Journal of Policy Research, 8(1), 18-30.
https://jprpk.com
https://doi.org/10.5281/zenodo.6451517

# Institutional Service Quality, Word of Mouth and Institutional Image: An Empirical Study of Pakistani Universities

**Shakeel Ahmad[1], Muhammad Hasnain Ali[2]**

**Abstract**
This research paper aims to find the influence of service quality and university image on word of mouth in public and private sector universities. In this study the established survey instrument is used. Such as Service quality is adapted from previous researcher comprised of 12 items. The construct of university image has 5 items which are adapted from the earlier researcher. For the construct of word of mouth there are 6 indicators revised from the researcher. All those variables are measured on 7-point Likert scale ranging within strongly disagree=1 to strongly agree=7. The result for this study are: the findings are confirmed from the analysis of data such as service quality (SQ)show strong positive impact on university image (UI)), there is strong positive impact of service quality (SQ) on word of mouth and strong positive impact of university image on word of mouth. This study's significance and originality is affirmed by considering that just limited examinations have been done to check the impact of service quality (SQ) and university image (UI). There is no study conducted in which the influence of both service quality and university image on word of mouth is checked. The model is not applied in any research. There are five dimensions of service quality used in this research, but some researchers showed divergent behavior on using just these five dimensions in service sector and recommended to add more suitable dimensions in this construct.

**Keywords**: Pakistani Universities, Service Quality, Institutional Image, Word of Mouth
**JEL Codes:** O17

## 1. Introduction

Higher education is important tool to progress both economically and socially for every nation. It is reality that many developed nations have progressed by prioritizing this important tool. The main reason of backwardness in under developing countries like Pakistan lies in carelessness about quality in educational sector. Competition between universities has increased at a great level because of new teaching patterns, advancement, globalization, development in education quality and student's increasing demands. In accordance with this specific situation, the universities need to reassess their systems and use (Annamdevula & Bellamkonda, The effects of service quality on student loyalty: the mediating role of student satisfaction, 2016b)new marketing strategies for continuation in the market. Therefore, universities are opting advanced level marketing strategies which in turn menacing other universities existence(Seth et al, 2005). A five-dimension study on service quality was accompanied by (Parasuraman et al, 1988) that explored about several products of banking sector. The features consist of perceptibility, receptiveness, guarantee, reliability and compassion.(Carman, 1990) proposed few changings according to different industries like hospitality and restaurant. In education these five dimensions are used as suggested of(Parasuraman et al, 1988) as used in number of studies directed by (Afridi et al, 2016), (Arambewela & Hall, 2006), (Calvo-Porral et al, 2013), (Kanakana, 2014), (Mansori et al, 2014) and (Yousapronpaiboon, 2014). The extreme market challenge impulses organizations to consistently advance their service quality (SQ)(Bolton et al, 2004). It is realized that improvement in service quality (SQ) enhance consumer loyalty that guarantees improved long-life reimbursements as far as income (Anderson et al, 1994). There is an urgent need for universities to make effective plans for their existence in the long run. (Landrum, R.E, Turrisi, & R. and Harless, 1998) said that to win the extreme competition in the market the universities should pay more attention to make their reputation and university image better which is necessary for their survival in market.

As indicated by (Kotler & Fox, 1995)university image is more important at the time of choosing university rather than quality which is secondary while taking the final decision by student. In order to separate themselves from rivals the universities are making more investment in this section of making university image better to make themselves prominent from other institutions(McPherson & Shapiro, 1998). In studies given by (Yavas & Shemwell, 1996), (Landrum et al., 1998), (Parameswaran & and Glowacka, 1995) discovered that advanced education organizations need to keep up or build up a good brand image to make an upper hand and survive progressively in market. To these creators, image is one of the principles impacts on students to apply for enrolment in any university. Image of the institution is likewise significant when contributors are thinking about choosing an organization to embrace contracted innovative work. According to (Dowling, 1988) there are number of varying opinions about university image rather than just one image about the university.

[1] PhD Scholar, Institute of Business Management and Administrative Sciences (IBMAS) the Islamia University of Bahawalpur, Pakistan ahmedshakeel502@gmail.com
[2] Research Scholar; Bahauddin Zakariya University Multan, Pakistan

Several researchers (e.g. (Reichheld & Sasser, 1990) have found a significant relationship between service quality and its results on human behavior(Zeithaml, Berry, & Parasuraman, 1996 ). Intentions from those studies, Zeithaml, Berry, & Parasuraman, (1996) studied the impact of service quality (SQ) on various variables like positive word of mouth (WOM), external and internal reactions of people, product switching and their ability to pay more for certain benefits. The results of these studies shows the significant effect of service quality and human deportmental response nonetheless with some changes in dimesnions.Shemwell (1998) found an effective influence of quality on word of mouth and other similar variables.

Currently there are 190 universities in Pakistan, including both private and public institutions, and some which are military or vocational in focus. According to higher education commission report for 2018-19 there are 1086 higher education degree colleges and about one hundred and ninety universities are there in Pakistan. About three million students got admission in 13 to 16 grades in degree colleges and universities. With a sad demise no Pakistani university comes in top most six hundred universities (Times Higher Education (THE) World University Rankings 2019). This means there is a distinct prerequisite to expand Pakistan's advanced teaching framework. This fact is intensified by the way that more than two hundred million individuals in the nation are youth. For age index there are about sixty four percent of the Pakistani population are under 30 age as per official figures. Advanced education commission must take important steps to utilize this important age regiments into consideration to get benefits from them. The enrollment level of students in higher education is just 9% of the willing population to get admission. There is tremendous need by HEC to improve their operational activities to show noticeably better quality of education. As per recent demand higher education commission must be formed in all provinces of the country. These commissions should take effective measures such as visiting the institutes, collect data, evaluate them to measure their performance and ensure quality education in all higher education institutes to ensure a sense of responsibility.

Unfortunately, only a few numbers of studies have been done to check the influence of service quality and university image. There is no study conducted in which the impact of both service quality (SQ) and university image (UI) on word of mouth (WOM) is checked. Therefore, there is a significant need to check the influence of service quality and university image on word of mouth. The originality of this study is confirmed by the fact that both variables' such as service quality and university image influence is never studied together on word of mouth. Subsequently, it becomes the principal purpose to conduct this type of study. However, the studies done before none of the examination conducted in universities, exclusively in Pakistan. This study will yield specific findings and conclusions in this context. Therefore, this study will add up in improving quality of education in higher educational institutes and their corporate image. The objectives of this study are to examine the extent to which service quality and university image will affect word of mouth in higher education sector of Pakistan. This study will attempt to evaluate the effectiveness of service quality and university image in any university and to evaluate the effectiveness of those universities who is already providing excellent service quality and a better university images to get positive word of mouth.

## 2. Literature Review

This exploration concentrated on examining the impact of university image (UI) and service quality (SQ) on word of mouth (WOM). Numerous studies highlight the importance of institutions (Ali and Naeem, 2017; Ali, 2011; Ali, 2015; Ali, 2018; Ali and Bibi, 2017; Ali and Ahmad, 2014; Ali and Audi, 2016; Ali and Audi, 2018; Ali and Rehman, 2015; Ali and Senturk, 2019; Ali and Zulfiqar, 2018; Ali et al., 2016; Ali et al., 2021; Ali et al., 2021; Ali et al., 2015; Arshad and Ali, 2016; Ashraf and Ali, 2018; Audi and Ali, 2017; Audi and Ali, 2017; Audi et al., 2021; Ali and Ali, 2016; Audi et al., 2021; Audi et al., 2021; Audi et al., 2021).

### 2.1. Service Quality

The idea of service quality is suggested as Parasuraman et al. (1988) enlivened different specialists to explore the impressionof service in different working areas. In the area of education to measure service quality five dimesions comprised of assurance, empathy, tangibility, reliability and responsiveness are used and are still in use since that era (Afridi et al, 2016; the conclusions of these studies are considered indulging.As per Singh (2018), quality estimation of Indian business medical clinics is applicable to the present-day setting in the medicinal services division. As further accumulation (Abdullah, 2006) whom analyse the service quality in colleges of Malaysis given a concept named performance in higher education (HEdPERF) which can be furtherly used to check the service in education sector. The idea proposes the utilization of non-scholarly perspective, notoriety access and program issues as the components of the measurement. Also, a decrease in worker commitment levels can affect efficiency, client care and execution (Mone et al, 2011).Pawar & Chakravarthy (2014),study uncovered that, most of the workers leave for money related reasons or as a result of challenges with managing everything well with their supervisors, professional advancement, partner collaboration, job equivocalness or an absence of data on set of working responsibilities, among different reasons.Meantime, Chen (2016), who explored universities in

Taiwan, recommended that analysts incorporate school, staff and educator as to measure the service quality of universities. Another option was proposed by Annamdevula & Bellamkonda (2016b), to utilize advanced education quality (HiEduQual) in estimating service quality of universities.In another study, the analyst have acknowledged features approximating the service quality of colleges including the parts of instructing, managerial assistance, scholarly offices, structure, community service and internationalization, while Senthilkumar & Arulraj (2011), additionally led an investigation on schools in India, in which an idea to check service quality, to be specific, administration quality estimation in advanced education in

### 2.2. University Image

the image of a higher education organization as "an element of the procedures that advanced education organizations use, how they are actualized, and how they are seen by their publics (p. 276)".In accordance with the proposition of Alessandri et al (2006), we consider that self has a manageable nature and bring about the source of the correspondence procedure (the association), while image has to do with view of the collector. Along these lines, right now, idea of a general college picture was characterized as the assessments that the various partners make of a college through discernments,convictions, thoughts, and impressions that, as the outcome of a predictable articulation after some time, they aggregated about it. Image can be seen diversely because of insufficient data that somebody got about certain institution. Therefore, image of organization seems distinctive for various human beings(Dowling G. , 1988). Assessment on organizational image is important to get information about its strengths and weakness. By alluding to those definitions' university image gives insights about someone's perception and reviews about the university (Arpan, 2003; Landrum, 1998). Arpan et al, 2003referenced 3 factors which impact university image (UI), which are scholastic components, athletic elements and the degree of news inclusion of the university. Good image of store prompts consumers to purchase again and again. It is proved that good image will help helps in refining and recollecting consumer loyalty about the product and service offered (Dick & Basu, 1994).

### 2.3. Word of mouth

This research will focus on understanding the impact of service quality (SQ) and university image (UI) on word of mouth (WOM). As indicated by Arndt (1967), who is considered as one of the earliest analyst of the impact of WOM on customer conduct, described WOM as oral, individual to-individual correspondence between a beneficiary and a communicator whom the collector sees as non-business term, in regards to a brand, item or administration. WOM represents the consumer's readiness to endorse the item and facility to other people in future(Dabholkar P et al, 1995). WOM is significant factor when confronting complex circumstances and encountering dangers by buyers(File KM, 1994). The term WOM is used to portray verbal correspondences (either positive or negative) between meetings, for instance, the distributors, self-sufficient authorities, friends and family and the qualified or potential buyers(Ennew, 2000).

WOM advertising activities are extremely significant especially for the establishments working on management dissection. This is because organization wants are not as clear and sure as favorable circumstances foreseen from consumer goods. Particularly, people's public surroundings, former meetings, and social condition may give various sentiments about quality of service and compensations. Along these lines, people are generally more affected by the ones from their nearby links who live at similar conditions and have similar social qualities(Ateşoğlu et al. 2011).Casual (WOM) has been frequently alluded to as the best sort of correspondence in influencing costumers. Word of mouth (WOM)has important role in influencing consumers' point of view and purchasing activities(Yang et al, 2012). A study done in US office of consumers showed that a dissatisfied consumer will tell nine other humans about the reason of dissatisfaction whereas a satisfied or delighted consumer will share with five other humans about the satisfaction reason. Hence it proved that word of mouth will influence other people too in long and short run(Mangold et al & al, 1999). WOM is important factor in influencing decision-making process of people that takes place between the influencer sand the maker. In this process influencer can be a known one or may be unknown(Argan, 2012).WOM is best source to advertise any business free of cost but its influence is quite strong in positive or negative way that cannot be changed easily later on(Hasan et al & al, 2012). As per past results, theories and clarifications the hypothesis of the study is framed as follows:

**H1.** There is positive affect of service quality (SQ) on university image.
**H2.** There is positive effect of Service quality on word of mouth.
**H3.** There is positive effect of University image on word of mouth.

## 3. Method of study

### 3.1. Structural model/Path diagram

The structural model used for examination in this research imitated three hypothesis of research that is seminal the impact of service quality (SQ) and university image (UI) on word of mouth (WOM). The structural model can be shown as in Fig 1.

### 3.2. Survey Instrument

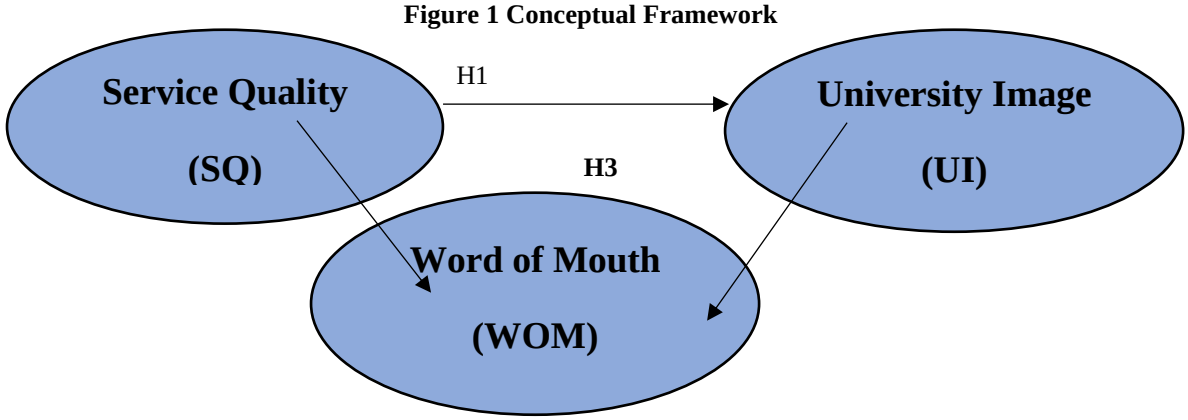
In this study the survey scales are adapted from the past studies. The scale of service quality consists of twelve indicators which are adapted from other researchers (Teddy Chandra et al & al, 2019; three indicators are adapted from Duarte et al, (2012) and the remaining two were adapted by(Teddy Chandra et al, 2019). For the scale of word of mouth six indicators are used which are adapted from (Smith & Ennew, 2001). All of the constructs are measured on 7 points likert scale indicates score ranging within strongly disagree=1 to strongly agree=7.

### 3.3. Population and sample

The population for this study is the students enrolled in public and private univeristies of Pakistan Primary data is collecting from the university students through quota sampling technique.For data collection online survey questionniare made on google froms is used. The survey questionniare link is shared in the official university groups. Thus the sample of 356 students are used for studying. Including percentage of students and the valid questionniares. The sample came from 57 universities, Undergraduate and Postgraduate colleges in total including 2 colleges (private) of higher learning, 33 public sector universities and 20 private sector universities as shown in Table no 1.

There are 32 majors included in this study from diverse fields of study. So the samaple is considered good for representation as shown in Table no 2.

**Figure 1 Conceptual Framework**




The education system in Pakistan includes 4 types diploma, bachelors, graduate and postgraduate levels of degree. Diploma degree takes 2 years to complete while undergraduate degree takes 4 years to complete and post graduate degree takes 2 years in completion. The general age for undergraduate students lies between 18 to 21 while for postgraduate students it is between 22-24 and for higher studies above age is seen through samples.

Demographics include gender, age, university name, university type, department name, occupation, education and socio economic status as seen in the Table 3.

**Table 1: Final composition of sample by Institute**

| No. | Educational institutes | No. of Students | Percentage |
|---|---|---|---|
| **1** | Bahauddin Zakariya University | 37 | 10.39 |
| **2** | University of Agriculture | 21 | 5.89 |
| **3** | Institute of Southern Punjab | 17 | 4.775 |
| **4** | FAST-NUCES | 33 | 9.269 |
| **5** | Comsat University | 43 | 12.07 |
| **6** | SZABIST University | 11 | 3.089 |
| **7** | IIUI | 12 | 3.37 |
| **8** | Bahria University | 8 | 2.247 |
| **9** | Iqra University | 13 | 3.65 |
| **10** | NUML University | 9 | 2.52 |
| **11** | Air University | 7 | 1.966 |
| **12** | Abasyn University | 12 | 3.37 |
| **13** | PIEAS University | 3 | 0.842 |
| **14** | Hajvery University | 7 | 1.966 |
| **15** | UOS | 8 | 2.247 |

| | | | |
|---|---|---|---|
| **16** | National Textile University Faisalabad | 7 | 1.966 |
| **17** | UMT | 2 | 0.561 |
| **18** | PMAS-ARID Agriculture University | 7 | 1.966 |
| **19** | GCU Lahore | 12 | 3.37 |
| **20** | UOL | 2 | 0.561 |
| **21** | NDU | 1 | 0.28 |
| **22** | Punjab University | 7 | 1.966 |
| **23** | Lahore College for Women University | 1 | 0.28 |
| **24** | Ripah International University | 2 | 0.561 |
| **25** | University of Education | 6 | 1.6855 |
| **26** | Agha Khan University | 1 | 0.28 |
| **27** | UCP | 1 | 0.28 |
| **28** | Abdul Wali Khan University of Mardan | 3 | 0.0824 |
| **29** | QAU | 6 | 1.685 |
| **30** | University of Malakand | 1 | 0.28 |
| **31** | UET | 2 | 0.561 |
| **32** | Ghazi University | 1 | 0.28 |
| **31** | BIMS | 1 | 0.28 |
| **32** | Preston University | 3 | 0.0824 |
| **33** | NFC | 2 | 0.561 |
| **34** | Hazara University | 1 | 0.28 |
| **35** | Karakoram International University | 1 | 0.28 |
| **36** | Dow University of Health Sciences | 1 | 0.28 |
| **37** | PIEAS | 1 | 0.28 |
| **38** | HITEC | 2 | 0.561 |
| **39** | Superior University | 4 | 1.123 |
| **40** | Swedish Institute affiliated IUB | 1 | 0.28 |
| **41** | Federal Urdu University | 4 | 1.123 |
| **42** | Beaconhouse National University | 4 | 1.123 |
| **43** | UVAS | 2 | 0.561 |
| **44** | Allama Iqbal Open University | 2 | 0.561 |
| **45** | CUST | 3 | 0.0824 |
| **46** | Mirpur University of Science and Technology | 3 | 0.0824 |
| **47** | Forman Christian College University | 2 | 0.561 |
| **48** | Islamia University of Bahawalpur | 3 | 0.0824 |
| **49** | PAF-KIET | 2 | 0.561 |
| **50** | University of Okara | 2 | 0.561 |
| **51** | University of Sindh | 1 | 0.28 |
| **52** | University of Swabi | 1 | 0.28 |
| **52** | Emerson College | 7 | 1.966 |
| | **Total** | **356** | **100** |

**Table 2: Final Composition of Sample by Study Program**

| **No.** | **Study Program** | **No. of Students** | **Percentage** |
|---|---|---|---|
| **1** | Computer Sciences | 49 | 13.76 |

| | | | |
|---|---|---|---|
| **2** | Law | 9 | 2.52 |
| **3** | Biosciences | 10 | 2.8 |
| **4** | Microbiology | 5 | 1.4 |
| **5** | Physics | 8 | 2.24 |
| **6** | Plant breeding and genetics | 11 | 3.08 |
| **7** | Agriculture | 7 | 1.96 |
| **8** | Commerce | 9 | 2.52 |
| **9** | Chemistry | 8 | 2.24 |
| **10** | Zoology | 4 | 1.12 |
| **11** | Media Studies | 9 | 2.52 |
| **12** | Mathematics | 6 | 1.68 |
| **13** | Psychology | 16 | 4.49 |
| **14** | Electrical Engineering | 15 | 4.21 |
| **15** | English | 10 | 2.8 |
| **16** | Horticulture | 4 | 1.12 |
| **17** | Entomology | 2 | 0.56 |
| **18** | Pharmacy | 6 | 1.68 |
| **19** | Environmental Sciences | 5 | 1.4 |
| **20** | Economics | 5 | 1.4 |
| **21** | Textile Engineering | 9 | 2.52 |
| **22** | Software Engineering | 5 | 1.4 |
| **23** | Civil Engineering | 6 | 1.68 |
| **24** | Social Sciences | 5 | 1.4 |
| **25** | Statistics | 2 | 0.56 |
| **26** | IT | 10 | 2.8 |
| **27** | Humanities | 3 | 0.84 |
| **28** | Food and Nutrition | 5 | 1.4 |
| **29** | Forestry and Range Management | 5 | 1.4 |
| **30** | Governance and Public Policy | 2 | 1.4 |
| **31** | Mechanical Engineering | 5 | 1.4 |
| **32** | Nuclear Engineering | 4 | 1.12 |
| **31** | Criminology | 4 | 1.12 |
| **32** | Management Sciences | 93 | 26.12 |
| | **Total** | **356** | **100.00** |

**Table 3: Demographic Profile of respondents**

| **Demographic** | **Category** | **Frequency** | **%** |
|---|---|---|---|
| **Gender** | Male | 238 | 66.9 |
| | Female | 118 | 33.1 |
| **Age** | 18-20 | 113 | 113 |
| | 21-24 | 180 | 180 |
| | 25-30 | 50 | 50 |
| | Above | 13 | 13 |
| **University Type** | Public University | 194 | 54.5 |

| | | | |
|---|---|---|---|
| | Private University | 162 | 45.5 |
| **Occupation** | Student | 250 | 70.2 |
| | Student and Work | 106 | 29.8 |
| **Education** | Undergraduate | 216 | 60.7 |
| | Postgraduate | 129 | 36.2 |
| | Above | 11 | 3.1 |
| **Socio Economic Status** | Upper Class | 27 | 7.6 |
| | Middle Class | 315 | 88.5 |
| | Lower Class | 14 | 3.9 |

First demograph is gender which includes 66.9% of males and 33.1% of females. The population of Pakistan has 49.8% of females and 50.2% of males according to the latest census so the male population dominates the female. The type of university shows the legal ownership of the university whether it's a public univeristy owned by government or whether it's a private university owned by private entities. In this study the 54.5% sample is from public university whereas 45.5% is from private university type. The occupation of the students includes students who are just studying while student and work is for those who are studying and doing work at the same time. Socio economic status means the social and economical position of person by family including their work experience.

For analysis of the data SPSS 21 software is used. ANOVA and Correlation method is used to test the hypoyhesis and the relation between the variables. Correlation method is used to check the relation between the service quality and word of mouth, service quality and university image, university image and WOM. Whereas Anova test is utilized to analyze the behaviour of respondents regarding demographics profiles. Structures equation modelling technique is used to test the hypothesis.

## 4. Research Finding

### 4.1. Validity and Reliability Test

For furhter analysis of data ANOVA test and SEM technique is used. But before proceeding to these two tests firstly the relaibility of the measuring scale will be checked. To check the scale reliability valiadity and reliability two techniques are used. Reliability test is used to check the constancy, stability and regularity of the measuring scale. While validity test is used to check the precision , correctness and exactness of the measuring scale items. By checking these two measuring we can exactly verify that correct measuring scale items are used which measure the impact of service quality and university image on word of mouth rather then some other extraneous variables. The outcomes of the tests is shown in Table IV.

The minimum limit for the reliability test is 0.60. If the relaibility of the scale is below this then the scale is not suitable for the measure of that particular item(Hair et al, 1998). Therefore, by examining the values of the indicators of service quality, university image and word of mouth it can be clearly shown that the measuring scales are reliable for study. The cronbach alphaαvalue for service quality is 0.84 which means that the items used are 84% reliable to measure this construct. While the values for university image and word of mouth is 0.827 and 0.869 so these scale items measures 82% and 86% of this construct. Hence the value of cronbach alpha is within the constituted limit we can move further. In order to check the scales's convergent validity an AVE variance extraction is commonly used. For AVE test the limit is above 0.5(Hair et al, 1998). The value of all the constructs are above 0.5 as shown in below table which means that all the measuring constructs are accurate for this study.

The value of correlation of all the items are positive which indicates the positive relationship of the items and parrallel movement. The factor loading of items are similarly translated as that of reliability. The limit for factor loading is within equal to or greater than 4 or less than or equal to 4. The limits for all the limits are justified within this. The significance of all the items are also elaborated which is less than 0.001.

CR value also known as construct reliability is used to check the core consistency of the measuring scale. The limit for exceptence is set above 0.7. The values for all the consrtucts are above 0.7 such as 0.9 which means that the scale is consistent(Hair et al, 1998). Almost similar values are obtained from cronabch alpha for all the scales. By examining all the values of relaibility, validity, CR and AVE it is completely clear that the scales are accurate for this research.

**Table 4: Validity and Reliability Test**

| Constructs | Indicators | Correlation | Loading Factor | p-value | Cronbach's α | CR | AVE |
|---|---|---|---|---|---|---|---|
| **(SQ)** | SQ1 | 0.305 | 0.478 | <0.001 | 0.84 | 0.902 | 0.44 |
| | SQ2 | 0.389 | 0.644 | <0.001 | | | |
| | SQ3 | 0.323 | 0.516 | <0.001 | | | |
| | SQ4 | 0.386 | 0.642 | <0.001 | | | |
| | SQ5 | 0.37 | 0.615 | <0.001 | | | |
| | SQ6 | 0.392 | 0.661 | <0.001 | | | |
| | SQ7 | 0.3799 | 0.635 | <0.001 | | | |
| | SQ8 | 0.3736 | 0.626 | <0.001 | | | |
| | SQ9 | 0.36375 | 0.605 | <0.001 | | | |
| | SQ10 | 0.3632 | 0.598 | <0.001 | | | |
| | SQ11 | 0.39125 | 0.656 | <0.001 | | | |
| | SQ12 | 0.3516 | 0.578 | <0.001 | | | |
| **University Image (UI)** | UI1 | 0.5582 | 0.723 | <0.001 | 0.827 | 0.921 | 0.5 |
| | UI2 | 0.6246 | 0.823 | <0.001 | | | |
| | UI3 | 0.6222 | 0.82 | <0.001 | | | |
| | UI4 | 0.5808 | 0.747 | <0.001 | | | |
| | UI5 | 0.5666 | 0.728 | <0.001 | | | |
| **Word of Mouth** | WOM1 | 0.601 | 0.767 | <0.001 | 0.869 | 0.911 | 0.5 |
| | WOM2 | 0.6545 | 0.844 | <0.001 | | | |
| | WOM3 | 0.659 | 0.85 | <0.001 | | | |
| | WOM4 | 0.5396 | 0.669 | <0.001 | | | |
| | WOM5 | 0.6453 | 0.827 | <0.001 | | | |
| | WOM6 | 0.5868 | 0.744 | <0.001 | | | |

### 4.2. Goodness of Fit test SEM

For further proceedings goodness of the fit test or chi square test is used. Chi square is used to check the normal distribution of the population whether the population fits to the sample data or not and the data is normally distributed or not. Chi square test is used for the large sample data larger than 5. The larger the chi square value the good will be the sample is distributed within the population. For testing the chi square test, we used two hypothesis alternative and the null hypothesis.As per null hypothesis shows that the information is typically disseminated inside the populationwhereas the alternate one shows that the information isn't regularly dispersed inside the normal population. For this if the value of sig is below 0.05 then the null hypothesis is accepted and if above then reject, he null hypothesis and accept the alternate hypothesis. For all the variables the value of sig is 0.00 so the null hypothesis is accepted, and the data is normally distributed within the population as shown in the table V.

**Table 5: Results for Goodness of Fit Test**

| Population | Chi-Square | Df | Asymp. Sig. |
|---|---|---|---|
| Gender | 40.449a | 1 | 0.00 |
| Age | 181.506b | 3 | 0.00 |
| University Type | 2.876a | 1 | 0.00 |
| Occupation | 58.247a | 1 | 0.00 |
| Education | 178.421c | 2 | 0.00 |
| Socio economic status | 487.961c | 2 | 0.00 |

### 4.3. Anova Test Result of Demographics

Anova test results with respect to the respondent profiles are shown in the Table VI.

Table VI shows the response of population for the variables of study with comparison to the demographics. Female respondents show more positive behavior for all the constructs as compared to the male respondents. They are more satisfied from the service quality. Image of the university and will recommend the university to the friends and family. For equality of the student's females shows a positive response. Students above the age of 30 shows more positive response as compared to other age group students. Students from the age group of 18-20 shows a little less positive behavior as compared to the above 30 age group students. Students from the age group of 25-30 age group shows the least positive behavior. Private university students are more satisfied with the service quality as compared to the public university sector. Whereas the students of public university show more positive university image rather than private university. Students of public university shows furtherdisposition to suggest the university to their friends and family. Public university students show

positive word of mouth as compared to private university students. Students who are just studying shows more positive response for service quality and university image whereas the respondents who are studying and working shows more positive word of mouth. Higher education students show more positive and significant response for service quality, university image and positive word of mouth. Postgraduate students show least positive behavior for all the constructs. The students belong to the middle class shows the most positive response for all the constructs whereas the upper class shows least positive response.From the results it is shown that teachers need to show equality for both genders as male students are satisfied in this regard.

### 4.4. Correlation Analysis

The results for the correlation analysis are shown in Table VII. Correlation analysis is a statistical technique used to examine the relationship between different variables such as there is any relation or link present between the variables or not. The value of correlation between 0 and 1 is acceptable. Therefore, the values in the table for correlation are within this ranges and shows positive relation between the variables.

**Table 6: ANOVA Test of Gender, education, university type, occupation, age and socio-economic status**

| Mean Indicators | Indicator | Construct | Standard Deviation SD | F-Test Gender | Age | University Type | Occupation | Education | Socio Economic Status |
|---|---|---|---|---|---|---|---|---|---|
| SQ1 | 4.0365 | 1.01928 | 1.82512 | 1.965 | 4.081 | 1.239 | 0.139 | 1.83 | 2.902 |
| SQ2 | 4.7303 | | 1.56917 | 1.899 | 1.166 | 0.431 | 0.483 | 0.598 | 0.801 |
| SQ3 | 4.7444 | | 1.66297 | 0.57 | 0.405 | 0.224 | 6.002 | 1.66 | 0.371 |
| SQ4 | 4.9888 | | 1.54733 | 1.302 | 1.308 | 0.003 | 0.435 | 0.197 | 0.399 |
| SQ5 | 4.2837 | | 1.87372 | 10.219 | 1.139 | 0.114 | 0.033 | 1.874 | 1.289 |
| SQ6 | 4.9017 | | 1.57762 | 0.294 | 1.548 | 0.362 | 1.486 | 0.187 | 0.714 |
| SQ7 | 5.2191 | | 1.69083 | 2.98 | 0.738 | 2.589 | 0.215 | 0.577 | 1.973 |
| SQ8 | 4.941 | | 1.77444 | 0.035 | 1.965 | 1.109 | 0 | 0.722 | 0.212 |
| SQ9 | 5.4466 | | 1.50116 | 1.572 | 1.106 | 2.089 | 2.477 | 0.942 | 3.335 |
| SQ10 | 4.1517 | | 1.95859 | 1.473 | 4.238 | 0.455 | 2.775 | 0.737 | 0.647 |
| SQ11 | 5.0562 | | 1.61932 | 0.055 | 1.362 | 0.859 | 0.187 | 1.201 | 0.211 |
| SQ12 | 5.2949 | | 1.64961 | 0.015 | 1.449 | 0.727 | 0.931 | 0.059 | 1.044 |
| UI1 | 5.7725 | 1.13946 | 1.39876 | 0.909 | 0.053 | 5.324 | 1.736 | 0.007 | 2.244 |
| UI2 | 5.3708 | | 1.47949 | 0.868 | 3.093 | 4.728 | 3.355 | 0.803 | 0.154 |
| UI3 | 5.1882 | | 1.51833 | 0.126 | 1.124 | 4.022 | 1.882 | 1.195 | 1.492 |
| UI4 | 5.0815 | | 1.51298 | 2.789 | 0.201 | 1.828 | 0.341 | 0.242 | 1.756 |
| UI5 | 5.0983 | | 1.49888 | 3.108 | 0.067 | 0.401 | 0.001 | 1.035 | 0.195 |
| WOM1 | 5.4775 | 1.15119 | 1.37873 | 2.507 | 1.688 | 1.064 | 2.397 | 1.203 | 0.226 |
| WOM2 | 5.4747 | | 1.39897 | 0.649 | 0.136 | 0.055 | 2.671 | 0.428 | 0.699 |
| WOM3 | 5.4101 | | 1.36364 | 0.394 | 0.915 | 0.072 | 2.769 | 0.114 | 2.934 |
| WOM4 | 4.882 | | 1.60022 | 6.124 | 1.514 | 0.037 | 0.577 | 0.608 | 0.066 |
| WOM5 | 5.4691 | | 1.36831 | 0.918 | 0.201 | 0.024 | 0.324 | 0.554 | 2.277 |

Note: p-value 0.1; p-value0.05; p-value0.01

**Table 7: Results of Correlation Analysis**

| | Variable | Mean | S. D | 1 | 2 | 3 |
|---|---|---|---|---|---|---|
| 1 | Service Quality | 4.8162 | 1.01928 | 1 | | |
| 2 | University Image | 5.3022 | 1.13946 | 0.527** | 1 | |
| 3 | Word of Mouth | 5.2837 | 1.15119 | 0.499** | 0.623** | 1 |

**p < .05, **p < .01*

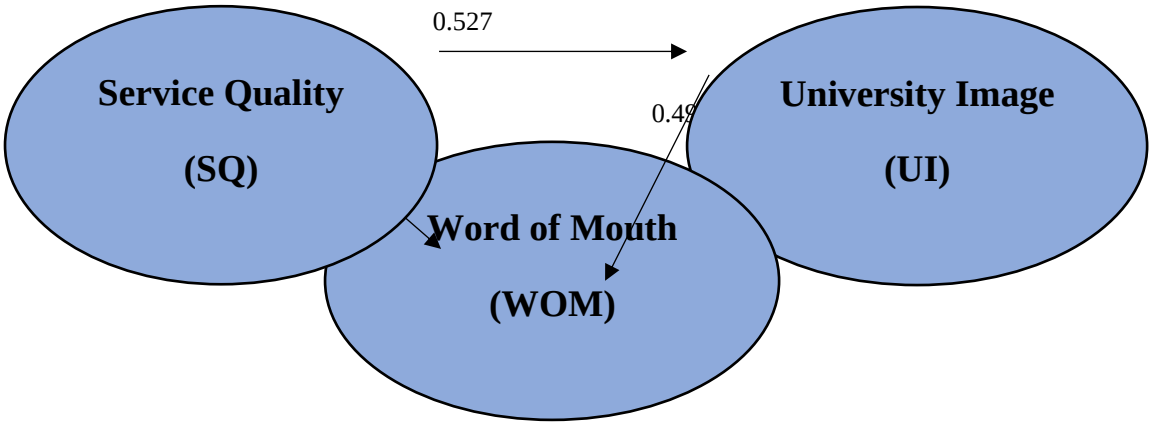
### 4.5. Hypothesis Testing

To test the hypothesis final estimation of measurement model parameters are used. To elaborate the results standard coefficient value, critical ratio and value of pis implemented to check the hypothesis. Whereas, the standardized coefficient beta value checks the strength of relation of independent variable on dependent variable.

Such as the effect of service quality on university image and word of mouth and effect of university image on word of mouth. By checking standardized coefficient beta value of 0.527 means that sercive quality has positive and significant influence on university image.The value of β for second hypothesis is o.623 which also shows positive and significant influence of service quality on word of mouth. Such as for the third hypothesis the value of β is 0.499 which shows positive and significant influence of university image on word of mouth. Hence by the beta and sig value it is shown that the three hypotheses are accepted and has strong impact.

**Table 8: Standardized parameter estimation of measurement model**

| Hypothesis | Exogenic Variable | Endogenic Variable | Standardized Coefficientβ | Critical Ratio | p Value | Conclusion |
|---|---|---|---|---|---|---|
| **H1** | Service Quality (SQ) | University Image | 0.527 | -8.695 | 0.00 | Significant |
| **H2** | Service Quality (SQ) | Word of Mouth | 0.623 | -9.292 | 0.00 | Significant |
| **H3** | University Image (UI) | Word of Mouth | 0.499 | 0.305 | 0.00 | Significant |




The results of the hypothesis are shown in the form of theoretical framework with clear implication of value.

## 5. Discussion

Result of hypothesis testing 1 shows that there is significant and positive influence of service quality on university image. This result shows that the universities in Pakistan must improve their service quality to get a good university image in turn. Three items of service quality got not good responses and University provides counseling services". It is suggested that teachers must behave equally with all students to make them satisfied from the service quality provided. Secondly administration staff must help the students with tasks to make them feel comfortable and to perform their tasks easily. Thirdly it is strongly observed that the counselling services provided to students are not enough and to some universities not even provided. So, it suggested to provide counseling services to students and make improvements in the existing counselling services. In word of mouth one item got poor response is "non-academic provision at University" which shows that the students are not satisfied by the non-academic activities. Therefore, it is suggested that the non-academic provisions must be improved to get a positive word of mouth by students. This study recommend that actions should be taken for scholars of 18-20 age group as they are not much satisfied from the service quality of the university. For public university sector there must be improvements in service quality. There is need for improvements for post graduate level students service providence.

It is suggested that the service quality plays very important role in positive word of mouth. Private university shows less positive word of mouth as compared to public university. So private university must improve their service quality to get positive word of mouth. University image has a positive and significant influence on word of mouth which suggests that if university image is good in their perspective country and other countries of world then it will also impact a positive word of mouth. The image of university contains different factors like ranking of the university within the country and in world also, its reputation for in both academic and non-academic activities, peaceful location for students to live. Hence it is proved that it is beneficial for universities to maintain

a good image. In modern era there is intense competition between private and public sector universities so the universities of Pakistan must pay good intention towards improving their service quality to show good image and optimistic word of mouth. The universities of Pakistan not only have to compete with the universities within the country but also in international countries. Service quality must be immediately improved by keeping the fact in mind that only those universities who is providing good service quality will get more number of students enrolled(Chen, 2016).

### 5.1. Theoretical implications

It is presumed that this study will benefit the operational administration area most particularly in service sector to improve the quality of education in HE institutes. This analysis will add up in Deming (1986) chain response concept theory and model which demonstrates that provided to the stakeholders the higher will be the profit which will last long as competitive advantage for the institution. This study also contributes to Sallis (2010) which proves that for a good quality management there must be continuous improvement in service quality to satisfy their customers in present and in future also. Hence this study also demonstrates a significant and positive influence of service quality and university image on word of mouth. Practically this study shows that how the lectures and administrative staff can improve the quality and image of university to attract more of the students. The universities must collaborate with the foreign institutes in terms of academic and non-academic activities to gain competitive advantage. By collaborating with foreign institutes universities can get access to the modern day needs of the students and trends. This study also contributes that the institutes which are providing good service quality will get good image and in turn they can attract a greater number of students by positive word of mouth to gain more profit in long term.

## 6. Conclusions and Future recommendations

The study shows following conclusions: such as findings after analysis of data show significant and positive impact of service quality on university image, there is significant and positive influence of service quality on word mouth and significant and positive influence of university image on word of mouth. The results of this study show the importance of service quality and university image on word of mouth. Therefore, the higher education institutions give more attention in improving their service quality which will affect their university image and the willingness of the people to recommend the university to other people in positive word of mouth. Future researchers can conduct similar studies with focus on private institutions. Moreover, the similar study can be conducted in other sectors too with adding other variables like emergency situations of COVID19 impact on service quality, university image and word of mouth.

## References

Abdullah, F. (2006). Measuring service quality in higher education: HEdPERF versus SERVPERF. *Marketing Intelligence & Planning*, *24*(1), 31-47.

Afridi et al, S. e. (2016). Measurement of service quality gap in the selected private universities/institutes of peshawar using SERVQUAL model. *City University Research Journal*, *6*(1), 61-69.

Alessandri et al, S. Y. (2006). An integrative approach to university. *Corporate reputation review*, *9*(14), 258-270.

Ali, A. & Naeem, M.Z. (2017). Trade Liberalization and Fiscal Management of Pakistan: A Brief Overview. *Policy Brief-Department of Economics, PU, Lahore*. 2017 (1), 1-6.

Ali, A. (2011). Disaggregated import demand functions of Pakistan; An empirical Analysis. M-Phil Thesis, NCBA&E, Lahore, Pakistan, 1-70.

Ali, A. (2015). *The impact of macroeconomic instability on social progress: an empirical analysis of Pakistan*. (Doctoral dissertation, National College of Business Administration & Economics Lahore).

Ali, A. (2018). Issue of Income Inequality Under the Perceptive of Macroeconomic Instability: An Empirical Analysis of Pakistan. *Pakistan Economic and Social Review*, 56(1), 121-155.

Ali, A. and Bibi, C. (2017). Determinants of Social Progress and its Scenarios under the role of Macroeconomic Instability: Empirics from Pakistan. *Pakistan Economic and Social Review* 55 (2), 505-540.

Ali, A., & Ahmad, K. (2014). The Impact of Socio-Economic Factors on Life Expectancy in Sultanate of Oman: An Empirical Analysis. *Middle-East Journal of Scientific Research*, 22(2), 218-224.

Ali, A., & Audi, M. (2016). The Impact of Income Inequality, Environmental Degradation and Globalization on Life Expectancy in Pakistan: An Empirical Analysis. *International Journal of Economics and Empirical Research*, 4 (4), 182-193.

Ali, A., & Audi, M. (2018). Macroeconomic Environment and Taxes Revenues in Pakistan: An Application of ARDL Approach. *Bulletin of Business and Economics* (BBE), 7(1), 30-39.

Ali, A., & Rehman, H. U. (2015). Macroeconomic instability and its impact on the gross domestic product: an empirical analysis of Pakistan. *Pakistan Economic and Social Review*, 285-316.

Ali, A., & Şenturk, I. (2019). Justifying the Impact of Economic Deprivation, Maternal Status and Health infrastructure on Under-Five Child Mortality in Pakistan: An Empirical Analysis. *Bulletin of Business and Economics*, 8(3), 140-154.

Ali, A., & Zulfiqar, K. (2018). An Assessment of Association between Natural Resources Agglomeration and Unemployment in Pakistan. *Pakistan Vision*, 19(1), 110-126.

Ali, A., Ahmed, F., & Rahman, F. U. (2016). Impact of Government Borrowing on Financial Development (A case study of Pakistan). *Bulletin of Business and Economics* (BBE), 5(3), 135-143.

Ali, A., Audi, M., & Roussel, Y. (2021). Natural Resources Depletion, Renewable Energy Consumption and Environmental Degradation: A Comparative Analysis of Developed and Developing World. *International Journal of Energy Economics and Policy*, *11*(3), 251-260.

Ali, A., Audi, M., Bibi, C., & Roussel, Y. (2021). The Impact of Gender Inequality and Environmental Degradation on Human Well-being in the Case of Pakistan: A Time Series Analysis. *International Journal of Economics and Financial Issues*, *11*(2), 92-99.

Ali, A., Mujahid, N., Rashid, Y., & Shahbaz, M. (2015). Human capital outflow and economic misery: Fresh evidence for Pakistan. *Social Indicators Research*, *124*(3), 747-764.

Anderson et al, E. e. (1994). Customer satisfaction, market share, and profitability: findings from Sweden. *The Journal of Marketing*, *58*(3), 53-66.

Annamdevula, S., & Bellamkonda, R. (2016a). Effect of student perceived service quality on student satisfaction, loyalty and motivation in Indian universities: development of HiEduQual. *Journal of Modelling in Management*, *11*(2), 488-517.

Annamdevula, S., & Bellamkonda, R. (2016b). The effects of service quality on student loyalty: the mediating role of student satisfaction. *Journal of Modelling in Management*, *11*(2), 446-462.

Arambewela, R., & Hall, J. (2006). A comparative analysis of international education satisfaction using SERVQUAL. *Journal of Services Research*, *6*(1), 141-163.

Argan, M. (2012). Word-of-Mouth (WOM) as A Tool of Health Communication: A Case Study of Turkey. *HealthMED*, *6*(1), 216221.

Arndt, J. (1967). Role of Product-Related Conversations in The Diffusion of a New Product. *Journal of Marketing Research*.

Arpan et al, L. R. (2003). A cognitive approach to understanding university image. *Corporate Communications: An International Journal*, *8*(2), 97-113.

Arshad, S., & Ali, A. (2016). Trade-off between Inflation, Interest and Unemployment Rate of Pakistan: Revisited. *Bulletin of Business and Economics (BBE)*, *5*(4), 193-209.

Ashraf, I., & Ali, A. (2018). Socio-Economic Well-Being and Women Status in Pakistan: An Empirical Analysis. *Bulletin of Business and Economics (BBE)*, 7(2), 46-58.

Ateşoğlu, İrfan, & Bayraktar, S. (2011). Ağızdan Ağıza Pazarlamanın Turistlerin Destinasyon Seçimindeki Etkisi. *ZKU Journal of Social Sciences*, *7*(14), 95-108.

Audi, M & Ali, A. (2017). Socio-Economic Status and Life Expectancy in Lebanon: An Empirical Analysis. *Archives of Business Research*, 5(11), 159-170

Audi, M. & Ali, A. (2017). Environmental Degradation, Energy consumption, Population Density and Economic Development in Lebanon: A time series Analysis (1971-2014). *Journal of International Finance and Economics*, 17(1), 7-20.

Audi, M. Sadiq, A. Ali, A. and Roussel, Y. (2021). Performance Evaluation of Islamic and Non-Islamic Equity and Bonds Indices: Evidence from Selected Emerging and Developed Countries. *Journal of Applied Economic Sciences*, 16(73), 251– 269.

Audi, M., & Ali, A. (2016). A Causality and Co-integration Analysis of Some Selected Socio-Economic Determinants of Fertility: Empirics from Tunisia. *Bulletin of Business and Economics (BBE)*, 5(1), 20-36.

Audi, M., Ali, A., & Roussel, Y. (2021). Aggregate and Disaggregate Natural Resources Agglomeration and Foreign Direct Investment in France. *International Journal of Economics and Financial Issues*, *11*(1), 147-156.

Audi, M., Ali, A., & Roussel, Y. (2021). Measuring the Tax Buoyancy: Empirics from South Asian Association for Regional Cooperation (SAARC). *Empirical Economics Letters*, 20(12).

Audi, M., Ali, A., & Roussel, Y. (2021). The Advancement in Information and Communication Technologies (ICT) and Economic Development: A Panel Analysis. *International Journal of Innovation, Creativity and Change*, 15(4), 1013-1039.

Bolton et al, R. e. (2004). The theoretical underpinnings of customer asset management: a framework and propositions for future research. *Journal of the Academy of Marketing Science*, *32*(3), 271-292.

Calvo-Porral et al, C. a.-M.-P.-C. (2013). Perceived quality in higher 2013education:an empirical study. *Marketing Intelligence & Planning*, *3*(6), 601-609.

Carman, J. (1990). Consumer perceptions of service quality: an assessment of the SERVQUAL dimensions. *Journal of Retailing, 66*(1), 33-55.

Chen, Y. (2016). An empirical study on the student experience of higher education service quality in Taiwan. *International Journal of Management Sciences, 6*(12), 582-594.

Dabholkar P et al, T. D. (1995). A Measure of Service Quality for Retail Stores. *Journal of the Academy of Marketing Science, 24*(1), 3-16.

Dick, A., & Basu, K. (1994). Customer loyalty: towards an integrated conceptual framework. *Journal of the Academy of Marketing Science, 22*(2), 99-113.

Dowling, G. (1988). "Measuring corporate images: a review of alternative approaches. *Journal of Business Research, 17*(1), 27-34.

Dowling, G. (1988). Measuring corporate images: a review of alternative approaches. *Journal of, 17*, 27-34.

Ennew, C. T. (2000). "Managing Word of Mouth Communication: Empirical Evidence From India. *International Journal of Bank Marketing, 18*(2), 75-83.

File KM, C. D. (1994). Word-of-Mouth Effects in Professional Services Buyer Behavior. *The Service Industries Journal, 13*(1), 301-314.

Hair et al, J. A. (1998). *Multivariate Data Analysis* (5th ed ed.). Prentice Hall International.

Hasan et al, S. A., & al, A. O. (2012). Effect of Trust Factors on Consumer's Acceptance of Word of Mouth Recommendation. *European Journal of Social Sciences, 31*(2), 212-218.

Ivy, J. (2001). Higher education institution image: A correspondence analysis approach. *International journal of educational management, 15*(6), 276-282.

Kanakana, M. (2014). Assessing service quality in higher education using the SERVQUAL tool. *International Conference on Industrial Engineering and operations Management,, 1*, 68-74.

Kotler, & Fox. (1995). *Strategic Marketing for Educational Institutions* (2nd ed ed.). Prentice-Hall, Englewood Cliffs, NJ.

Landrum, R.E, Turrisi, & R. and Harless, C. (1998). University image: the benefits of assessment and modeling. *Journal of Marketing for Higher Education, 9*(1), 53-68.

Mangold et al, W. G., & al, G. R. (1999). Word-of-Mouth Communication in the Service Marketplace. *Journal of Service Marketing, 13*(1), 73-89.

Mansori et al, S. a. (2014). Service quality, satisfaction and student loyalty in Malaysian private education. *Asian Social Science, 10*(7), 57-66.

McPherson, & Shapiro, M. (1998). The Student Aid Game. *Princeton University Press*.

Mone et al, E. E. (2011). Performance management at the wheel: driving employee engagement in organizations. *Journal of Business and Psychology, 6*(2), 205-212.

Parameswaran, R., & and Glowacka, A. (1995). University image: an information processing. *Journal of Marketing for Higher Education, 6*(2), 41-56.

Parasuraman et al, A. a. (1988). SERQUAL: a multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing, 64*(1), 12-40.

Pawar, A., & Chakravarthy, V. (2014). Factors influencing employee turnover in fusion healthcare organization. *International Journal of Management Research and Reviews, 4*(9), 834-846.

Reichheld, F., & Sasser, W. (1990, september/october). Zero defections: quality comes to services. *Harvard Business Review*, 105-111.

Senthilkumar, N., & Arulraj, A. (2011). SQM-HEI – determination of service quality measurement of higher education in India. *Journal of Modelling in Management, 6*(1), 60-78.

Seth et al, N. a. (2005). Service quality models:areview. *InternationalJournalof Quality & Reliability Management, 22*(9), 913-949.

Shemwell, D. e. (1998). Customer-service provider relationships: an empirical test of a model of service quality, satisfaction and relationship-oriented outcomes. *International Journal of Service Industry Management, 9*(2), 155-68.

Singh, S. (2018). Sustainable people, process and organization management in emerging markets. *Benchmarking: An International Journal, 25*(3), 774-776.

Yang et al, S. a. (2012). An Empirical Study of Word-of-Mouth Generation and Consumption. *Marketing Science, 31*(6), 952-963.

Yavas, U., & Shemwell, D. (1996). Graphical representation of university image: a. *Journal of Marketing for Higher Education, 7*(2), 75-84.

Yousapronpaiboon, K. (2014). SERVQUAL: measuring higher education service quality in Thailand. *Procedia – Social and Behavioral Sciences, 116*(1), 1088-1095.

Zeithaml, V., Berry, L., & Parasuraman. (1996 ). The behavioural consequences of service quality. *Journal of Marketing, 60*, 31-46.