tawuniya (6246466 thousand SR), Bupa Arabia (4728688 thousand SR), Medgulf (3646476 thousand SR), Malath (1229009 thousand SR) and Al Rajhi (1006545 thousand SR).

The above table reveals that Bupa Arabia, Tawuniya, Medgulf insurance companies' earning capacity is positive, while Bupa Arabia is performing well above all. The performance of Al Rajhi and Malath is negative and they need to improve their net income after improving their operational activities. The average growth rate of Bupa Arabia, Al Rajhi and Twuniya is positive, while there is negative average growth trend in Medgulf and Malath insurance companies. So, overall Malath, Medgulf and Al Rajhi need to improve their operational activities.

Table 2. Sales profitability ratio (ratios are in percentage)

Years	Name of the insurance company									
	Tawuniya	Fixed based index no.	Al Rajhi	Fixed based index no.	Bupa Arabia	Fixed based index no.	Malath	Fixed based index no.	Medgulf	Fixed based index no.
2011	10.69	100.00	-24.61	-100.00	2.75	100.00	3.29	100.00	8.94	100.00
2012	4.83	45.16	0.00	0.00	6.55	238.33	-3.97	-220.36	6.29	70.29
2013	-11.73	-303.18	0.00	0.00	4.85	176.45	-4.84	-1097.57	-4.78	-198.21
2014	7.55	70.67	2.05	108.29	5.70	207.31	-1.63	-149.54	4.75	53.13
2015	7.06	66.06	4.01	116.30	9.98	362.83	-0.45	-113.68	-6.23	-169.57
2016	9.52	89.02	4.47	118.17	8.24	299.55	-6.64	-301.81	1.56	17.33
Average	4.65	11.29	-2.35	40.46	6.35	230.74	-2.37	-297.16	1.76	-21.17

Note: Ratios and absolute amounts are from the financial statements of the corporations available on www.argaam.com and fixed based index no. of respective years calculated from the ratios considering 2011 as the base.

Table 3. Return on assets (ROA) (ratios are in percentage)

Years	Name of the insurance company									
	Tawuniya	Fixed based index no.	Al Rajhi	Fixed based index no.	Bupa Arabia	Fixed based index no.	Malath	Fixed based index no.	Medgulf	Fixed based index no.
2011	6.41	100.00	-15.07	-100.00	3.13	100.00	1.92	100.00	6.41	100.00
2012	3.31	51.63	0.00	0.00	7.17	229.19	2.16	111.98	4.76	74.26
2013	-6.60	-202.80	0.00	0.00	5.56	177.65	-2.57	-233.85	-3.52	-149.91
2014	4.72	73.48	1.67	111.08	6.92	221.11	-1.19	-161.46	3.77	58.81
2015	4.46	69.42	3.05	120.23	11.88	379.64	-0.44	-122.91	-4.51	-170.20
2016	5.69	88.77	3.45	122.83	9.14	291.99	-7.89	-510.95	1.08	16.65
Average	3.00	30.08	-1.15	42.36	7.30	233.26	-1.33	-136.20	1.33	-11.73

Note: Ratios and absolute amounts are from the financial statements of the corporations available on www.argaam.com and fixed based index no. of respective years calculated from the ratios considering 2011 as the base.

3.1.3. Return on assets (ROA)

Return on assets is to be obtained after dividing net income before taxes by total assets. This ratio reveals the corporation's ability to earn profit before considering tax (Öner Kaya, 2015). The larger return on assets (ROA) ratio is to be considered favorable for the company. This ratio measures efficiency of the utilization of assets or productivity of the assets of insurance company (Ali & Haque, 2017). The net income before tax for the period from 2011 to 2016 in a decreasing order was: Bupa Arabia (344216 thousand SR), Tawuniya (309438 thousand SR), Medgulf (45425 thousand SR), Al Rajhi (6615 thousand SR) and Malath (-35840 thousand SR), while the average of total assets for the period from 2011 to 2016 in a decreasing order was: Tawuniya (10154816 thousand SR), Medgulf (4936238 thousand SR), Bupa Arabia (4095143 thousand SR), Malath (1529229 thousand SR) and Al Rajhi (344668 thousand SR).

Bupa Arabia, Tawuniya, Medgulf insurance companies are performing well in respect of their assets. The utilization of assets in Bupa Arabia, Tawuniya and Medgulf is positive and productive. The utilization of assets in Malath and Al Rajhi insurance companies is negative, and it is in need of assets management or utilization. The average growth perspectives are better in Bupa Arabia, Tawuniya and Al Rajhi, while there is negative trend of growth in Malath and Medgulf. So, the overall return on assets is not satisfactory in any insurance company. There is, thus, a need to improve return on assets in Malath, Medgulf and Al Rajhi insurance companies.

3.1.4. Return on equity (ROE)

Return on equity establishes the relationship between net income before tax and equity capital of a company. It reveals the return on equity to the shareholders of the corporation. The larger return

Table 4. Return on equity (ROE) (ratios are in percentage)

Years	Name of the insurance company									
	Tawuniya	Fixed based index no.	Al Rajhi	Fixed based index no.	Bupa Arabia	Fixed based index no.	Malath	Fixed based index no.	Medgulf	Fixed based index no.
2011	23.12	100.00	-111.05	-100.00	10.51	100.00	7.05	100.00	21.42	100.00
2012	12.69	54.91	0.00	0.00	22.68	215.76	-6.86	-197.30	17.59	82.07
2013	-40.07	-273.34	0.00	0.00	21.09	200.67	-12.83	-281.84	-19.87	-192.34
2014	22.59	97.70	18.94	117.61	31.13	296.15	-8.36	-218.58	17.85	83.33
2015	23.07	99.82	16.04	114.44	43.87	417.45	-3.25	-145.95	-27.32	-180.85
2016	26.18	113.28	20.30	118.28	32.26	306.96	-160.99	-2383.55	5.22	24.36
Average	8.28	32.06	-15.21	41.72	26.92	256.16	-4.85	-521.20	2.48	-13.91

Note: Ratios and absolute amounts are from the financial statements of the corporations available on www.argaam.com and fixed based index no. of respective years calculated from the ratios considering 2011 as the base.

on equity ratio is favorable to the company and it indicates expected return on shareholders invested fund. The net income before tax for the period from 2011 to 2016 in a decreasing order was: Bupa Arabia (344216 thousand SR), Tawuniya (309438 thousand SR), Medgulf (45425 thousand SR), Al Rajhi (6615 thousand SR) and Malath (35840 thousand SR), while the average of equity capital for the period from 2011 to 2016 in a decreasing order was: Tawuniya (2190889 thousand SR), Bupa Arabia (1105457 thousand SR), Medgulf (1066053 thousand SR), Malath (253010 thousand SR) and Al Rajhi (196144 thousand SR).

It is clear from the above that Bupa Arabia, Tawuniya and Medgulf insurance companies are returning positively on shareholders' equity, while Malath and Al Rajhi insurance companies' returns are negative. The investment in Malath and Al Rajhi is not beneficial from the shareholders' point of view. The average growth rate of return on equity is positive in case of Bupa Arabia, Al Rajhi and Twuniya, while it is negative in case of Malath and Medgulf. So, Malath and Medgulf have to improve their income to attract more investors in future.

3.1.5. Satisfaction

A total of 350 questionnaires were filled. Out of these, some questionnaires were left out due to incomplete responses. Finally, 314 responses were analyzed. Of these respondents, 199 (63.37%) were satisfied and 115 (36.62%) were not satisfied with their service providers.

Next, hypotheses testing was done on the sample data to derive further results. Initially, a set of five hypotheses was tested for significant differences.

1. *Null hypothesis:* There is no significant difference between nationality and satisfaction (not accepted).
2. *Null hypothesis:* There is no significant difference between age group and satisfaction (accepted).
3. *Null hypothesis:* There is no significant difference between employment and satisfaction (accepted).

4. *Null hypothesis:* There is no significant difference between income group and satisfaction (not accepted).

5. *Null hypothesis:* There is no significant difference between company and satisfaction (accepted).

For hypothesis 1, the p -value is 0.018. Hence, the alternate hypothesis is accepted. As is evident, there is a significant difference between nationality and satisfaction. The dissatisfaction of non-Saudi customers (1.39) is more than that of Saudi customers (1.21). This suggests that the non-Saudi customers expect more from the service providers than their Saudi counterparts. It may be because the non-Saudi customers have experienced better service back home. They are merely concerned with fulfilling the legal requirement. In simpler terms, they buy motor insurance just because they will be fined if they do not have it.

For hypothesis 3, the p -value is 0.004. Group 1 has the highest dissatisfaction. This was expected. Normally, all service providers have some level of segmentation. Customers subscribing to high end services would be normally the ones with higher and they are better serviced. But most surprising of all was the result of the fourth hypothesis. The results showed that there is no significant difference amongst different service providers in terms of satisfaction of their customers. In other words, in terms of satisfaction from the services, all the service providers are the same. In a sense, it means that customers were not satisfied with all the service providers.

3.1.6. GAP analysis

In order to further probe into the matter, the gap scores for all the five components of SERVQUAL have been calculated. The results are given below.

The above table shows that gaps exist in all the dimensions of service quality. This goes along with the earlier results, which show that there is no significant difference between companies in their satisfaction. In order to further probe into the specific aspects of service quality, the researchers now look at the gaps in the different aspects of service quality. Next, an attempt is made to identify

Table 5. Gap score of SERVQUAL dimensions

Criteria	Tangibles	Reliability	Responsiveness	Assurance	Empathy
Performance	2.39	2.25	2.43	2.30	2.27
Evaluation	3.25	3.15	3.16	3.21	3.15
GAP	-0.86	-0.90	-0.73	-0.91	-0.88

provider's performance with reference to each individual item of service quality. The gap scores of each item and service providers are taken and a set of five hypotheses is tested to look for possible difference between the companies in terms of the dimension of SERVQUAL.

Hypothesis: There is no significant difference between company and gap scores of tangibles (accepted).

Hypothesis: There is no significant difference between company and gap scores of reliability (accepted).

Hypothesis: There is no significant difference between company and gap scores of responsiveness (not accepted).

Hypothesis: There is no significant difference between company and gap scores of assurance (accepted).

Hypothesis: There is no significant difference between company and gap scores of empathy (not accepted).

There is a significant difference between company and gap scores of empathy. The p -value is

0.009. The lowest gap in terms of empathy is for Al Rajhi, followed by Bupa Arabia, Tawuniya, Malath, Medgulf. Empathy refers to convenient working hours, having customer best interests at heart, individualized attention and sending updates through email and SMS on all important things such as when a customer's service is expiring.

There is a significant difference between company and gap scores of responsiveness. The p -value is 0.008. In terms of responsiveness, there is a significant difference between service providers. The lowest gap which in other word means, the best in terms of responsiveness is Tawuniya followed by Al Rajhi, Bupa Arabia, Malath and Medgulf. Responsiveness includes ease of access to info, location, range of services and appearance of employees. From the above analysis and interpretation of service quality, customer satisfaction and profitability of insurance companies, some conclusions can be drawn as follows.

Finally, correlation using non-parametric Spearman rank method is sought between the ranking of companies as per two elements of SERVQUAL, namely responsiveness and empathy with absolute average amount of incurred losses, earned premium, gross written premium and net income before tax. All the correlations were not significant at 5% level of

Table 6. Summary – ranking of customer satisfaction, profitability ratios and absolute average amount

Company	SERVQUAL				Absolute average amount				Profitability ratios			
	Responsiveness	Empathy	Incurred losses	Earned premium	Gross written premium	Net income before tax	Total assets	Equity capital	Loss ratio	Sales profitability ratio	ROA	ROE
Tawuniya	1	3	1	1	1	2	1	1	3	2	2	2
Bupa Arabia	3	2	2	2	2	1	3	5	1	1	1	1
Al Rajhi	2	1	5	5	5	4	5	2	2	3	4	5
Malath	4	4	4	4	4	5	4	4	4	4	5	4
Medgulf	5	5	3	3	3	3	2	3	5	5	3	3

significance. Even when a correlation is established between SERVQUAL elements and the profitability ratios, namely loss ratio, sales profitability ratio, ROA and ROE, except for one, all others were found to be not very significant. The only signifi-

cant relationship was between the ranking of companies as per empathy and the ranking of firms as per loss ratio. This shows a weak and unpredictable relationship between SERVQUAL dimensions and profitability in the insurance sector.

CONCLUSION

The profitability of insurance companies reveals that Bupa Arabia, Tawuniya and Al Rajhi are earning well, while Malath and Medgulf are not faring well in terms of profitability. Bupa Arabia has the first position in profitability, but in SERVQUAL, it is in positions three and two, and similarly Tawuniya is in the second position in profitability, but in SERVQUAL, it is in the first and third positions. Malath and Medgulf are in the fifth and fourth positions in profitability, while occupying the fourth and fifth positions in SERVQUAL aspects. There is no direct relationship between responsiveness and empathy and the average absolute amounts of the insurance companies. Tawuniya is in the first and second positions in SERVQUAL, while it is in the first position in average absolute amounts. Bupa Arabia is in the second and third positions in SERVQUAL, but it is in the second, third and fifth positions in average absolute amounts. Medgulf insurance company's position is the lowest among all the insurance companies under consideration here, while it holds the middle position in absolute average amounts.

In this study, 63.37% of the customers were satisfied and 36.62% were not satisfied with the insurance companies whose services they have subscribed to. Further, it is found that the satisfaction levels of customers of all insurance companies are the same. But when the dimensions of SERVQUAL are studied, it is found that perceptions about the quality of service are lower than the expectations from the service providers. This result is quite surprising, since, generally, it is assumed that there would be no gaps in service quality if the customer is satisfied. This contrast in result could have been because of the sample under study. Hence, individual items of service quality are tested for significant differences amongst companies and it is found that only two of the five dimensions, namely responsiveness and empathy, are different for companies. So, it can be concluded that there is no definite relationship between service quality, customer satisfaction and profitability in the insurance sector of Saudi Arabia.

As the results indicate, since there is no significant difference between age groups and satisfaction level of customers, it can be utilized by companies to produce services, which differentiate between age groups. This policy recommendation can lead to future satisfaction among insurers. Also, it is seen that there is no significant difference between satisfaction and employment status. This can also be utilized by individual companies to differentiate itself, say, by giving certain discounts to the employees of certain companies and so on. Further, it is seen that there is no significant difference between companies and tangibles, reliability and assurance. So, companies, which wish to increase customer base, should emphasize the tangibles, reliability and assurance aspects.

In the overall internal and external analysis of the insurance sector of Saudi Arabia, it is evident that there is no impact of service quality and customer satisfaction on profitability of the insurance companies. A probable reason for this could be that insurance purchase is done merely to satisfy the statutory requirement in Saudi Arabia. Here, the profitability or sale of insurance policies of companies is not primarily affected by the quality of services provided. It means that, if a person works in the private sector or owns a car, he has to compulsorily go for insurance. There may be some difference in the services, but mostly fulfilling the statutory requirement is the main motive for subscribing to insurance. Another factor can be price of the service. Studying the effect of price is beyond the scope of this study. So, there is a room for further research to identify and study the factors other than service quality and customer satisfaction affecting the profitability or financial performance of the insurance sector of Saudi Arabia.

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REFERENCES

- Affaine, A., & Sungip, Z. S. (2008). An assessment on service quality in Malaysia insurance industry, *Communications of the IBIMA, I(II)*, 13-26. Retrieved from <http://ibimapublishing.com/articles/CIBIMA/2008/779663/779663.pdf>
- Akotey, J. O., Sackey, F. G., Amoah, L., & Manso, R. F. (2013). The financial performance of life insurance companies in Ghana. *The Journal of Risk Finance, 14(3)*, 286-302. Retrieved from https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=CSAE2013&paper_id=316
- Alharbi, M. F. (2017). An empirical analysis of customer satisfaction with cooperative health insurance in Saudi Arabia: The role of customer knowledge, service characteristics, and national culture. *International Journal of Health Science and Research, 7(11)*, 234-246. Retrieved from http://www.ijhsr.org/IJHSR_Vol.7_Issue.11_Nov2017/32.pdf
- Al Nemer, H. A., & Ansari, Z. A. (2016). Protection and savings insurance consumer behavior in Saudi Arabia. *European Journal of Business and Management, 8(24)*, 27-38. Retrieved from <http://iiste.org/Journals/index.php/EJBM/article/view/32461>
- Anderson, E. W., Fornell, C., & Lehman, D. R. (1994). Customers satisfaction, market share, and profitability: Findings from Sweden. *Journal of Marketing, 58(3)*, 63-66.
- Ansari, Z. A. (2012). An empirical analysis of risk perception, remedial measures and behavior of people in Saudi Arabia towards insurance. *African Journal of Business Management, 6(10)*, 3733-3744.
- Arokiasamy, A. R. A. (2014). Service quality on customer loyalty and intentions to switch in the airline industry in Malaysia. *Australian Journal of Basic and Applied Sciences, 8(6)*, 279-284. Retrieved from <http://ajbasweb.com/old/ajbas/2014/April/279-284-april14.pdf>
- Çekrezi, A. (2015). Determinants of financial performance of the insurance companies: A case of Albania. *International Journal of Economics, Commerce and Management, 3(4)*, 1-10.
- Dorfman, M. S. (2005). *Introduction to Risk Management and Insurance* (8th ed.). Upper Saddle River, N.J.: Pearson Prentice Hall.
- Handy, C. R., & MacDonald, J. M. (1989). Multinational structures and strategies of U.S. food firms. *American Journal of Agricultural Economics, 71(5)*, 1246-1254.
- Harrington, S. E., & Niehaus, G. R. (2004). *Risk Management and Insurance* (2nd ed.). Boston: McGraw-Hill.
- Ishfaq, M., Qadri, F. A., Sulaiman, K., Abusaleem, M., & Al-Zyood, M. (2015). Measuring quality of service consumers' perspectives: A case of healthcare insurance in Saudi Arabia. *IMED Journals, 1(1:11)*, 1-11.
- Jani, A. S. (2016). A study of consumer perception about service quality of Indian non-life insurance companies: Comparative analysis between governments owned non-life insurance and privately owned non-life insurance. Paper presented at 8th International Business Research Conference, IES Management College and Research Centre, Mumbai, India. Retrieved from <https://www.noexperienecessarybook.com/yBMn1/a-study-of-consumer-perception-about-service-quality-of-indian.html>
- Kaplan, R. S., & Norton, D. P. (1992). The balanced scorecard: Measures that drive performance. *Harvard Business Review, 70(1)*, 71-79.
- Karimi, M., & Kashani, B. H. (2012). Paper customer preference of private insurance covers in Iran. *African Journal of Business Management, 6(11)*, 4276-4281.
- Liu, Chia-Ming, & Wang, Tsung-Yuan (2017). A study on the effect of service quality on customer loyalty and corporate performance in financial industry. *Problems and Perspectives in Management, 15(2)*, 355-363. Retrieved from https://businessperspectives.org/images/pdf/applications/publishing/templates/article/assets/9056/PPM_2017_02cont2_Liu.pdf
- Marie, A. A., Ibrahim, M. E., & Al Nasser, A. D. (2014). Effects of financial and non-financial performance measures on customer perceptions of service quality at Islamic banks in UAE. *International Journal of Economics and Finance, 6(10)*, 201-212.
- Megeid, N. S. A. (2013). The impact of service quality on financial performance and corporate social responsibility: Conventional versus Islamic banks in Egypt. *International Journal of Finance and Accounting, 2(3)*, 150-163. Retrieved from <http://article.sapub.org/10.5923.j.ijfa.20130203.03.html>
- Öner, K. E. (2015). The effects of firm-specific factors on the profitability of non-life insurance companies in Turkey. *International Journal of Financial Studies, 3(4)*, 510-529. Retrieved from <http://www.mdpi.com/2227-7072/3/4/510>

20. Parasuraman, A., Zeithaml, V. A., & Berry, L. L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49(4), 41-50. Retrieved from https://www.researchgate.net/profile/Valarie_Zeithaml/publication/225083670_A_Conceptual_Model_of_Service_Quality_and_its_Implication_for_Future_Research_SERVQUAL/links/02e7e53cd16b91bcd2000000/A-Conceptual-Model-of-Service-Quality-and-its-Implication-for-Future-Research-SERVQUAL.pdf
21. Pourkiani, M., Chegini, M. G., Yousefi, S., & Madahian, S. (2014). Service quality effect on satisfaction and word of mouth in insurance industry. *Management Science Letters*, 4, 1773-1780.
22. Rejda, G. E., & McNamara, M. J. (2014). *Principles of Risk Management and Insurance* (12th ed.). Boston: Pearson.
23. Reichheld, F., & Sasser Jr. W. E. (1990). Zero defections: Quality comes to services. *Harvard Business Review*, 68(5), 105-111.
24. Rust, R. T., & Zahorik, A. J. (1993). Customer satisfaction, customer retention and market share. *Journal of Retailing*, 69(2), 193-215.
25. Saad, A. M., & Islam, R. (2016). Consequences of service quality in the insurance industry: A case study on Saudi Arabia insurance industry. *International Business Management*, 10(3), 209-217. Retrieved from <http://medwelljournals.com/abstract/?doi=ibm.2016.209.217>
26. Saaty, A. S. (2012). An empirical analysis of the strategies undertaken by insurance companies in Saudi Arabia to enhance customer loyalty and customer retention. *International Journal of Economics and Management Sciences*, 1(11), 20-25. Retrieved from <https://www.omicsonline.org/open-access/an-empirical-analysis-of-the-strategies-undertaken-by-insurance-companies-in-saudi-arabia-to-enhance-customer-loyalty-and-customer-retention-2162-6359-1-100.pdf>
27. Sureshchander, G.S, Rajendran, C. & Anathan, R. N. (2002). The relationship between service quality and customers satisfaction- A factor specific approach, *Journal of Services Marketing*, 16(4), 363-379. Retrieved from <https://www.emeraldinsight.com/doi/full/10.1108/08876040210433248>
28. Toukabri, M., & Ibrahim, H. (2016). Challenges and ways to develop insurance industry in KSA market. *International and Multidisciplinary Journal of Social Sciences*, 5(2), 152-182. Retrieved from <http://hipatiapress.com/hp-journals/index.php/rimcis/article/view/1963>

APPENDIX

Table A1. Nationality and satisfaction

	Nationality	N	Mean	Std. deviation	Std. error mean
Satisfaction	1	47	1.2128	0.41369	0.06034
	2	267	1.3933	0.48939	0.02995

Independent samples test							
T-test for equality of means							
Satisfaction	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
						Lower	Upper
Equal variances assumed	-2.382	312	0.018	-.18049	0.07577	-.32957	-.03141
Equal variances not assumed	-2.679	70.714	0.009	-.18049	0.06737	-.31483	-.04616

Table A2. Age group and satisfaction

Descriptives								
Satisfaction	N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
					Lower bound	Upper bound		
1	5	1.4	0.54772	0.24495	0.7199	2.0801	1	2
2	279	1.3692	0.48345	0.02894	1.3122	1.4262	1	2
3	30	1.3333	0.47946	0.08754	1.1543	1.5124	1	2
Total	314	1.3662	0.48255	0.02723	1.3127	1.4198	1	2

ANOVA						
Satisfaction	Sum of squares	df	Mean square	F	Sig.	
Between groups	0.041	2	0.02	0.087	0.917	
Within groups	72.842	311	0.234	–	–	
Total	72.882	313	–	–	–	

Table A3. Employment status and satisfaction

Descriptives								
Satisfaction	N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
					Lower bound	Upper bound		
1	71	1.2535	0.43812	0.052	1.1498	1.3572	1	2
2	28	1.4286	0.50395	0.09524	1.2332	1.624	1	2
3	208	1.3894	0.4888	0.03389	1.3226	1.4562	1	2
4	7	1.5714	0.53452	0.20203	1.0771	2.0658	1	2
Total	314	1.3662	0.48255	0.02723	1.3127	1.4198	1	2

ANOVA						
Satisfaction	Sum of squares	df	Mean square	F	Sig.	
Between groups	1.417	3	0.472	2.049	0.107	
Within groups	71.465	310	0.231	–	–	
Total	72.882	313	–	–	–	

Table A4. Income group and satisfaction

Descriptives								
Satisfaction	N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
					Lower bound	Upper bound		
1	229	1.4192	0.49451	0.03268	1.3548	1.4836	1	2
2	55	1.1818	0.38925	0.05249	1.0766	1.287	1	2
3	30	1.3	0.46609	0.0851	1.126	1.474	1	2
Total	314	1.3662	0.48255	0.02723	1.3127	1.4198	1	2

ANOVA					
Satisfaction	Sum of squares	df	Mean square	F	Sig.
Between groups	2.645	2	1.322	5.856	0.003
Within groups	70.237	311	0.226	–	–
Total	72.882	313	–	–	–

Table A5. Company and satisfaction

Descriptives								
Satisfaction	N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
					Lower bound	Upper bound		
1	181	1.3702	0.48419	0.03599	1.2992	1.4412	1	2
2	42	1.4524	0.50376	0.07773	1.2954	1.6094	1	2
3	18	1.1667	0.38348	0.09039	0.976	1.3574	1	2
4	18	1.4444	0.51131	0.12052	1.1902	1.6987	1	2
5	17	1.2941	0.46967	0.11391	1.0526	1.5356	1	2
6	38	1.3421	0.48078	0.07799	1.1841	1.5001	1	2
Total	314	1.3662	0.48255	0.02723	1.3127	1.4198	1	2

ANOVA					
Satisfaction	Sum of squares	df	Mean square	F	Sig.
Between groups	1.252	5	0.25	1.077	0.373
Within groups	71.63	308	0.233	–	–
Total	72.882	313	–	–	–

Table A6. Company and gap scores of individual SERVQUAL elements

Descriptives									
Item	Company	N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
						Lower bound	Upper bound		
Tangibles	1	181	–.7873	1.1157	0.08293	–.9509	–.6237	–4.00	4
	2	42	–.9107	0.92364	0.14252	–1.1985	–.6229	–3.25	1
	3	18	–.4444	1.0274	0.24216	–.9554	0.0665	–2.50	1
	4	18	–.9861	0.89719	0.21147	–1.4323	–.5400	–2.50	0.75
	5	17	–1.4118	0.86124	0.20888	–1.8546	–.9690	–3.50	0
	6	38	–1.0724	1.11031	0.18012	–1.4373	–.7074	–3.50	1.5
	Total	314	–.8639	1.0717	0.06048	–.9829	–.7449	–4.00	4

Table A6 (cont.). Company and gap scores of individual SERVQUAL elements

Descriptives									
Item	Company	N	Mean	Std. deviation	Std. error	95% confidence interval for mean		Minimum	Maximum
						Lower bound	Upper bound		
Reliability	1	181	-.8011	1.00164	0.07445	-.9480	-.6542	-4.00	1.5
	2	42	-.9167	1.0325	0.15932	-1.2384	-.5949	-3.50	1
	3	18	-.7083	0.74877	0.17649	-1.0807	-.3360	-1.75	1
	4	18	-1.1528	1.00418	0.23669	-1.6521	-.6534	-2.75	0.5
	5	17	-1.5000	0.91001	0.22071	-1.9679	-1.0321	-4.00	0.25
	6	38	-1.0329	1.19426	0.19373	-1.4254	-.6404	-3.50	1.25
	Total	314	-.8973	1.02271	0.05771	-1.0109	-.7837	-4.00	1.5
Responsiveness	1	181	-.5677	0.88147	0.06552	-.6970	-.4384	-4.00	2.25
	2	42	-.8690	0.95674	0.14763	-1.1672	-.5709	-3.75	0.75
	3	18	-.6250	0.9085	0.21413	-1.0768	-.1732	-3.25	0.75
	4	18	-1.0694	1.15302	0.27177	-1.6428	-.4961	-3.25	0.75
	5	17	-1.2500	1.43886	0.34897	-1.9898	-.5102	-4.00	1.75
	6	38	-1.0132	1.17253	0.19021	-1.3986	-.6278	-3.50	2.25
	Total	314	-.7309	1.00081	0.05648	-.8420	-.6198	-4.00	2.25
Assurance	1	181	-.8909	1.44296	0.10725	-1.1025	-.6792	-16.00	1
	2	42	-.5952	1.60311	0.24737	-1.0948	-.0957	-2.75	7.25
	3	18	-.7917	0.89627	0.21125	-1.2374	-.3460	-3.50	0.75
	4	18	-1.0139	1.10969	0.26156	-1.5657	-.4621	-3.75	1
	5	17	-1.3382	1.16907	0.28354	-1.9393	-.7372	-4.00	0.75
	6	38	-1.1250	1.16502	0.18899	-1.5079	-.7421	-3.75	0.75
	Total	314	-.9053	1.38034	0.0779	-1.0585	-.7520	-16.00	7.25
Empathy	1	181	-.8149	1.12897	0.08392	-.9805	-.6493	-4.00	2.5
	2	42	-.6786	0.89764	0.13851	-.9583	-.3988	-2.75	0.75
	3	18	-.3889	1.28115	0.30197	-1.0260	0.2482	-4.00	1.25
	4	18	-1.0694	0.88203	0.2079	-1.5081	-.6308	-2.75	0.25
	5	17	-1.4412	1.04032	0.25231	-1.9761	-.9063	-4.00	0.5
	6	38	-1.2763	1.12374	0.1823	-1.6457	-.9070	-4.00	0.5
	Total	314	-.8766	1.11109	0.0627	-1.0000	-.7532	-4.00	2.5
ANOVA									
Item	Criteria	Sum of squares	df	Mean square	F	Sig.			
Tangibles	Between groups	11.344	5	2.269	2.007	0.077			
	Within groups	348.148	308	1.13	-	-			
	Total	359.492	313	-	-	-			
Reliability	Between groups	10.382	5	2.076	2.018	0.076			
	Within groups	316.993	308	1.029	-	-			
	Total	327.375	313	-	-	-			
Responsiveness	Between groups	15.497	5	3.099	3.203	0.008			
	Within groups	298.014	308	0.968	-	-			
	Total	313.51	313	-	-	-			
Assurance	Between groups	9.541	5	1.908	1.001	0.417			
	Within groups	586.828	308	1.905	-	-			
	Total	596.369	313	-	-	-			
Empathy	Between groups	18.777	5	3.755	3.146	0.009			
	Within groups	367.629	308	1.194	-	-			
	Total	386.405	313	-	-	-			

Table A7. Correlation between SERVQUAL and absolute average amount of profitability

Item	Criteria	Responsiveness	Empathy	Incurred losses	Earned premium	Gross written premium	Net income before tax	Total assets	Equity capital
Responsiveness	Correlation coefficient	1	0.7	0.3	0.3	0.3	0.3	0.1	0.6
	Sig. (2-tailed)	–	0.188	0.624	0.624	0.624	0.624	0.873	0.285
	N	5	5	5	5	5	5	5	5
Empathy	Correlation coefficient	0.7	1	–.200	–.200	–.200	0.2	–.500	0.1
	Sig. (2-tailed)	0.188	–	0.747	0.747	0.747	0.747	0.391	0.873
	N	5	5	5	5	5	5	5	5
Incurred losses	Correlation coefficient	0.3	–.200	1	1.000**	1.000**	0.8	.900*	0.1
	Sig. (2-tailed)	0.624	0.747	–	–	–	0.104	0.037	0.873
	N	5	5	5	5	5	5	5	5
Earned premium	Correlation coefficient	0.3	–.200	1.000**	1	1.000**	0.8	.900*	0.1
	Sig. (2-tailed)	0.624	0.747	–	–	–	0.104	0.037	0.873
	N	5	5	5	5	5	5	5	5
Gross written premium	Correlation coefficient	0.3	–.200	1.000**	1.000**	1	0.8	.900*	0.1
	Sig. (2-tailed)	0.624	0.747	–	–	–	0.104	0.037	0.873
	N	5	5	5	5	5	5	5	5
Net income before tax	Correlation coefficient	0.3	0.2	0.8	0.8	0.8	1	0.6	–.100
	Sig. (2-tailed)	0.624	0.747	0.104	0.104	0.104	–	0.285	0.873
	N	5	5	5	5	5	5	5	5
Total assets	Correlation coefficient	0.1	–.500	.900*	.900*	.900*	0.6	1	0.3
	Sig. (2-tailed)	0.873	0.391	0.037	0.037	0.037	0.285	.	0.624
	N	5	5	5	5	5	5	5	5
Equity capital	Correlation coefficient	0.6	0.1	0.1	0.1	0.1	–.100	0.3	1
	Sig. (2-tailed)	0.285	0.873	0.873	0.873	0.873	0.873	0.624	–
	N	5	5	5	5	5	5	5	5

Table A8. Correlation between SERVQUAL and profitability ratios

Item	Criteria	Responsiveness	Empathy	Loss ratio	Sales profitability ratio	ROA	ROE
Responsiveness	Correlation coefficient	1	0.7	0.6	0.7	0.3	0.1
	Sig. (2-tailed)	–	0.188	0.285	0.188	0.624	0.873
	N	5	5	5	5	5	5
Empathy	Correlation coefficient	0.7	1	.900*	0.7	0.2	–.100
	Sig. (2-tailed)	0.188	–	0.037	0.188	0.747	0.873
	N	5	5	5	5	5	5
Loss ratio	Correlation coefficient	0.6	.900*	1	.900*	0.5	0.3
	Sig. (2-tailed)	0.285	0.037	–	0.037	0.391	0.624
	N	5	5	5	5	5	5
Sales profitability ratio	Correlation coefficient	0.7	0.7	.900*	1	0.7	0.6
	Sig. (2-tailed)	0.188	0.188	0.037	–	0.188	0.285
	N	5	5	5	5	5	5
ROA	Correlation coefficient	0.3	0.2	0.5	0.7	1	.900*
	Sig. (2-tailed)	0.624	0.747	0.391	0.188	–	0.037
	N	5	5	5	5	5	5
ROE	Correlation coefficient	0.1	–.100	0.3	0.6	.900*	1
	Sig. (2-tailed)	0.873	0.873	0.624	0.285	0.037	–
	N	5	5	5	5	5	5