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## Article

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# Service quality and attitudinal loyalty: Consumers' perception of two major telecommunication companies in Oman

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## ABSTRACT

Intense competition and shifting loyalties in the Omani telecommunication sector are forcing companies to focus on service quality for increased customer satisfaction, customer loyalty, and organizational profitability. This study assesses the service quality for two major telecommunication companies– Omantel and Ooredoo– in the Sultanate of Oman using the SERVQUAL model and tests the effect of five SERVQUAL dimensions on the attitudinal loyalty of customers. The analysis of data using the partial least squared (PLS) based Structural Equation Modeling technique reveals a positive effect of reliability and assurance dimensions on attitudinal loyalty. However, the outcomes do not reflect any significant effect of tangibles, responsiveness, and empathy on attitudinal loyalty. The multi-group analysis does not reveal any significant difference between the Ooredoo and Omantel customers pertaining to the effect of the SERVQUAL dimensions on attitudinal loyalty. Whilst the study reveals the significance of reliability and assurance dimensions in affecting attitudinal loyalty of telecom customers for the long-term profitability, it also indicates the possibility of tangibles, responsiveness, and empathy in affecting behavioral loyalty to prevent customers' switching in the short-run. By positioning their service quality focus on reliability and assurance, telecom companies can secure a higher attitudinal loyalty and profitability in the long term.

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## 1. Introduction

Telecommunication has emerged as a very important service in the 21st century. It has contributed distinctly in the areas of personal communication (Campbell & Park, 2008; Ishii, 2006), health (Sneiderman & Ackerman, 2004; Ure, 2008), education (Kosakowski, 1998; Ure, 2008), politics (Rosenau & Singh, 2002), economy (Chakraborty & Nandi, 2003; Ure, 2008), globalization (Elliott & Urry, 2010; Steger, 2003; Ure, 2008), and even in upholding the traditional identities of communities (Ure, 2008). It is almost impossible to conceptualize the modern society without telecommunication services. According to Rajasekar and Al Raee (2013), in the past decade, the telecommunications business has seen tremendous changes and competition in the Middle East. Consequently, the expectations of customers for different telecom services, particularly mobile voice and data services is rising day by day. The power of buyers is increasing and their decisions are becoming sensitive to factors such as price, value, and service quality (Rajasekar & Al Raee, 2013). Telecom companies are exerting significant efforts to satisfy customers and gain their loyalty by improving their service quality (Kotler & Keller, 2012; Lawfer, 2004; Russell & Taylor, 2011).

Telecommunication industry started in the Sultanate of Oman between 1981 and 1985 when the General Telecommunications Organization was created and the 'Post, Telegraph and Telephone Sector' was dissociated from the Ministry of Communications to become the Ministry of Post, Telegraph & Telephone (MOTC, 2017). During this period, a number of projects in the areas of the rural communications, mobile telephony, long distance transmission, and local exchanges and networks were launched (MOTC, 2017). This public monopoly was later "transformed into a state-owned joint stock company, Omantel, which became Omantel Group in 2004." (The Report: Oman, 2014, p. 193). The telecom market in Oman remained monopolistic until 2004 when Nawras — the first private sector Omani telecommunication company (acquired later by a Qatar based company Ooredoo in 2010) — came into existence. In 2014, Omantel and Ooredoo jointly held 90% shares of the telecommunication market in Oman (Prakash & Mathew, 2014).

'Omantel group' is the licensed operator of fixed phone and internet services, in the Sultanate of Oman (Muscat Security Market, 2017a, 2017b). The company scored a net profit of 116.7 million OMR in 2016 (Omantel, 2017). Established in 1999 and headquartered in Muscat, the company has 2680 Omani and 268 non-Omani employees working in 34 branches in the Sultanate (Muscat Security Market, 2017a). Omantel's domestic customer base was 3.35 million as of December 31, 2016 (Times of Oman, 2017).

Ooredoo Oman's core business is to operate and provide mobile and fixed telecommunications networks and services to residential and corporate customers in the Sultanate of Oman (Muscat Security Market, 2017a, 2017b). Established in 2004 and headquartered in Muscat, the company has 909 Omani and 101 non-Omani employees working in the Sultanate (Muscat Security Market, 2017b). The company reported a net profit of 46.3 million OMR for the year 2016 with a customer base of 2.95mn as of December 31, 2016 (Muscat Daily, 2017).

Although Omantel shows better ratios than Ooredoo concerning the short-term liquidity, profitability, operating profit, market share, and earnings before interest, tax, and depreciation and amortization, both companies need to improve their operating profits and the profitability on capital (Prakash & Mathew, 2014). Ross Cormack, the former CEO of Nawras (now Ooredoo), emphasized offering high-quality services and knowing what the customers like or do not like regarding existing services, especially in the wake of growing competition in the market (Q&A Ross Cormack, CEO, 2008). This links well with the findings of Rajasekar and Al Raee (2013) that 'competitors' and 'threat of substitutes' are the strongest competitive forces in Omani telecommunication sector. Given these conditions and the rising power of buyers, maintaining service quality and customer loyalty becomes the most important challenge for telecom operators in Oman. Hence, it becomes imperative to study the relationship between the quality of services and customer loyalty, for customer-centered companies consider customer satisfaction and loyalty a key goal as well as a marketing tool (Kotler & Keller, 2012).

Customers' perceived quality of services is the key factor informing service loyalty (Caruana, 2002; Kotler & Keller, 2012). Customer's evaluation of the services (quality) and their response to the service providers (loyalty) is important for sustaining business relationships (Oliver, 2006). The extant literature clearly reveals a causal link between the service quality, customer satisfaction, and customer loyalty (Davis-Sramek, Droge, Mentzer, & Myers, 2009; Gustafsson, Johnson, & Roos, 2005; Izogo, 2017; Ladhari & Leclerc, 2013). Some studies take into account an overall perspective of service quality (Chen & Cheng, 2012; Kipkirong Tarus & Rabach, 2013), whilst others focus on the individual dimensions of service quality (Izogo, 2017; Ladhari & Leclerc, 2013). Izogo (2017) suggests that there is a need for further research in this area, for a broad consensus is yet to emerge on the effects of distinct components of quality, customer commitment, and loyalty. Furthermore, service providers often struggle to find out which dimensions of service quality are more important for customers (Gautam, 2015). Considering the services of telecommunication organizations, and the key role of customers in subscribing to these services, it becomes important to assess customers' perception of perceived service quality of Omani telecommunication companies and to understand in what way the service quality affects their attitudinal loyalty.

This study uses the widely known SERVQUAL model of Parasuraman, Zeithaml, and Berry (1988) and the attitudinal loyalty measure of Butcher, Sparks, and O'Callaghan (2001) to study the relationship between service quality and customer loyalty. It is known that the SERVQUAL model measures the service quality along five dimensions — tangibles, reliability, responsiveness, assurance, and empathy. The study contributes specifically to revealing the most prominent dimensions of SERVQUAL that affect the attitudinal loyalty of telecom customers in a typical Arab world nation. This research, therefore, aims to (i) assess the quality of services and loyalty perceptions of Omantel and Ooredoo customers; (ii) to test the effect of each dimension of the SERVQUAL model on customers' attitudinal loyalty; and to test if this relationship between service quality and attitudinal loyalty applies in the

same way for Omantel and Ooredoo customers. This study fills some gap in the extant literature and is unique in its approach to assess the current situation of two prominent telecommunication companies facing an oligopolistic market structure in the Middle East that otherwise has had a long experience of monopoly in the telecom sector (Mumuni, Luqmani, & Quraeshi, 2017).

In the next section, we present the review of relevant literature followed by the specification of the path model and the hypothesis. The methodology comes next followed by the findings, discussions, limitations and directions for further research. Finally, we present the conclusions to share the key findings of this research.

## 2. Literature review and hypotheses

Quality is a philosophical concept, which is difficult to define in absolute terms (Green, 1994). According to the American Society for Quality (ASQ), it is a subjective term for which each person has his or her own definition (ASQ, 2017). Marketers define it as “the totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs” (Kotler & Keller, 2009: p. 831). For customers, it is one of the key measures to define and assess the value of products and services. Accordingly, many customer-centric terms and models, such as fitness for use, meet the purpose, total quality management, and quality management systems have evolved to reflect quality in products and services (Russell & Taylor, 2011). Marketers rate the quality of services high when services reveal excellence, flexibility, dynamism, improvability, and exceed customers’ expectation (Spath, 2009).

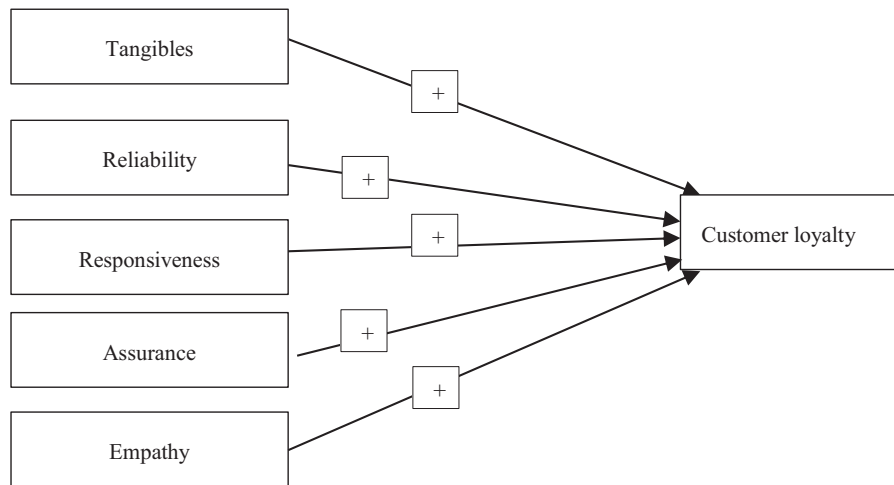
According to Casalino (2000: p. 520)– “efforts to improve quality require efforts to measure it.” However, measuring the quality is a difficult task especially if it targets the services (Russell & Taylor, 2011). The most widely used measure to evaluate quality is SERVQUAL, for it does not only reflect good validity and reliability, but also suits to the service sector (Asubonteng, McCleary, & Swan, 1996; Buttle, 1996; Parasuraman et al., 1988). SERVQUAL is an appropriate and easy to use tool (Nyeck, Morales, Ladhari, & Pons, 2002). Its dimensions are well known and have been explained in the extant literature. Wang, Luor, Luarn, and Lu (2015) analyzed the use of the SERVQUAL instrument in research by drawing 367 articles from 167 indexed journals published between 1998 and 2013. Their result revealed a wide use of SERVQUAL — in 46 fields altogether, of which 42.5% was in the field of Management and 16.9% in Business. SERVQUAL can be widely used to evaluate the perceptions of customers toward services, to categorize them into segments, to compare performance with other competitors, and to improve the services (Parasuraman et al., 1988). The major motives behind using SERVQUAL is to influence customer loyalty through service quality.

Loyalty is defined as “a deeply held commitment to rebuy or patronize a preferred product or service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour” (Oliver, 1997, p. 392). Loyal customers bear a strong and lifelong connection with the company and its brands (Kotler & Keller, 2012). Loyalty can be either behavioral or psychological (Gurski, 2014); the former is reflected in customer’s regularity in purchasing a specific product or service (Gupta & Zeithaml, 2006; Kuehn, 1962) and can be measured by repeat purchase frequency or volume (Tellis, 1988). The latter, i.e., the psychological (or attitudinal) loyalty can be measured by customers’ intention to commit to certain behaviors (Gurski, 2014) such as intention to purchase (Reynolds & Arnold, 2000), intention to recommend (Lam, 2004; Mattila, 2001), intention to buy more, or intention to switch to another brand (Selnes & Gonhaug, 2000).

A business cannot continue without loyal customers who are not only a source of profit but also a source of saving — realized often by the low cost of retaining customers (Lawfer, 2004). Therefore, many research outcomes assign a high value to customer loyalty, as it brings a sort of competitive advantage to organizations (Lawfer, 2004; Lee & Cunningham, 2001; Richheld, 1996). Customer loyalty also plays a significant role in the growth and performance of companies (Lee & Cunningham, 2001; Richheld, 1996). According to Kim et al. (2004), retaining the existing customers is considered the best-used marketing practice in many industries.

Globally, many studies show the relationship between service quality and loyalty in the telecommunication sector. Khatibi, Ismail, and Thyagarajan (2002) used a condensed SERVQUAL instrument (by replacing responsiveness and empathy with competence) to study 245 customers of Malaysian telecommunication companies and concluded that each SERVQUAL dimension had a positive effect on both customers’ satisfaction and customers’ loyalty. Chadha and Kapoor (2009) studied a sample of 300 customers of Indian telecommunications companies based on the SERVQUAL model and observed that service quality makes a positive effect on customers’ loyalty. Boohene and Agyapong (2011) while studying the effect of the service quality on the customers’ loyalty on 520 customers of Vodafone Ghana Telecommunication Company observed a strong positive effect of the quality of services on the Vodafone customers’ loyalty. In their study, they measured the service quality by the SERVQUAL model and customer loyalty by the measures developed by Narayandas (2005) and Lee, Lee, and Feick (2001). Haridasan and Venkatesh (2011) while studying 490 customers in the Indian telecom sector found that ‘advocacy loyalty’, i.e., ‘intention to use the services, and recommend others to use’ was affected positively by responsiveness, customer perceived network quality, reliability, empathy, and assurance but not by tangibles and convenience.

Mokhtar, Maiyaki, and Noor (2011) also tested the effect of the five SERVQUAL dimensions on loyalty on 341 sampled customers in the Malaysian telecommunication sector but found a different result. Their testing confirmed the positive effect of all the SERVQUAL dimensions on customer loyalty except empathy, which caused a negative effect. Akroush, Mohammad, Zuriekat, and Lail (2011) also concluded that service quality affects customers’ loyalty positively in the Jordanian telecommunication market.



**Fig. 1 – The path model.**

Furthermore, a study of 340 respondents in five Pakistani telecommunications companies by [Ishaq \(2012\)](#) also observed a positive effect of service quality on the customer's loyalty.

[Alnsour, Abu Tayeh, and Alzyadat \(2014\)](#) developed a questionnaire based on SERVQUAL to evaluate service quality (based on the commitment-trust theory of relationship marketing) and customers' loyalty in the Jordanian telecommunication sector. Each of the SERVQUAL dimensions was found affecting customer loyalty positively in their study of 377 respondents.

In the Sultanate of Oman, there has been limited research evaluating the service quality of the telecommunication sector and its effect on customer loyalty. [Al Darey and Saleh \(2009\)](#) administered 250 questionnaires based on the SERVQUAL model to measure service quality of the Omani telecommunication sector and found that each of the SERVQUAL dimensions except empathy affected consumer loyalty positively. This study did not compare the differences between any telecommunication companies, which could have offered some more insights into this issue.

Clearly, the above research links all or some of the SERVQUAL dimensions with consumer loyalty albeit with inconclusive results. While some research outcomes reveal a positive effect of all the SERVQUAL dimensions on the loyalty of customers, others preclude the effect of some dimensions such as empathy or assurance on the loyalty of customers. This indicates a need for more studies in different geographical and temporal perspective. Some research assesses the attitudinal and behavioral loyalty together, indicating a need to measure them differently to arrive at a distinct effect of each of the SERVQUAL dimensions on the customer loyalty. This research fills the gap in the area of studying the attitudinal loyalty as affected by the SERVQUAL dimensions in the telecommunication sector in the Sultanate of Oman. The following sections state the hypotheses of this study by laying out a path model as the first step toward testing of hypotheses using the partial least square analysis terminology and approach ([Hair, Hult, Ringle, & Sarstedt, 2014](#)).

### 2.1. Path model specification and hypotheses

This research study focuses on service quality and customer loyalty as it applies to the telecommunication companies in Oman. Based on the extant literature, this research posits that each dimension of the SERVQUAL model makes a positive impact on the attitudinal loyalty of customers, as specified in the path model exhibited in [Fig. 1](#). More specifically, this study hypothesizes that tangibles, reliability, responsiveness, assurance, and empathy make a positive effect on the attitudinal loyalty of the customers of mobile services. This can be reflected through the following set of alternative hypotheses:

- Hypothesis 1: Tangibles affects the attitudinal loyalty of customers positively.
- Hypothesis 2: Reliability affects the attitudinal loyalty of customers positively.
- Hypothesis 3: Responsiveness affects the attitudinal loyalty of customers positively.
- Hypothesis 4: Empathy affects the attitudinal loyalty of customers positively.
- Hypothesis 5: Assurance affects the attitudinal loyalty of customers positively.

## 3. Methodology and measures

Under the broader worldview of post-positivism, this research adopted the deductive approach, collecting data using the survey method in a cross-sectional time horizon, and analyzing the data by quantitative methods ([Cresswell, 2003; Saunders, Lewis, &](#)



**Table 1 – Profile of sample respondents.**

Age	Frequency	Percent	Education	Frequency	Percent
Less than 18	3	1.0	PhD	5	1.7
18-24	24	8.1	Master	26	8.8
25-35	177	60.3	Bachelor	161	54.9
35-45	73	24.7	Diploma	37	12.5
Above 45	17	5.8	High school	59	20.0
<b>Gender</b>			School	6	2.0
Male	130	44.1	<b>Subscribers of</b>		
Female	164	55.9	Omantel	152	51.9
			Ooredoo	142	48.1

Thornhill, 2012). The strategy of inquiry was non-experimental quantitative, and the sampling method was convenience sampling because it was the most suitable method to contact the telecom customers (Bryman & Bell, 2012; Saunders et al., 2012).

### 3.1. Data instrument and samples

Questionnaire (in both offline and online form) was chosen as a primary instrument to collected data, for it is known to many people, easy to analyze, reduces bias, and is a cost-effective instrument (Blumberg, Cooper, & Schindler, 2012; Bryman & Bell, 2012; Saunders et al., 2012). A bilingual questionnaire was designed in English and Arabic for this purpose. The face and content validity of the questionnaire was ensured through backward and forward translation by bilingual academics and by a pilot test on 20 respondents (Prince & Mombour, 1967). This addressed the comprehensibility, logic, and ambiguity related issues associated with the instrument before its actual administration to the wider sample (Saunders et al., 2012). The first section of the questionnaire sought information on age, gender, educational level, and the preferred service operator, whilst the second section carried 27 statements– 22 on the quality of the telecom services, and the remaining 5 on the attitudinal loyalty.

One set of 200 questionnaires was distributed to the respondents at the health centers, hypermarkets, primary schools, and universities in Oman. The other set of questionnaires were administered using “forms.google.com” website to reach the wider audience in Oman. The online questionnaires were distributed through three waves– lasting two weeks, 10 days, and one week, respectively. The purpose behind resorting to the online and offline approach was to draw a representative and statistically appropriate sample including respondents from all the sections of the society. Out of 302 total responses, eight were incomplete. Thus, only 294 completed questionnaires were included in the analysis. This samples size was in accordance with both the 10 times rule (10 times the maximum items for any construct, i.e.,  $10 \times 5 = 50$ ) and the G\*Power criteria (recommending a sample size of 74) for multiple regression models (Hair, Hult, Ringle, & Sarstedt, 2016, pp. 20).

The respondents belonged to different age categories. Three of them (1%) were less than 18 years, 24 (8%) between 18 and 24 years, 177 (60%) between 25 and 35 years, 73 (25%) belonged to 35 and 45 years and 17 (6%) were above 45 years of age. Gender wise, 164 (56%) of them were female and 130 (44%) were male. With reference to their educational status, 5 participants (2%) had PhD, 26 (9%) had master degree, 161 (55%) bachelor's degree, 37 (12%) diploma, 59 (20%) high school certificate, and 6 (2%) had school certificates. Since the respondents were approached using both offline and online mechanisms, they represented all the sections of the society and all the major administrative regions of Oman. Altogether, the sample was representative of the population. The profile of the sample respondents is presented in Table 1.

The majority of the respondents (60.3%) belonged to an age group of 25 35 years, followed by 25% in the 35-45 age group. The proportion of females to males was 56% to 44%. A majority of the participants (54.9%) had a bachelor degree, 12.5% had a diploma, and another 20% a high school certificate. They were almost equally distributed between the two companies, some having a subscription to both, who were asked to rate the company they preferred the most.

The data was analyzed using the SmartPLS software as the Partial Least Square (PLS) based Structural Equation Modeling (SEM) approach (Hair et al., 2014) was applied to test the effects of the independent variables– tangibles, reliability, responsiveness, assurance, and empathy on the dependent variable, i.e., attitudinal loyalty, as hypothesized earlier (Fig. 1). According to the standard procedure of reporting the PLS-based SEM analysis, we cover the analysis and findings under specific heads such as the measurement model specification, measurement model estimation, structural model estimation and tests of hypotheses, multi-group analysis, reporting, and discussion (Hair et al., 2014).

## 4. Analysis and findings

### 4.1. Measurement model specification

The five independent variables — ‘tangibles’ (4 items), ‘reliability’ (5 items), ‘responsiveness’ (4 items), ‘assurance’ (4 items), and ‘empathy’ (5 items) were measured using the SERVQUAL instrument of Parasuraman et al. (1988). The dependent variable

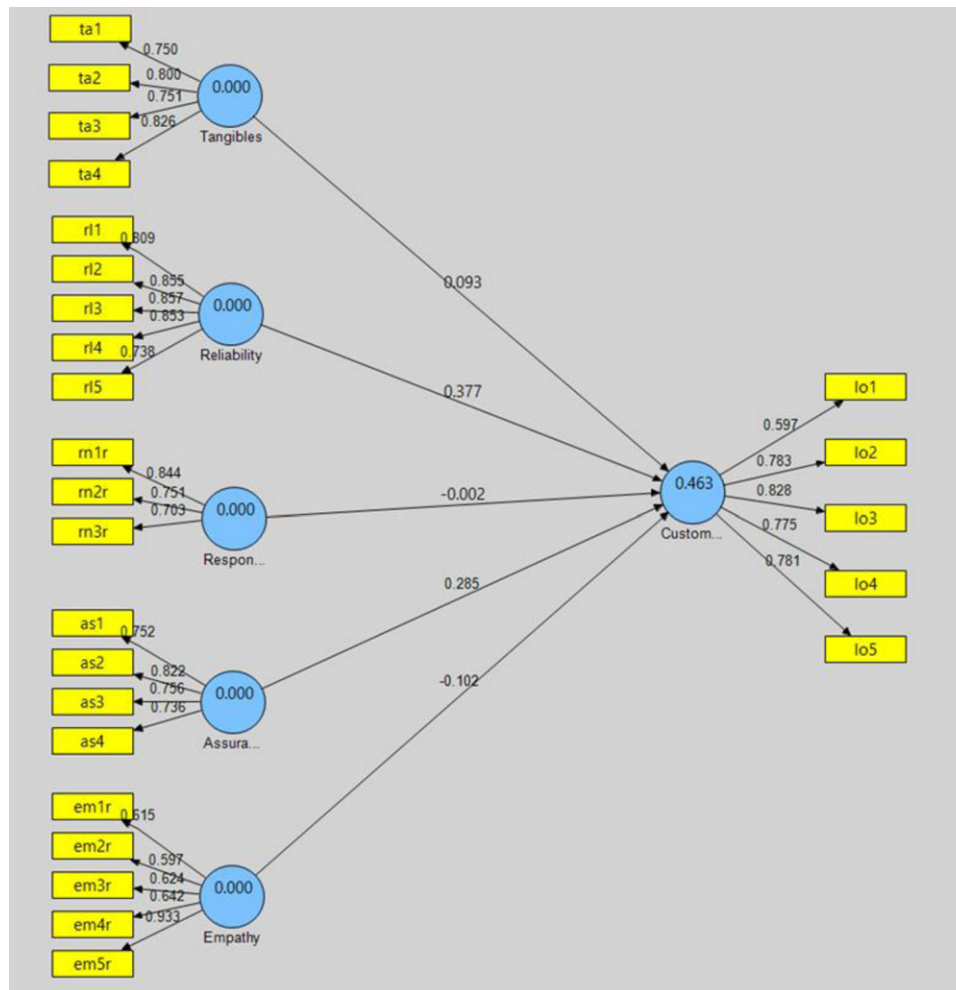


Fig. 2 – Measurement model and estimates.

‘attitudinal loyalty’ was measured using five items, based on the scale developed by [Butcher et al. \(2001\)](#). All the constructs were reflective in nature. The overall measurement model and related estimates are presented in [Fig. 2](#).

#### 4.2. Measurement model estimation

The reliability and validity of the measurement model (or outer model) were tested using the SmartPLS software. Indicator reliability, composite reliability, average variance extracted (AVE) values, communality, and cross-loadings of each item for the constructs were observed ([Fornell & Larcker, 1981](#); [Hair et al., 2016](#)). Internal consistency was evaluated using the Cronbach's alpha score, which reflected an acceptable value (greater than 0.7) for all the constructs. The internal consistency for the constructs was also observed using the composite reliability scores, which were found within the acceptable range (0.70-0.90) ([Hair et al., 2014](#), p. 102). [Table 2](#) shows these

Table 2 – Reliability statistics.

	AVE	Composite Reliability	Cronbach's Alpha	Communality
Assurance	0.588475	0.850958	0.769001	0.588475
Customer loyalty	0.572939	0.868994	0.811330	0.572939
Empathy	0.480913	0.817486	0.817538	0.480910
Reliability	0.678255	0.913100	0.880550	0.678255
Responsiveness	0.590060	0.811067	0.679486	0.590059
Tangibles	0.612211	0.863086	0.790322	0.612211

**Table 3 – Cross loadings– discriminant validity statistics.**

	Assurance	Customer loyalty	Empathy	Reliability	Responsiveness	Tangibles
as1	<b>0.751985</b>	0.407744	0.036322	0.482438	–0.012188	0.455783
as2	<b>0.821685</b>	0.463388	0.043577	0.562298	–0.018443	0.451155
as3	<b>0.755764</b>	0.356794	–0.022450	0.415924	–0.052789	0.375191
as4	<b>0.736257</b>	0.544557	–0.142655	0.548520	–0.143752	0.436960
em1r	–0.018360	–0.041047	<b>0.615172</b>	0.071928	0.398244	0.050255
em2r	0.045500	0.009499	<b>0.596451</b>	0.102234	0.389026	0.119170
em3r	–0.011320	–0.024205	<b>0.623618</b>	0.042849	0.471446	–0.007524
em4r	–0.047418	–0.038765	<b>0.641607</b>	0.013091	0.391901	–0.055169
em5r	–0.026780	–0.133859	<b>0.932542</b>	–0.035257	0.343340	–0.015627
lo1	0.342247	<b>0.597455</b>	–0.112422	0.323174	–0.125893	0.230677
lo2	0.472887	<b>0.782554</b>	–0.070828	0.431007	–0.040535	0.333549
lo3	0.507222	<b>0.827636</b>	–0.112157	0.587695	–0.066153	0.464181
lo4	0.370380	<b>0.774969</b>	–0.155714	0.464713	–0.230291	0.371917
lo5	0.521447	<b>0.780884</b>	–0.012040	0.514094	–0.015268	0.412667
rl1	0.500174	0.492546	–0.015777	<b>0.808569</b>	–0.094027	0.523737
rl2	0.574245	0.542310	0.026433	<b>0.854872</b>	–0.078555	0.480993
rl3	0.551518	0.544505	0.021481	<b>0.857171</b>	–0.086432	0.522864
rl4	0.546968	0.540776	–0.063585	<b>0.853078</b>	–0.065982	0.531175
rl5	0.576355	0.448842	0.005336	<b>0.737701</b>	–0.049264	0.510035
rn1r	–0.117412	–0.108098	0.300285	–0.106821	<b>0.858545</b>	–0.144298
rn2r	–0.035062	–0.067877	0.449150	–0.010059	<b>0.729314</b>	–0.025120
rn3r	0.082973	–0.050804	0.511694	0.003699	<b>0.665163</b>	–0.028399
rn4r	0.098603	0.027222	0.445587	0.115423	<b>0.363618</b>	0.065534
ta1	0.347381	0.367335	–0.067902	0.456899	–0.070792	<b>0.749648</b>
ta2	0.475860	0.340505	0.053832	0.474848	–0.089581	<b>0.799598</b>
ta3	0.473727	0.332569	–0.053390	0.421968	–0.172562	<b>0.751337</b>
ta4	0.473213	0.469541	0.004220	0.570317	–0.069317	<b>0.826442</b>

reliability statistics. It is clear that the individual item reliability for all the items was found satisfactory, except the fourth item for responsiveness (0.364) that was dropped, and met the criteria of convergent validity as expressed by [Hair, Ringle, and Sarstedt \(2011\)](#).

The discriminant validity of constructs was measured using two methods– (i) the cross-loadings of the indicators, (ii) by the Fornell Larcker criterion (comparison of AVE value with the associated correlations). The cross-loadings are presented in [Table 3](#) with the highest value in boldface for each row while the AVE and the associated correlations are presented in [Table 4](#), which presents the square root of each AVE on the diagonal (in bold) and the correlation coefficients (off-diagonal) for each construct in the relevant rows and columns. The discriminant validity was ensured by both the criteria. However, a new criterion the heterotrait-monotrait (HTMT) has been developed to deal with the disadvantages associated with Fornell-Larcker criterion and (partial) cross-loadings ([Henseler, Ringle, & Sarstedt, 2015](#)). According to this criterion, the highest HTMT values must be less than 0.85 and 0.9 respectively for normal and inferential purposes, which in this case were 0.82 and 0.92 respectively. HTMT results were also supportive of the discriminant validity.

#### 4.3. Structural model estimation and test of hypotheses

After confirming the suitability of the measurement model (outer model), the estimation for the structural model (inner model) was conducted. [Fig. 3](#) presents various estimates including the value of path coefficients pertaining to five dimensions of service quality and the overall variance on customer loyalty caused by them.

Overall, the SERVQUAL dimensions explained 46.2% of the variance in customer loyalty. [Table 5](#) presents the path coefficient and the *T*-values — acquired after the process of bootstrapping — for the test of hypotheses. Hypothesis 1 postulating that tangibles affect the attitudinal loyalty of customers positively was not supported (*t* value <1.96 at 5% level of significance). Hypothesis 2 postulating that reliability affects the attitudinal loyalty of customers positively was supported. Hypothesis 3

**Table 4 – AVE and the correlations between constructs.**

	Assurance	Customer loyalty	Empathy	Reliability	Responsiveness	Tangibles
Assurance	<b>0.767</b>					
Customer loyalty	0.593	<b>0.757</b>				
Empathy	–0.037	–0.118	<b>0.693</b>			
Reliability	0.666	0.626	–0.006	<b>0.824</b>		
Responsiveness	–0.061	–0.106	0.500	–0.068	<b>0.768</b>	
Tangibles	0.565	0.491	–0.019	0.622	–0.105	<b>0.782</b>



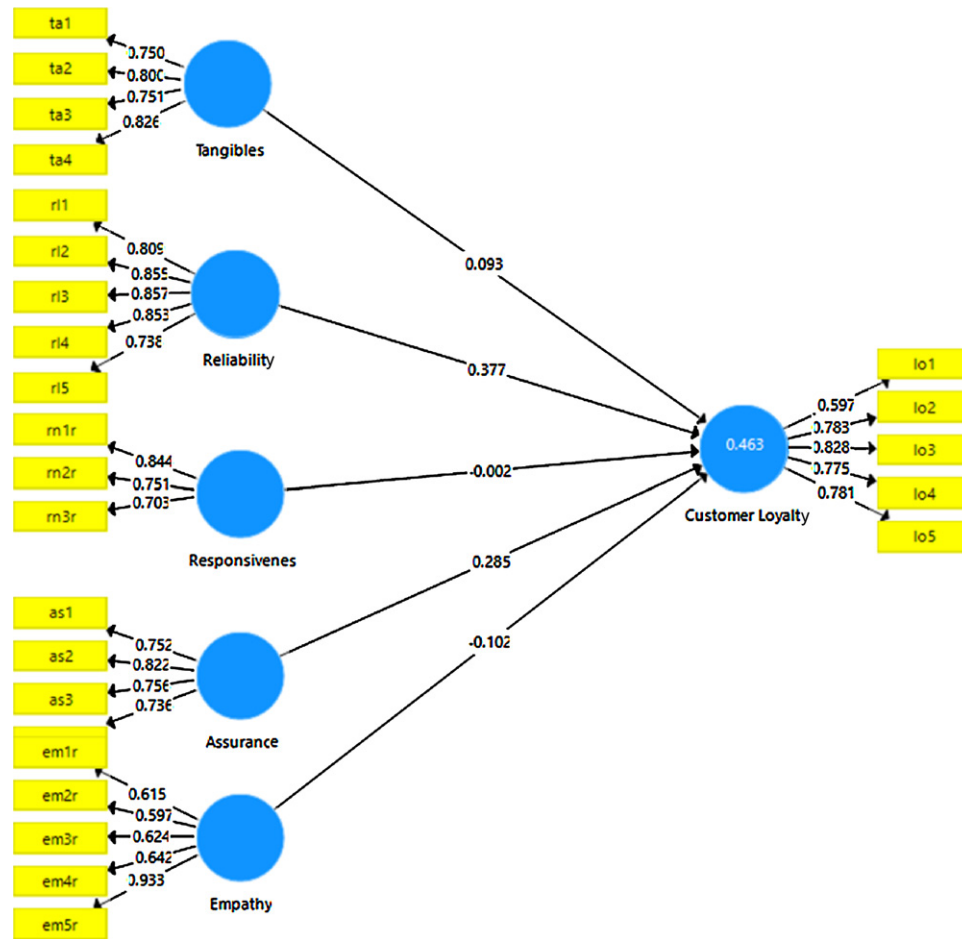


Fig. 3 – Structural model and estimates.

postulating that responsiveness affects the attitudinal loyalty of customers positively was not supported. Hypothesis 4 postulating that empathy affects the attitudinal loyalty of customers positively was also not supported. Hypothesis 5 postulating that assurance affects the attitudinal loyalty of customers positively was supported. It emerged that only assurance and reliability of telecom services affect customer loyalty, positively, in Oman (Table 5). To analyze whether these hypothetical relationships differ among the customer groups of the two organizations, a Multigroup Analysis (MGA) following the procedures prescribed by Ringle, Wende, and Becker (2015). No significant difference between the inner loadings of SERVQUAL dimensions and Customer Loyalty was observed between two groups of customers (Table 6).

## 5. Discussion

This study assessed the quality of services of two companies Omantel and Ooredoo, the main telecommunication operators in Omani sector, to test the relationship of each SERVQUAL dimension with the attitudinal loyalty. The results of this study found

Table 5 – Path coefficients (mean, STDEV, T-values).

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STERR )	p-values
Assurance → customer loyalty	0.285	0.289	0.058	4.930	0.000
Empathy → customer loyalty	-0.102	-0.079	0.082	1.253	0.213
Reliability → customer loyalty	0.377	0.372	0.067	5.671	0.000
Responsiveness → customer loyalty	-0.002	-0.025	0.053	0.044	0.965
Tangibles → customer loyalty	0.093	0.092	0.062	1.499	0.132

**Table 6 – Multi-group analysis (MGA) outputs.**

	Path coefficients-diff ( Omantel – Ooredoo )	p-value (Omantel vs Ooredoo)
Assurance → customer loyalty	0.078	0.246
Empathy → customer loyalty	0.080	0.743
Reliability → customer loyalty	0.027	0.581
Responsiveness → customer loyalty	0.083	0.764
Tangibles → customer loyalty	0.145	0.880

only reliability and assurance dimensions of the SERVQUAL model significant in affecting customer loyalty positively in the case of both companies. The other dimensions– tangibles, responsiveness, and empathy did not reveal any significant association with customer loyalty.

The outcomes of this study are in line with the research done by [Al Darey and Saleh \(2009\)](#) who also found reliability and assurance as significant dimensions affecting customer loyalty. According to [Parasuraman et al. \(1988\)](#), reliability means the ‘ability to perform the promised service dependably and accurately’ and the assurance means the ‘knowledge and courtesy of employees and their ability to inspire trust and confidence’. Both of these dimensions are important for the customers of telecommunication services, for they need to subscribe to a dependable and accurate service at its core followed by good after-sales services from the employees inspiring trust and confidence. It is important to discuss why tangibles, responsiveness, and empathy were unable to make an impact on customer loyalty. Tangibles mean physical facilities, equipment, and appearance of personnel, which in case of telecommunication services, unlike restaurant or hospitals, remain largely behind the line of visibility. Similarly, responsiveness, which means a willingness to help customers and provide prompt service, remains largely system dependent, unlike restaurants or hospitals, once the customers are assured of services ([Prentice, 2013](#)). Likewise, customers in the telecom situation do not need the individualized attention of the firm, as the services are system supported and are extremely standardized, so the empathy dimension might not play a noticeable role in informing the customer loyalty. It would be worth conceptualizing that given the line of visibility of services, the remaining dimensions of service quality; i.e., tangibles, responsiveness, and empathy that were unable to make an impact upon the attitudinal loyalty, might be decisive to influence the behavioral loyalty. [Prentice \(2013\)](#) also find the role of customer’s behavioral loyalty for shorter-term benefits.

However, maintaining a battery of loyal customer is very crucial in the highly competitive telecom market, which is characterized by a low switching cost. Service quality makes a wider impact on customer commitment and loyalty and prevents switching ([Davis-Sramek et al., 2009](#); [Gustafsson et al., 2005](#); [Ladhari & Leclerc, 2013](#)). The results of this research reveal the relative importance for the SERVQUAL dimensions in affecting attitudinal loyalty of telecom customers in Oman. It can be argued that by stressing on the reliability and assurance dimensions, telecom companies can secure a better positioning in their target markets and this may help in building the attitudinal loyalty and profitability in the long term. Customer loyalty has been studied from the angles of attitudinal and behavioral loyalty. Whilst the study of attitudinal loyalty is important for the long-term profitability of the firm, the study of behavioral loyalty is the key to customer retention in the short term ([Kaur Sahi, Sambyal, & Sekhon, 2016](#); [Kumar & Shah, 2004](#); [Liang & Wang, 2007](#)).

### 5.1. Limitations and direction for further research

The findings of this research cannot be generalized for the other industries, neither the effect of SERVQUAL dimensions on the attitudinal loyalty nor the order of effect of these dimensions on the attitudinal loyalty. This research measured only the attitudinal loyalty of the customers, not the behavioral loyalty. The results are more likely to suit the Omani telecommunication sector in particular and the GCC countries in general and should be cautiously interpreted in other contexts. More studies following qualitative or quantitative approaches to examine the relationship between service quality and customer loyalty by incorporating attitudinal and behavioral dimensions or a combination of these are, therefore, necessary. The future researchers can also expand this study to other sectors is highly recommended to know which dimensions of SERVQUAL affect customer loyalty in Oman in particular or the Arab world in general.

## 6. Conclusions

Intense competition and shifting loyalties in the Omani telecommunication sector are forcing companies to focus service quality for increased customer satisfaction, customer loyalty, and profitability. Customer satisfaction, led mainly by the quality of services, is the key to prevent customers from switching to competitors. This study assessed the quality of services for the two major telecommunication companies in the Sultanate of Oman– Omantel, and Ooredoo– using SERVQUAL model, and compared their services based on five SERVQUAL dimensions, i.e., tangibles, reliability, responsiveness, assurance, and empathy. This study revealed why it is important for telecom companies to measure their services from the perspective of securing the attitudinal loyalty of customers and improve them continuously for the long-term profitability. This study tested the effect of tangibles, reliability, responsiveness, assurance, and empathy on the attitudinal loyalty of the customers of Omantel and Ooredoo,

collectively and separately. The study concluded that not all the SERVQUAL dimensions affect attitudinal loyalty of telecom customers in Oman. Only reliability and assurance made a positive effect on customers' attitudinal loyalty collectively and the hypothesized effect of tangibles, responsiveness and empathy on attitudinal loyalty was not supported. The multi-group analysis did not reveal any significant difference separately for Ooredoo and Omantel customers in terms of the hypothesized relationships. The results suggest that by focusing on the reliability and assurance dimensions of the SERVQUAL model while positioning their services, telecom companies in Oman can develop a higher attitudinal loyalty and profitability in the long term.

### Conflict of interest

None.

### Appendix A. Coding of SERVQUAL and consumer loyalty dimensions

	Questionnaire statements.	Dimensions	Code
1	The company has up-to-date equipment.	Tangibles	Ta 1
2	The company's physical facilities are visually appealing.	Tangibles	Ta 2
3	Company's employees are well dressed and appear neat.	Tangibles	Ta 3
4	The appearance of the physical facilities of the company is in keeping with the type of services provided.	Tangibles	Ta 4
5	When the company promises to do something by a certain time, it does so.	Reliability	Rl 1
6	When you have problems, the company is sympathetic and reassuring.	Reliability	Rl 2
7	The company is dependable.	Reliability	Rl 3
8	Company provides its services at the time it promises to do so.	Reliability	Rl 4
9	The company keeps its records accurately.	Reliability	Rl 5
10	The company does not tell customers exactly when services will be performed.	Responsiveness	Rn 1
11	You do not receive prompt service from the company's employees.	Responsiveness	Rn 2
12	Employees of the company are not always willing to help customers.	Responsiveness	Rn 3
13	Employees of the company are too busy to respond to customer requests promptly.	Responsiveness	Rn 4
14	You can trust employees of the company.	Assurance	As 1
15	You feel safe in your transactions with the company's employees.	Assurance	As 2
16	Employees of the company are polite.	Assurance	As 3
17	Employees get adequate support from the company to do their jobs well.	Assurance	As 4
18	The company does not give you individual attention.	Empathy	Em 1
19	Employees of the company do not give you personal attention.	Empathy	Em 2
20	Employees of the company do not know what your needs are.	Empathy	Em 3
21	The company does not have your best interests at heart.	Empathy	Em 4
22	The company does not have operating hours convenient to all their customers.	Empathy	Em 5
23	You think of this company as your company.	Attitudinal loyalty	Lo 1
24	It would bother you if you switch to another company tomorrow.	Attitudinal loyalty	Lo 2
25	You will strongly recommend the company to friends.	Attitudinal loyalty	Lo 3
26	If the company is busy, you will not go elsewhere.	Attitudinal loyalty	Lo 4
27	This is your favorite company, by a long way.	Attitudinal loyalty	Lo 5
N.B.: The questionnaire in Arabic can be made available on request.			

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