TELECOMMUNICATION SECTOR OF SAUDI ARABIA: INTERNAL AND EXTERNAL ANALYSIS

Anis Ali, Prince Sattam bin Abdulaziz University
Mohammad Imdadul Haque, Prince Sattam bin Abdulaziz University

ABSTRACT

Telecommunication sector plays a vital role in development of any economy. This study takes a holistic approach of studying the sales, financial performance, customer satisfaction and service quality. A comparative study of the three major telecom service providers is planned here. Financial performance of service providers indicates STC as the best, while Zain currently has the highest net sales. Overall customer satisfaction is much lower in the telecommunication sector. Also, customers' perception about the quality of service is lower than the expectations in terms of all the dimensions of SERVQUAL. But, the results indicate that there is neither any significant difference between the satisfactions of customers from their respective service providers nor there is any significant difference between aspects of service quality of different service providers. This is both a problem and opportunity for this sector. Increasing quality of services would lead to increase in customer satisfaction and finally increase sales and profits.

Keywords: Telecommunication, Customers Satisfaction, Profitability, Ratio Analysis, SERVQUAL, Saudi Arabia.

INTRODUCTION

Nowadays, Telecommunication industry has become integral part of development of any country. The telecommunication industry plays its role in all aspects of a country. A country's other sectors like education, agriculture, business and health sectors, etc., are also getting benefits from information and communication technology. In Kingdom of Saudi Arabia, need and necessity was first realized in 1926 and a royal decree was issued for the establishment of posts, telegraphs and telephones under the ministry of Kingdom's internal affairs. Since then, Saudi government is giving importance and support to the telecommunication in different sectors. In 1926, twenty wireless stations were installed to connect all the towns and villages and further in 1984 the first fiber optic network was operated and in 1995 mobile service came into operation (Brief history- MCIT, Saudi Arabia). Since then the telecommunication sector of Kingdom of Saudi Arabia has contributed significantly to the economic development (Al Gahtani, 2011)

The telecom sector of Saudi Arabia was privatized in1998 and the regulatory authority Communication and Information Technology Commission (CITC) was established in 2001. The services provided in Saudi Arabia can basically be categorized into fixed telephone service, mobile phone service and internet services. Until 2004, only STC which was owned by the government used to provide telecommunication. Later, Mobily and Zain entered the telecommunication sector in 2007 and 2009 respectively. In the ICT development index published by United Nations, rank of Saudi Arabia improved from 73 in 2002 to 45 in 2016. In 2016, mobile cellular telephone subscription per 100 inhabitants was 176.59; percentage of household with internet access was 94. For the year 2015 the highest net sales was to STC,

followed by Mobily and Zain. The overall performance of satisfactory in sales of STC, Mobily and Zain is revealing decreasing trend (Table 1).

This study has broadly three objectives. First one is to analyze the financial ratios of telecommunication service providers in Saudi Arabia. Second one is to assess the differences in the level of customer satisfaction and service quality amongst service providers. And finally, to establish a relationship between sales, customer satisfaction, service quality and financial performance of the service providers.

REVIEW OF PAST LITERATURE

Over the years, there have been extraordinary technological innovations in the telecommunication sector. This has led to severe competition among the providers of telecommunication services. This competition has led to be viewed beyond just providing service. At present, service providers are forced to strive for consumer satisfaction and loyalty by providing better quality of services (Rajeswari, 2017). This relationship between service quality dimensions and customer loyalty in the telecom sector has been established by Shafei & Tabaa (2016) and Izogo (2017). Financial analysis, through a review of different ratios, helps in identifying the strength and weakness of an organization (Khan & Saifuddin 2016). These ratios are the elements to gauge a firm's performance in the telecom sector (Jan, 2017). Measuring customer satisfaction is part of the external analysis of firms and studying the trends in financial ratios is part of the firm's internal analysis (Nabi et al., 2017). There is a positive and significant relationship between customer satisfaction and firms' profitability. This has been established by Shaheen & Naseem (2015) in service sector, Hosseini & Shahmoradi (2016) and Belas & Gabcova (2016) in banks, and by Frennea & Mittal (2017) in different type of firms.

Talet et al. (2011) investigated about the quality of services provided by telecom companies and its effect on customer satisfaction. They found that customer service significantly influences customer satisfaction. Customers' satisfaction is the main factor that helps to maintain existing customers in business and tries to attract more. Increasing number of customers play significant role in improving the profitability and operational performance. Al-Aali et al. (2011) used a modified SERVQUAL and found that there were significant differences in customers' perceptions of the overall service quality. They have added network quality and competitive advantage to the original five dimensions of SERVQUAL. STC was lacking in all dimensions except for network quality.

Alam and Salim (2012) found a positive relation between service quality, brand image, price perception and customer's satisfaction and revealed that the customers always prefer to buy a service that they trust. They studied the marketing strategies in the Saudi perspective and found that service quality affected customer loyalty through customer satisfaction.

Kadasah (2014) compared the service quality of STC and Mobily and found that Mobily was best in all the dimensions of service quality. Sharma (2014) observed in his research paper about customers satisfaction in telecommunication sector in Saudi Arabia. He noticed that 'customers satisfaction' depended upon customer care service, promotion schemes and service quality and the main factors of the customers satisfaction were coverage of network, promotional and value added schemes, SMS and MMS quality , customer care services.

Al Saleh and Othman (2015) studied ethics and customer satisfaction and found that there were differences in terms of satisfaction from different companies. Saleh et al. (2015) identified customer service, service pricing, and service quality as important factor determinants for satisfaction of customers in the telecom sector. Service quality is the utmost significant aspect

that leads to customer satisfaction, the other being customer service and service pricing. Khizindar et al. (2015) studied that the variables like price, service quality, brand image affected customer loyalty in the telecom sector in Saudi Arabia. They emphasized on value added services and customer relationship management.

Al Rawashdeh (2015) in their study compared the financial analysis of two telecom providers of Saudi Arabia namely, STC and Mobily from 2008 to 2012. They find that both the companies are performing well though the current ratio is feeble for both of them. The study also finds that Mobily's profitability ratios are performing better than STC but collection period and asset management is better in STC than Mobily.

Review of past literature showed that there had been few studies on customer satisfaction and service quality in the telecom sector of Saudi Arabia. But a comparison of the gap scores amongst the three major telecommunication service providers was missing. Also, a comprehensive study which studied the profitability of the sectors was also missing. A study of these missing elements is the significance of this study.

RESEARCH METHODOLOGY

The financial data is obtained from the income statement and balance sheet of all the companies (as available on tadawul.com). The research depends on the primary and secondary data collected from the website of *Tadawul*, but primary information is also collected from different types of respondents according to the need and requirement of the research. The analysis is static in nature and the financial information used in this research paper is as on 31 December, 2015.

Ratio analysis, trend analysis and different analytical tools are used to analyze the secondary data and information to fulfill the requirement of the study. Also a questionnaire is administered to know customer preferences. Though it is planned to take a convenience sample of faculty, staff and students of College of Business Administration, Al Kharj but the researchers plan to take random samples as much as possible. Also, responses would be subject to hypothesis testing for deriving conclusions.

In addition, in the next section a commonly used scale of SERVQUAL developed by Parasuman et al. (1998) is used to judge the service quality of different telecom operators. This SERVQUAL measures the gap between the perceptions and expectations of users with respect to five items namely, Tangibles, Reliability, Responsiveness, Assurance and Empathy. Though some previous studies have modified SERVQUAL scale by incorporating price, which is not done here as call rates and charges for internet and other value added services is almost the same over here in Saudi Arabia. Also, some researchers have incorporated brand image in their analysis but here it is not done as in the culture of Saudi Arabia it is not a matter of pride to be associated with a particular telecom company. Similarly, brand loyalty has also not been considered as it is here taken to be synonymous with customer satisfaction. The reason is that there is portability over here in Saudi Arabia. If one is not satisfied with the services, he can very easily switch to different provider without having to change his number.

Chi square (χ^2) test is applied to study the difference between proportions and the null hypothesis not rejected when the calculated chi square value is less than the critical value at 5% level of significance

$$\text{Chi Square} = \sum \frac{(\text{Frequency observed} - \text{Frequency expected})^2}{\text{Frequency expected}}$$

Also, randomized complete block analysis of variance (ANOVA) will be used to study for differences between telecom companies in terms of the SERVQUAL dimensions.
F ratio between blocks=Mean Square Blocking/Mean Square Within
F ratio between samples=Mean Square Between/Mean Square Within
The null hypothesis of no difference is accepted if the p value is more than 0.05 for 5% significance level and vice versa.

DATA ANALYSIS AND INTERPRETATION

The weak performance of the telecommunication companies is the result of their weak operational efficiency and externally their inappropriate or inefficient marketing and low customer's satisfaction. Low quality of services, increased prices, and brand image affect the customer's loyalty and lead to attracting the customers from one service provider to another service provider. Customer's satisfaction and operational efficiency are the responsible factors for the positive results of a telecommunication service provider company. The factors which are responsible for the profitability and financial position of the companies can be broadly classified into two categories- Internal factors and External factors. So, analysis of the service companies can be bifurcated into two categories, i.e., internal analysis and external analysis. Internal analysis basically refers maximization of profit, wealth and efforts. These are to minimize the expenses and maximize the revenues and utilization of the resources. The internal and external factors of any organization are interrelated and both are responsible for the company's growth and development. An idea of the net sales of the three major companies and its trend in Saudi Arabia can be seen from the table below:

Table 1
NET SALES AND TREND

Telecommunication Company	Financial Years			
	2015	**2014**	**2013**	**2012**
STC	50650612 (85)	45825640 (77)	45604629 (76)	59362589 (100)
Mobily	14424125 (61)	13995018 (59)	25190853 (107)	23642133 (100)
Zain	6741382 (110)	6170270 (101)	6455047 (106)	6106694 (100)

Source: Appendix Tables
Note: Net sales in thousand riyals; Trend in parenthesis

INTERNAL FACTOR ANALYSIS

The internal factors responsible for weak operational performance lie within an organization. These internal factors are due to lack of proper management of resources, inefficient controlling over expenses. Profitability, utilization of resources and paying ability of the companies form the basis of internal analysis.

Profitability

Profitability refers to the ability to earn profit. Profitability is the measurement of operational performance of a company. It is a relative measurement and calculated to get comparative earning capacity of the company. Ratio analysis and Trend analysis is the appropriate tool to analyze the comparative profitability of different companies (Ali & Haque, 2014). Ratios are logical relationship between the variables of financial statement. Trend analysis indicates the growth or changes of different aspects of the companies, So, Trend analysis is important to reveal the growth pattern of the companies and very helpful in revealing the comparative profitability of the companies.

The comparative profitability of the companies can be determined by calculating following ratios and trend pattern to know the positive and negative cumulative performance. Profitability is to be calculated through four ratios – Gross profit ratio, Net profit/income ratio, Operating expenses ratio, Operational profit ratio.

Gross Profit Ratio

Gross profit ratio is the ratio of Gross profit and net sales (Muralidhar, 2010) and indicates the efficiency in minimizing the manufacturing expenses. The higher gross profit ratio reveals the efficiency of smooth and effective operational or production activities. The Gross profit ratio of all companies is satisfactory (Appendices A.1.1 & A.1.2).

Net Profit Ratio

Net profit/income ratio is the logical relationship between net profit and sales (Gregory, 2004) and reveals the efficiency in managing operational expenses. The higher ratio is indication of efficient operating expenses and reduced cost of sales.

The Net profit of all the telecommunication companies is decreasing every year significantly (Appendix A.2.1).The Net Profit of Mobily and Zain are negative (Appendix A. 2.2). There is very little deviation in sales and Gross Profit STC. The sales of Mobily (Etihad Etisalat Co.) decreased in 2014 and 2015 resulting more decrement in Gross Profit. Gross profit of Mobily was positive in year 2012 (25.45%) and 2013 (26.50%) but became negative in 2014 (-11.26%) and 2015 (-7.58%) due to heavy downfall in sales to 39 % (SR 23642133 thousands in 2012 and SR 14424125 thousands in 2015) (Appendix A.2.2). Net profit of Zain has been negative for last four years but negativity is decreasing ever year. Sales of Mobily is increasing and resulting the decrement of the negative Net profit. Sales of Zain increased by 10% (Appendix A.2.2). The positive improvement in the negativity of Zain is because of operating leverage. So, it is an advice to Mobily Company to increase the turnover.

Operating Expenses Ratio

Operating expenses ratio is the ratio of operating cost (Sales Cost+Total Expenses) and net sales (Muralidhar, 2010) and measures manufacturing and operating efficiency jointly (Ali & Haque, 2014). The lower operating expenses ratio is indication of efficient manufacturing expenses and operating expenses. The operating expenses of STC are lesser than its net sales and decreasing every year (Appendix A.3.2). The operating expenses of Mobily and Zain are more than sales but there is decreasing trend in Zain and indicating good control over sales cost and

total expenses (Appendix A.3.1). There is 9,218,008 thousands SR or 39% decrement (23,642,133 thousands SR in 2012 and 14,424,125 thousands SR in 2015) in sales and 2,150,001 Thousands SR or 12% decrement (17,619,419 thousands SR in 2012 and 15,469,418 thousands SR in 2015) in operating expenses of Mobily. (Appendix A.3.2). As per above analysis, it is very clear that Mobily company is unable to control its operating expenses.

Operational Profit Ratio

Operational profit ratio is the ratio between operational profit and net and measures the operational performance. The high operational profit ratio is the indication of managing its all expenses against its cost (Ali and Haque, 2014).

Operational profit of STC is only positive while rest three companies operational profit is negative in 2015 (Appendix A.4.2). The negativity of all three companies is decreasing every year (Appendix A.4.1). All three negative Companies are decreasing negativity and improving their operational efficiency (Appendix A.4.1). There is 9,218,008 thousands SR or 39% decrement (23,642,133thousands SR in 2012 and 14,424,125 SR in 2015) in sales and 7,068,007 SR or 117% decrement in operational loss of Mobily company (Appendix A.4). In Zain sales is increased by 17249 thousands SR (6%) (Appendix A.4.2).The turnover of Mobily and Zain should be increased to get positive operational result.

Utilization of Resources

Utilization of resources refers that how efficiently it is utilizing its resources to generate income or profit. Utilization of the resources is the relationship between profit and total resources and shareholders fund. So, utilization of resources reflects under and over utilization funds or resources. The utilization of resources can be measured in organization by two ways.

Return on Total Asset/Resources

The return of total assets/resources ratio is the ratio of profit before tax/zakat and total assets (Muralidhar, 2010) and reflects the operational performance of the concern in respect of its total resources. A high percentage of return on total assets reveals the better utilization of resources (Ali and Haque, 2014).The return on total assets or resources is only positive in case of STC and negative in case of rest two companies (Appendix B.1.2). But, all negative return making companies are continuously improving their utilization of resources (Appendix B.1.1). The negative trend of all three companies is decreasing year by year. In Mobily company, there is 57, 62,693 thousands SR (20%) increment in the total assets while 70, 11,701 thousands SR (115%) decrement in the return on total assets (Appendix B.1.2). So, it is advised not to increase the ends SR (7%) decrement (23,559,347 thousands SR investments in total assets for Mobily Company. In Zain company, there are 16,70,025 thousand 2012 and 21,952,322 thousands SR in 2015) and 221,094 thousands SR (15%) decrement (15,02,71 thousands SR in 2102 and 12,80,977 thousands SR in 2015) in total assets, resulting 777,463 thousands SR (44%) decrement (17,49,412 thousands SR in 2012 and 971,949 thousands SR in 2015) and 126,025 thousands SR or 46% (274,124 thousands SR in 2012 and 148,099 thousands SR in 2015) in negative return on total assets (Appendix B.1.2). So, it advised Zain to reduce its investment in total resources.

Return on Shareholders Fund

Return on shareholders' fund is the ratio between profit after Zakat/tax and shareholders' equity (Muralidhar, 2010) and reflects the profitability for its real owners. High return on shareholders' fund indicates that how much shareholders are getting return from the corporation after all its dues. The return on shareholders' fund is positive in STC but negative in rest of the companies (Appendix B.2.2). The investment in the Mobily and Zain are not beneficial for the shareholders. In Mobily, return on shareholders' fund was positive in 2012 and 2013 but suddenly got reduced and became negative due to heavy downfall in sales of 73,09,438 thousands SR or 31% (23,963,329 Thousands SR in 2013 and 16,6 53,891 SR IN 2014) resulting 124% (66,76,553 thousands SR in 2013 and -15,75,805 SR in 2014) decrement in return (Appendix B.2.2). Hence it is advised to Mobily Company to increase the turnover. The return on shareholders' fund is negative in case of Zain (Appendix B.2.1) due to no control over operational expenses

Financial Soundness and Paying Ability

The term financial soundness and ability refers ability to make payment of its liabilities or dues. The financial soundness of a company can be measured after making the relationship between available resources to make payment and due liabilities to pay. Financial soundness and paying ability can be bifurcated into two. First, long term paying ability is the ability of the companies to pay its long-term debts depending upon capital structure and utilization of resources. Working on equity and weak operational performance is harmful for the company's long term paying ability. Second, short term paying ability depends upon the availability of cash and cash equivalent to pay short-term responsibilities of the company. Therefore, short term and long term paying ability of the company can be measured after calculating current and debt equity ratio.

Current Ratio

Current ratio is the ratio between current assets and current liabilities of concern (Babalola & Abiola, 2013) and measures the short term paying ability. This ratio indicates that how a business concern is able to make its short time payments. There should be an optimum ratio between current assets and current liabilities. The highest ratio is the symbol of blockage of funds while the lowest ratio indicates the weak short term paying ability. So, highest and lowest ratio should be avoided.

The STC company maintains the optimum current ratio (standard current ratio is 2:1). Current ratio in Mobily and Zain is at its lowest level and revealing the weak short term paying ability of the concern but another hand it is the reflection of utilization of maximum liquidity in purchasing of fixed assets or payment of long term liabilities (Appendix C.1.2). In Mobily, current ratio was satisfactory in 2013 but suddenly got decreased in 2014 due to investment in fixed assets of 33,39,433 thousands SR and decreasing in shareholders' equity of 73,09,438 thousands SR. In Zain, current ratio is not satisfactory but trend revealing improvement in short term paying ability of both companies since last 2102 (Appendices C.1.1 and C.1.2). In Zain, there is a reduction of 39, 00,183 thousands SR (84, 51,864 SR in 2012 and 45, 51,681 thousands SR in 2015) increment in current liabilities of Zain (Appendix C.1). So it is advised Zain to increase or retain shareholders' equity and efforts to increase cash sales and fast recovery from

debtors. In Zain, level of inventory should be reduced as it was 50,300 thousand SR in 2012 and 103,612 thousands SR in 2015 (53, 312 thousands SR or 106% increment) and corresponding there is 348,036 thousands SR or 8 % decrement in current assets (43, 40,309 thousands SR in2012 and 39, 92,273 thousands SR in 2015) (Appendix C.1.2 & http://www.Tadawul.com.sa/wps/portal/tadawul/market-participants/.Statement & indicators, Balance sheet, Mobile Telecommunication Company Saudi Arabia). If it is necessary to reduce shareholders equity, low interest rate debentures or bonds, etc. can be option in place of cash payment to shareholders.

Debt Equity Ratio

Debt-Equity ratio is the ratio between long term debt or non-current liabilities and shareholder's fund (Babalola & Abiola, 2013) and reveals the long term paying ability of the concern (Ali & Haque, 2014). There should be optimum balance debt and equity. High debt-equity ratio is helpful to achieve profitability but not advisable when the cost of capital is more than the normal rate of return.

STC Company is not working on equity as its debts are less than 20% since last four years. Mobily is also not working on equity as its equity ratio is below 100% (Appendix C.1.2). The net profit ratio, operational profit ratio of Mobily and Zain are negative (Appendix A.2.2). The negativity of profit or return is most unfavorable while the companies are working on equity. So, Zain Company's fund management is not appropriate as this company manages most of its fund from external sources and this might be very harmful for the company's liquidity and paying capital cost. It is advised Zain not to increase debts in capital structure as the operational profit is negative but negativity is decreasing year by year (Appendix A.4.1). STC can increase external sources in capital structure to get benefits of working on equity as its operational efficiency is satisfactory and able to pay cost of external capital (Table 2 and Appendices A.4.1 and A.4.2)

Table 2
SUMMARY OF PROFITABILITY, UTILIZATION OF RESOURCES AND FINANCIAL SOUNDNESS RATIO

	A. Profitability				B. Utilization of Resources		C. Financial Soundness and Paying Ability	
Telecom Co.	**Gross Profit Ratio**	**Net Profit Ratio**	**Operating Expenses Ratio**	**Operational Income Ratio**	**Return on Total Assets**	**Return on shareholders fund**	**Current Ratio**	**Debt Equity Ratio**
STC	59.91	18.28	81.67	18.23	22.66	15.29	1.59	.16
Mobily	55.17	-7.58	107.25	-7.25	-2.72	-7.02	.44	.56
Zain	58.61	-14.42	114.42	-14.42	-4.43	-21.35	.61	3.30

Source: Appendix Tables

External Factor Analysis

Customer Satisfaction

In order to see the difference between different telecom operators a questionnaire was administered to 200 respondents. These respondents were staff and students of College of Business Administration in Al Kharj. Out of the total filled questionnaires 170 were used for analysis and the remaining omitted due to incomplete responses. 97 respondents were using STC 37 were using Mobily and 36 were using Zain. 38.57%, 27.58 % and 38.46 % of STC, Mobily and Zain customers are satisfied with the services. Overall, only 26.47% customers were satisfied with their telecom service providers. Chi square test was applied to see whether there was any difference in terms of satisfaction between different telecom users.

Table 3
SATISFIED AND DISSATISFIED CUSTOMERS OF STC, MOBILY AND ZAIN

	STC	Mobily	Zain	Total
Satisfied	27	8	10	45
Not satisfied	70	29	26	125
Total	97	37	36	170
Satisfied (%)	38.57	21.62	27.78	26.47
Not satisfied (%)	72.16	78.38	72.22	73.53

The null and alternate hypotheses were as follows:

Null Hypothesis: There is no significant difference in satisfaction between STC, Mobily and Zain users.

Alternate Hypothesis: There is a significant difference in satisfaction between STC, Mobily and Zain users.

The calculated chi square value is 0.57 (Appendix D.1) as the calculate chi square value is less than the table value at 5% significance level hence it is concluded that there is no significant difference between the operators in terms of satisfaction of users (Table 3).

SERVQUAL

The external factor is uncontrollable and affects organizations efficiency and results in low turnover or sales of goods and services. It is commonly accepted that external factors are governed by customer satisfaction. This satisfaction is derived from good quality of services in the service sector like telecommunication. In external factors, customer's satisfaction is affected by organization's tangibles, reliability of services, responsiveness to serve, assurance of contracted services and empathy to help customers (Parasuraman et al., 1988).

To explore further a commonly used scale of SERVQUAL is used. The Cronbach alpha for the statements on expected items was 0.934 and on perceived items was 0.904 (Appendix D.3), which is good enough to demonstrate reliability in the questionnaire. When perceptions are lower than expectations, it shows failure in the delivery of services. Normally expectations are more than perception implying that improvements are required. Tangibles had the highest

expectations and assurance had the lowest expectations. Even the highest perceived scores were of tangibles and the lowest perceived scores were of assurance. Overall, the highest gap for service providers was in the dimension of assurance and empathy. Empathy had the biggest gap for STC and Mobily for Zain the highest gap was in assurance. Overall, all the dimensions of service quality are lacking and need improvement. A glance at the gap score indicate that most of the score is close to each other. The largest gap score is -0.62 and the smallest gap score is -0.16 (Appendix D.2).

Table 4
GAP ANALYSIS OF CUSTOMERS' SATISFACTION

	Tangibles	Reliability	Responsiveness	Assurance	Empathy	Sum of Gaps
STC	-0.31	-0.35	-0.31	-0.35	-0.42	-1.74
Mobily	-0.4	-0.08	-0.39	-0.54	-0.62	-2.03
Zain	-0.16	-0.35	-0.35	-0.4	-0.26	-1.52
Sum of Gaps	-0.87	-0.78	-1.05	-1.29	-1.3	

In order to find out as to whether there is any significant difference between the gap scores of all the five dimensions for the three companies a test of Randomized block Analysis of Variance is conducted. Here the null and alternate hypotheses are as follows:

Null Hypothesis: There is no significant difference between the SERVQUAL dimensions for the three companies.

Alternate Hypothesis: There is a significant difference between the SERVQUAL dimensions for the three companies.

The null hypothesis is accepted, as the p value is greater than 0.05 at 5% level of significance. This can be seen with relation to the chi square test done earlier to test for significant differences in satisfaction between different service providers. Also, there is no significant difference found between the satisfaction levels of different service providers.

Outcomes of the Study

Internal Study Outcomes

On the basis of internal analysis, which is based on financial statement analysis of telecommunication companies it can be explained that the cost of providing telecommunication services is lesser that its sales price as all companies are managing their cost of production efficiently. The operational performance of all companies is not satisfactory as Net profit, Operational profit and operational expenses are revealing negativity except STC. The return on total resources and shareholders fund is negative in all companies excluding STC due to low turnover, uncontrolled operational expenses and excessive investment in business comparatively sales revealing underutilization of resources. The short term paying ability of STC is satisfactory only long paying ability of all companies is dissatisfactory as their Net profit and operational profits are negative except STC. So, it can be concluded that the all Saudi telecommunication companies are not performing well except STC.

External Study Outcomes

In terms of all the five dimensions the score of perceived is higher than the score of score of expected. This indicates that the customers are getting more than what they thought of. But if we go back to the question of whether you are satisfied with your telecom operator it is found that 73.52% (125/170) of the customers are not satisfied with their telecom operators. This here can imply that service quality is not enough to measure the significance of telecom users or that the expectations and demand of customers' needs to be probed further.

CONCLUSION

On the basis of Internal and External analysis and their interpretations of telecommunication companies of Kingdom of Saudi Arabia, it can be said that the operational performance, financial position and paying ability of all the telecommunication are not satisfactory except STC and this happens only because of low turnover and high operational expenses and underutilization of resources and fund. Externally, all the loss making companies have to increase their turnover after satisfying the expectations of the customers as the study reveals that the most of the customers are not satisfied with their service provider. Improved quality of service and the increased satisfaction level of customers will lead to increase the turnover and resulting increased profitability. Externally, all the poor operational performance companies have to control over their operational expenses to maximum utilization of resources and control over expenses.

An analysis of the financial ratios shows that except for Gross Profit ratio and Current Ratio where STC is the best followed by Zain and Mobily, in all other ratio STC is the best followed by Mobily and Zain (Table 2). Though STC is the best in terms of profitability but in terms of service quality, in general Zain has the smallest gap and Mobily has the largest gap. Hence in terms of service quality Zain is the best performer followed by STC and Mobily (Table 4). But the sale of STC is the highest followed by Mobily and Zain (Table 1). So, net sales is related to most (6 out of 8) financial ratios, there is a mixed relationship between sales, financial ratios and service quality. Nevertheless, as per the results of the testing of hypothesis, there is neither any significant difference between the satisfactions of customers from their respective service providers nor there is any significant difference between aspects of service quality of different service providers.

In this study, it is observed that despite low-level of satisfaction, companies are earning good profits. Increased turnover, controlled operational expenses and appropriate capital structure will improve profitability, financial soundness and efficiency of operational performance. Since there are only three major players improving the service quality and subsequently the customer satisfaction could be the key to success and out compete each other. However, the results here indicate that customer satisfaction and service quality is the same for all the companies but the real picture is not captured, as the market structure is not taken into consideration. This is a limitation of the study. Scope for further research would be to study the market structure in the telecommunication sector. In addition, this would be an opportunity for a new entrant in this sector to provide excellent service quality and capture market share.

APPENDIX

APPENDIX A.1.1

TREND OF GROSS PROFIT RATIO

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	59.91 (105)	61.44 (108)	60.11 (106)	56.58 (100)
Mobily	55.17 (108)	49.30 (97)	51.40 (100)	50.90 (100)
Zain	58.61 (131)	52.23 (117)	48.56 (108)	44.83 (100)

APPENDIX A.1.2

GROSS PROFIT RATIO

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	30344819*100/ 50650612 =59.91%	28155631*100/ 45825640 =61.44%	27413244*100/ 45604629 =60.11%	33589298*100/ 59362589 =56.58%
Mobily	7958088*100/ 14424125 =55.17%	6899152*100/ 13995018 =49.30%	12948166*100/ 25190853 =51.40%	12033806*100/ 23642133 =50.89%
Zain	3951103*100/ 6741382 =58.61%	3222650*100/ 6170270 =52.23%	3134855*100/ 6455047 =48.56%	2859921*100/ 6106694 =44.83%

Figures are in thousand riyals

Gross Profit Ratio=Gross Profit*100/Net sales

APPENDIX A.2.1

TREND OF NET PROFIT/INCOME RATIO

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	18.28 (149)	23.91 (195)	21.70 (177)	12.26 (100)
Mobily	-7.58 (-129)	-11.26 (-144)	26.50 (104)	25.45 (100)
Zain	-14.42 (50)	-20.58 (71)	-25.58 (89)	-28.65 (100)

Where, Gross profit=Sales-Sales cost

APPENDIX A.2.2

NET PROFIT/INCOME RATIO

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	9258428*100/ 50650612 =18.28%	10959490*100/ 45825640 =23.91%	9897067*100/ 45604629 =21.70%	7275959*100/ 59362589 =12.26%
Mobily	-1093125*100/ 14424125 =-7.98%	-1575805*100/ 13995018 =-11.26%	6676553*100/ 25190853 =26.50%	6017653*100/ 23642133 =25.45%
Zain	-971949*100/ 6741382 =-14.42%	-1269565*100/ 6170270 =-20.58%	-1651465*100/ 6455047 =-25.58%	-1749412*100/ 6106694 =-28.65%

Figures are in thousand riyals

$$\text{Net Profit/Income Ratio} = \frac{\text{Net Profit/Loss}*100}{\text{Net sales}}$$

APPENDIX A.3.1

TREND OF OPERATING EXPENSES RATIO

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	81.67 (91)	77.78 (87)	81.03 (91)	89.28 (100)
Mobily	107.25 (144)	111.57 (150)	74.21 (100)	74.53 (100)
Zain	114.42 (89)	120.58 (84)	125.58 (98)	128.65 (100)

Where, Net profit=Sales+Other Revenue – (Sales cost+All operating expenses+Zakat)

APPENDIX A.3.2

OPERATING EXPENSES RATIO

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	41368406*100/ 50650612 =81.67%	35597176*100/ 45825640 =77.68%	36953128*100/ 45604629 =81.03%	52997098*100/ 59362589 =89.28%
Mobily	15469418*100/ 14424125 =107.25%	15614100*100/ 13995018 =111.57%	18693057*100/ 25190853 =74.21%	17619419*100/ 23642133 =74.53%
Zain	7713331*100/ 6741382 =114.42%	7439835*100/ 6170270 =120.58%	8106512*100/ 6455047 =125.58%	7856106*100/ 6106694 =128.65%

Figures are in thousand riyals

Operating Expenses Ratio=Operating Cost*100

Net Sales

Where, Operating Cost=Sales+Total Expenses

APPENDIX A.4.1 **TREND OF OPERATIONAL PROFIT RATIO**				
Telecommunication Company	**Financial Years**			
	2015	**2014**	**2013**	**2012**
STC	18.23 (170)	22.32 (208)	18.97 (177)	10.72 (100)
Mobily	-7.25 (-128)	-11.57 (-145)	25.79 (101)	25.47 (100)
Zain	-14.42 (50)	-20.58 (73)	-25.58 (89)	-28.65 (100)

APPENDIX A.4.1 **OPERATIONAL PROFIT RATIO**				
Telecommunication Company	**Financial Years**			
	2015	**2014**	**2013**	**2012**
STC	9282206*100/ 50650612 =18.33%	10228460*100/ 45825640 =22.32%	8651501*100/ 45604629 =818.97%	6365491*100/ 59362589 =10.72%
Mobily	-1045293*100/ 14424125 =-7.25%	1619082*100/ 13995018 =-11.57%	6497796*100/ 25190853 =25.79%	6222714*100/ 23642133 =25.47%
Zain	-971949*100/ 6741382 =-14.42%	-1269565*100/ 6170270 =-20.58%	-1651465*100/ 6455047 =-25.58%	-1749412*100/ 6106694 =-28.65%

Figures are in thousand riyals

Operational Profit Ratio=Operational Profit*100
Net Sales

Where, Operational profit=Sales–(Sales cost+Operating Expenses)

APPENDIX B.1.1 TREND OF RETURN ON TOTAL ASSETS/RESOURCES				
Telecommunication Company	**Financial Years**			
	2015	**2014**	**2013**	**2012**
STC	22.66 (287)	27.82 (280)	23.79(240)	9.91 (100)
Mobily	-2.72 (13)	-4.50 (21)	-21.67 (100)	-21.59 (100)
Zain	-4.43 (60)	-5.78 (78)	-7.20 (97)	-7.43 (100)

APPENDIX B.1.2 RETURN ON TOTAL ASSETS				
Telecommunication Company	**Financial Years**			
	2015	**2014**	**2013**	**2012**
STC	10486022*100/ 46283470 =22.66%	12163421*100/ 43718353 =27.82%	10448292*100/ 43919674 =23.79%	8563150*100/ 86380000 =9.91%
Mobily	-924148*100/ 33959275 =-2.72%	-1535300*100/ 34117534 =-4.50%	6755022*100/ 31175771 =21.67%	6087553*100/ 28196582 =21.59%
Zain	-971949*100/ 21952322 =-4.43%	-1269565*100/ 21977139 =-5.78%	-1651465*100/ 22927215 =-7.20%	-1749412*100/ 23559347 =-7.43%

Figures are in thousand riyals

Return on total assets/Resources=Profit before tax/Zakat*100

Total resources or Assets

Where, Total resources or assets=Fixed assets+other assets

APPENDIX B.2.1 TREND OF RETURN ON SHAREHOLDERS FUND				
Telecommunication Company	**Financial Years**			
	2015	**2014**	**2013**	**2012**
STC	15.29 (124)	18.14 (147)	17.60 (143)	12.35 (100)
Mobily	-7.02 (-124)	-9.46 (-133)	27.86 (97)	28.78 (100)
Zain	-21.35 (103)	-23.24 (112)	-24.43 (118)	-20.70 (100)

APPENDIX B.2.2

RETURNS ON SHAREHOLDERS FUND

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	9258428*100/ 60541336 =15.29%	10959490*100/ 604223238 =18.14%	9897067*100/ 56229627 =17.60%	7275959*100/ 58895352 =12.35%
Mobily	-1093125*100/ 15560766 =-7.02%	-1575805*100/ 16653891 =-9.46%	6676553*100/ 23963329 =27.86%	6017653*100/ 20905776 =28.78%
Zain	-971949*100/ 4551681 =-21.35%	-1269565*100/ 5464004 =-23.24%	-1651465*100/ 6758672 =-24.43%	-1749412*100/ 8451864 =-20.70%

Figures are in thousand riyals

Returns on shareholders fund=Profit after tax/Zakat*100

Shareholders fund

Where, Profit after tax/Zakat=Sales+Other Revenue – (Sales cost+All operating expenses+Zakat)

APPENDIX C.1.1

TREND OF CURRENT RATIO

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	1.59 (146)	1.85 (170)	1.58 (145)	1.09 (100)
Mobily	0.44 (46)	0.39 (41)	1.16 (121)	0.96 (100)
Zain	0.61 (218)	0.98 (350)	0.82 (293)	0.28 (100)

APPENDIX C.1.2

CURRENT RATIO

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	36199176/ 22714391 =1.59	31058296/ 16818807 =1.85	31071669/ 19650309 =1.58	27637735/ 25288248 =1.09
Mobily	7912283/ 18149713 =0.44	11684306/ 29790215 =0.39	14419316/ 12423750 =1.16	27637735/ 25288248 =1.09
Zain	3992273/ 6498498 =0.61	3825707/ 3897621 =0.98	3173793/ 3826091 =0.82	4340309/ 15536859 =0.28

Figures are in thousand riyals

Current Ratio=Current Assets/Current Liabilities

APPENDIX C.2.1

TREND OF DEBT EQUITY RATIO

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	0.16 (123)	0.19 (146)	0.18 (138)	0.13 (100)
Mobily	0.56 (151)	0.01 (3)	0.42 (114)	0.37 (100)
Zain	3.30 (702)	3.02 (643)	2.32 (494)	0.47 (100)

APPENDIX C.2.2

DEBT EQUITY RATIO

Telecommunication Company	Financial Years			
	2015	2014	2013	2012
STC	9819701/ 60541336 =0.16	11553658/ 60422328 =0.19	10371945/ 56229627 =0.18	7596475/ 58895352 =0.13
Mobily	86656896/ 15560766 =0.56	199921/ 16653891 =0.01	10128160/ 23963329 =0.42	7642673/ 20905776 =0.37
Zain	14998029/ 4551681 =3.30	16503901/ 5464004 =3.02	15657185/ 6758672 =2.32	3961233/ 8451864 =0.47

Figures are in thousand riyals

Debt Equity Ratio=(Long-term debt or non-current liabilities)/Shareholders' Equity

APPENDIX D.1

CHI SQUARE CALCULATIONS

	STC	Mobily	Zain	
Satisfied	27	8	10	45
Not satisfied	70	29	26	125
	97	37	36	170
Actual				
	STC	**Mobily**	**Zain**	
Satisfied	25.67647	9.794118	9.529412	
Not satisfied	71.32353	27.20588	26.47059	
Fo	Fe	Fo-Fe	(Fo-Fe)2	(Fo-Fe)2/Fe
27	25.67	1.33	1.7689	0.068909233
8	9.79	-1.79	3.2041	0.327282942
10	9.52	0.48	0.2304	0.024201681
70	71.32	-1.32	1.7424	0.024430735
29	27.2	1.8	3.24	0.119117647
26	26.47	-0.47	0.2209	0.008345297
				0.572287533

APPENDIX D.2 GAP ANALYSIS OF PERCEPTION AND EXPECTATION OF TELECOM CUSTOMERS' OF SAUDI ARABIA			
	Perceived Tangibles	**Expected Tangibles**	**Tangibles (P-E)**
STC	1.97	2.28	-0.31
Mobily	2.07	2.47	-0.4
Zain	1.92	2.08	-0.16
Average	1.99	2.28	-0.29
	Perceived Reliability	**Expected Reliability**	**Reliability (P-E)**
STC	2.08	2.43	-0.35
Mobily	2.1	2.18	-0.08
Zain	2.1	2.45	-0.35
Average	2.09	2.35	-0.26
	Perceived Responsiveness	**Expected Responsiveness**	**Responsiveness (P-E)**
STC	2.05	2.36	-0.31
Mobily	2.02	2.41	-0.39
Zain	1.85	2.2	-0.35
Average	1.97	2.32	-0.35
	Perceived Assurance	**Expected Assurance**	**Assurance (P-E)**
STC	1.86	2.21	-0.35
Mobily	1.74	2.28	-0.54
Zain	1.66	2.06	-0.4
Average	1.75	2.18	-0.43
	Perceived Empathy	**Expected Empathy**	**Empathy (P-E)**
STC	1.85	2.27	-0.42
Mobily	1.92	2.54	-0.62
Zain	1.91	2.17	-0.26
Average	1.89	2.33	-0.43

APPENDIX D.3 RELIABILITY (EXPECTED)		
Reliability Statistics		
Cronbach's Alpha	**Cronbach's Alpha Based on Standardized Items**	**No of Items**
0.934	0.941	5

APPENDIX D 3.1.
ITEM-TOTAL STATISTICS

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
VAR00001	10.8256	21.552	0.852	0.756	0.915
VAR00002	10.9201	19.976	0.721	0.525	0.948
VAR00003	10.8721	21.359	0.876	0.801	0.911
VAR00004	10.7292	20.921	0.872	0.782	0.911
VAR00005	10.845	21.402	0.86	0.749	0.913

APPENDIX D.4

RELIABILITY (PERCEIVED)

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
0.902	0.903	5

APPENDIX D 4.1.

ITEM-TOTAL STATISTICS

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
VAR00006	12.2524	10.743	0.728	0.571	0.886
VAR00007	12.3488	10.511	0.792	0.653	0.873
VAR00008	12.267	10.336	0.756	0.586	0.88
VAR00009	12.0518	10.222	0.75	0.57	0.882
VAR00010	12.142	9.983	0.758	0.589	0.88

APPENDIX D 4.2

ANOVA: TWO-FACTOR WITHOUT REPLICATION

SUMMARY	Count	Sum	Average	Variance
STC	5	-1.74	-0.348	0.00202
Mobily	5	-2.03	-0.406	0.04258
Zain	5	-1.52	-0.304	0.00903
Tangibles	3	-0.87	-0.29	0.0147
Reliability	3	-0.78	-0.26	0.0243
Responsiveness	3	-1.05	-0.35	0.0016
Assurance	3	-1.29	-0.43	0.0097
Empathy	3	-1.3	-0.43333	0.032533

ANOVA

Source of Variation	**SS**	**df**	**MS**	**F**	**P-value**	**F crit**
Rows	0.026173	2	0.013087	0.750526	0.502659	4.45897
Columns	0.075027	4	0.018757	1.075703	0.428911	3.837853
Error	0.139493	8	0.017437			
Total	0.240693	14				

INTERNET SOURCES USED

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