

## **Service Quality and Student Satisfaction: The Moderating Role of University Culture, Reputation and Price in Education Sector of Pakistan**

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### **Abstract**

Service quality is imperative for higher education institutes in order to remain competitive and growing. There is a need to ensure students' satisfaction with university. This study will help improve service quality of the institutes. Information and data are collected using a survey questionnaire from the higher education institutes of Pakistan using convenience sampling technique. Findings revealed that with the moderating effect of university culture, university reputation and price, higher education institutes can more significantly achieve the student satisfaction. University culture positively strengthens service quality to achieve and sustain student satisfaction, while price and university reputation strengthen the relationship in a negative direction. These moderators are the significant contributing factors.

### **Keywords**

Service quality, Student satisfaction, University reputation, Price, University culture.

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## **Introduction**

Addressing quality in Higher Educational Institutions (HEIs) is a complex phenomenon. There are two important points to focus, academic quality and service quality. Academic quality emphasizes on the learning outcome, that is, the acquiring of knowledge and abilities in subject domains. While, service quality generally emphasizes the institutional services. The service aspects include both tangible and non-tangible features. The weaker comprehension of the service provision notion in HEIs has made them to concentrate more on measureable features like equipment, physical environment and assets. As a result, HEC generally funds universities more on these perceptions and hence evaluates them on the same too. There is a strong need of Pakistani HEIs to concentrate on the promotion of minds they employ and spend more on the human resources, in addition to their infrastructure.

The number of educational institutes in Pakistan has been increased during 2000-2015. In 2000, 45 universities and degree awarding institutions were operative which increased to 173, according to the figure of Higher Education Commission (HEC) of Pakistan in 2015. This increase in number of universities raised the need for the service quality in order to attract and retain students. Since, education is considered to be an important source in any economy and there exists a significant association between education and growth in economy of any country (Husain et al., 2009).

Number of researches have been done around the globe pertaining the impact of service quality and student satisfaction. Very few investigated price and university reputation as determinants of service quality or as independent variables. But, scarce literature is available in the context of Pakistani HEIs about the effect of mediator or moderator variables. The current research emphasized on three factors, which are price, university reputation, and university culture, as moderators and investigates the extent to which service quality impacts satisfaction of students, particularly in Pakistani context.

The key objective of this research is to identify the effect of service quality on student satisfaction with moderating effect of university

culture, price and university reputation. This study investigated the following two research questions:

1. To what extent does the service quality impact on student satisfaction?
2. What role do university culture, university reputation and price have between the association of service quality and student satisfaction?

## **Literature Review**

### **Service quality**

Service quality (Parasuraman et al., 1985; Zeithaml, 1988; Chang, 2009) is difficult to be measured because of its intangible nature (Eshghi et al., 2008). It is essential to take all aspects of service quality in consideration that justify the situation in which specific industry is working (Lagrosen, 2001). Parasuraman et al. (1988) suggested that 'SERVQUAL', which measures service quality, is based on five aspects, these are tangibles, reliability, responsiveness, assurance, and empathy (Andam et al., 2015). Researchers are of the view that the dimensions used by SERVQUAL requires more generalization (Iwaarden & Van der Wiele, 2002).

### **Student satisfaction**

Student satisfaction is "the extent to which an institutions' service performance meets the reckoning of the students" (Weirs-Jenssen et al., 2002; Salami, 2005; Roberts-Lombard, 2009). Satisfaction of students is affected by students' expectations and their perception about services and quality of services provided (Hu et al., 2009; Babaei, 2015).

Satisfaction of the students with university has institutional, individual, and social welfare. According to an institutional argument, contented students are much more probable to endure their studies and prosper academically. Student satisfaction can easily be achieved by outstanding service standards. This will help HEIs to attain a sustainable competitive edge in today's higher educational environment (Huang et al., 2012).

Helgesen and Nettet (2007) strengthened the findings of Mavondo et al. (2000), by stating that reputation of institutions is also an important consideration in determining satisfaction level of students. Those students who are satisfied, generate optimistic views about institution and endorse the same institute to other students.

### **University culture**

With the passage of time, leadership involved in these institutions is getting aware of the culture (Ahangaran et al., 2016) and its role in diversity towards university's development. Each university has its own elements which are interconnected with its cultural aspects (Bartell, 2003; Sporn, 1996). In short, university culture works as a web, where administration plays its role by keeping everyone connected (Bartell, 2003).

University culture can be regarded as a strong or weak culture (Sporn, 1996). Universities with strong cultures have same set of constant beliefs and ethics shared by both managers and the staff (Kotter & Heskett, 1992). If the links present between groups are lost then the culture is said to be weak. Strong university culture is distinguished by collective standards, strong behavioral values, compliance and readiness of the faculty to conform to these values. Weak culture is distinguished by the divergence from collective standards, lack of values (both written and oral) at the university (Antic & Ceric, 2008). It is imperative to comprehend university culture to promote student satisfaction with the university.

### **University reputation**

The combined representation of university's multiple elements (internal and external elements), including the media-hold of the university over the period of time is known as university reputation. Fombrun and Van Riel (2003), and Van den Bosch et al. (2005) discussed five aspects of corporate reputation (visibility, distinctiveness, authenticity, transparency and consistency) by proposing a closed association between "corporate visual identity" and "corporate reputation". Researchers reported that a university's reputation can be made by the direct or indirect mediated experiences

and the information that is obtained through various channels of communication and symbols (Bromley, 2000; Gotsi & Wilson, 2001; Grunig & Hung, 2002).

Numerous researches identified and recognized the importance of university reputation (Nguyen & LeBlanc, 2001; Hoyt & Brown, 2003). According to Sevier (1994), mostly students chose universities based on the perception they have about the reputation of the university. He further added that reputation is mostly perceived in two directions; horizontal and vertical. Horizontal context of reputation deals with the comparison of institutions on the basis of specific characteristics and dimension that a student would love to mention it to anyone. While vertical context of reputation deals with the student's perception of positive or negative emotions concerning institutes.

### **Price**

Price is the purchase of commodities and services by spending money or commodities (Hanif et al., 2010; Kotler & Amstrong, 2010). Zeithaml (1988) narrated price in the context of consumer perception as letting go of something to attain a particular service or commodity. Price can be defined as a concept of quality and contentment in the context of service (Zeithaml & Bitner, 2000). Bolton et al. (2003) defined the concept of fairness as the procedure through which rational outcomes can be attained. If the price is fair in the view of consumer, then it can be perceived as fairly charged (Clemes et al., 2008).

Customer contentment can be determined through the perceived price (Anderson et al., 1994; Zeithaml & Bitner, 1996). The factors that are used for identifying the price are reported by many researchers including Kao (2007). He described that perceived price of student can be examined with the help of different factors like, tuition charges, books cost and the coaching material. If customers get satisfied from the received services or product in return of what they had paid then they considered the product as quality product and feel satisfied (Bei & Chiao, 2001). There is dissimilarity between all these

concepts including price, consumer contentment and service quality (Parasuraman et al., 1994). These interrelationships among the concepts of satisfaction, quality and price make it interesting to study all of these three concepts.

### Research Methodology

It is a cross-sectional study, using quantitative approach to obtain primary data from undergraduate students of HEIs in Pakistan. Convenience sampling technique was used to save expenses and time.

### Theoretical framework

Since, service quality showed an enhancing impact on student satisfaction (Parasuraman et al., 1985; Buttle, 1996), there are rare studies specifically measuring the effect of service quality on student satisfaction by using university culture, price and university reputation as moderators. The theoretical model is shown in Figure 1.

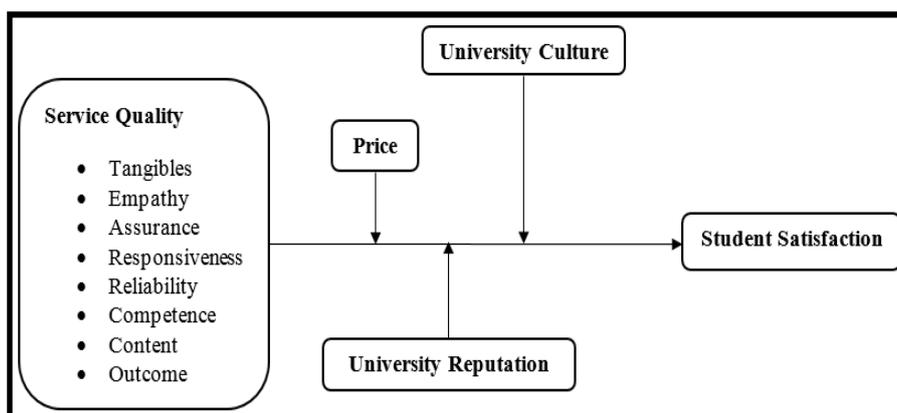


Fig. 1. Theoretical framework

### Hypotheses

The research hypotheses for this research are as follows:

- H1.** Service quality significantly impacts student satisfaction.
- H2.** University culture has a moderating relation between service quality and student satisfaction.
- H3.** University reputation has a moderating relation between service quality and student satisfaction.

**H4.** Price has a moderating relation between service quality and student satisfaction.

### Measures

Data were collected from students of 20 HEIs as a sample through a questionnaire. Personal visits and responses via email were collected. Students were mostly from business administration, telecommunication engineering, computer engineering, electrical engineering, software engineering and computer sciences programs. Total questionnaires rotated were 900. A response rate of 83% was achieved as 747 questionnaires were received.

Questionnaire statements were adopted from different empirical studies, shown in Table 1.

Table 1. Measure

Sr. No.	Construct	Author	No. of Items
1	Tangibles	Owlia & Aspinwall (1998)	7
2	Competence	Owlia & Aspinwall (1998)	6
3	Outcome	Gronroos (1990)	3
4	Content	Owlia & Aspinwall (1998)	4
5	Reliability	Owlia & Aspinwall (1998)	5
6	Empathy	Parasuraman et al. (1991)	3
7	Assurance	Parasuraman et al. (1991)	4
8	Responsiveness	Parasuraman et al. (1991)	4
9	University culture	Quinn & Rohrbaugh (1983); Elliott & Shin (2002); Ijaz et al. (2011); Abdullah (2006); Zindi (1994); Tinklin et al. (2004); Presley et al. (1993)	17*
10	Price	Sweeney & Soutar (2001)	2
11	University reputation	Petrick (2002); Sweeney & Soutar (2001)	5
12	Student satisfaction	Athiyaman (1997); Cronin et al. (2000); McDougall & Levesque (2000)	8

\*All of these questions were modified as per Pakistani context.

Data were analyzed using different techniques through SPSS-21 and AMOS-18 including reliability analysis, confirmatory factor analysis and correlation analysis. The impact of the independent variable was investigated on the dependent variable in presence of moderators through Structural Equation Modeling (SEM) to test the proposed association in order to find the impact of each constructs, directly or indirectly and through moderator.

## Reliability and Validity Analysis

### Reliability analysis

Reliability of the instrument is the essential pillar of the research process. Reliability of any method or experiment is achieved, when “a test, an experiment or method gives the same results repeatedly” (Carmines & Zeller, 1979). Normally, Cronbach’s coefficients value of above 0.70 is considered suitable and scale with this value or greater is considered reliable (Murphy & Balzer, 1989). According to Nunnally (1978), the value above 0.6 is also acceptable. Table 2 contains alpha values of instrument and shows that all the values are above 0.6 which shows that scale/instrument used in this research is acceptable and highly reliable.

Table 2. Reliability analysis

Sr. No.	Dimension	No. of items	Cronbach Alpha ( $\alpha$ )
1	Service Quality	36	0.930
2	Price	2	0.679
3	Reputation	5	0.772
4	University Culture	17	0.892
5	Student Satisfaction	8	0.866

### Validity analysis

Validity is “when measurement procedures truly identify what it aims to identify and ensures reliability through similar findings of the investigation if the measurement procedure is repetitive”. Validity is an imperative feature of the instrument because it ensures suitability of construct in particular context and more importantly measures what it is supposed to measure (Suter, 2006).

Validity is classified as “content validity, construct validity and criterion-related validity” by Creswell (2002), Gay and Airasian (2003), and Muijs (2004). Criterion-related validity embraces simultaneous and analytical validity. Hypothesized constructs upon which researchers build their study, are validated through measuring their construct validity.

### Construct validity

The degree to which a construct is precisely operational is known as construct validity (Yin, 2003). This study obtained a greater construct validity by devising the procedures after detailed study of research works available regarding variables used. These procedures have *high validity* as they are imitated in the number of studies carried out earlier. The improvement in the questionnaire is completed by consulting skilled experts in the field of service quality and education. After pilot survey, language of the questionnaire is reviewed to have further operational form of the questionnaire and its consideration amongst the respondents. The questionnaire is confirmed subsequently incorporating the inputs of the experts and the respondents of the pilot survey, thus leaving no grounds for the *misrepresentation* of the instruments.

### Confirmatory Factor Analysis (CFA)

According to Schreiber et al. (2006), CFA is normally used to analyze the validity of the experimental variables in association with latent constructs. Factors were loaded with their items and standardized estimates were calculated for validity analysis. Estimates showed that factor loading is greater than 0.3, ensuring no item is needed to be removed from measuring instrument and all the items used in the scale are valid in the particular context in which data were collected. Furthermore, *goodness-of-fit indices* are used to assess the model.

In Table 3, CMIN/DF for the default model is  $2.105 < 5$ ; it reveals an acceptable range of model fitness (Tabachnick & Fidell, 2007) showing a significant model at  $p$ -value  $0.00 < 0.05$ .

Table 3. Model fit summary

Model	P	CMIN/ DF	NFI Delta1	TLI rho2	CFI	PRATIO	PNFI	PCFI	RMSEA
Default model	0.000	2.105	0.796	0.872	0.881	0.935	0.745	0.824	0.038
Saturated model			1.000		1.000	0.000	0.000	0.000	0.108
Independence model	0.000	9.663	0.000	0.000	0.000	1.000	0.000	0.000	

Baseline Comparisons (NFI, TLI, and CFI), Parsimony-Adjusted Measures (PRATIO, PNFI and PCFI), and RMSEA showed a good

model fit as per standards set by Byrne (1998), Mulaik et al. (1989) and Hair et al. (1998), respectively.

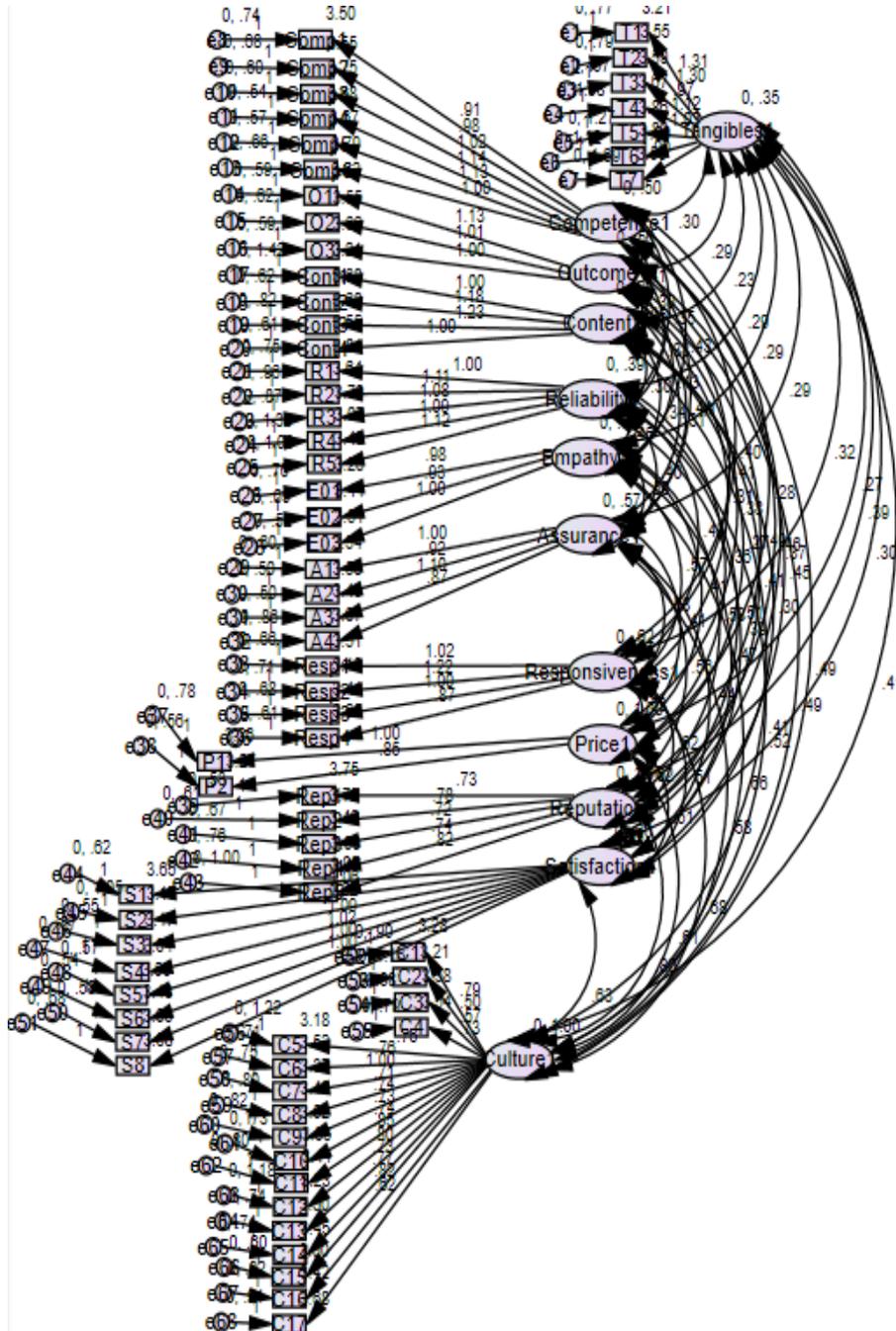


Fig. 2. Confirmatory factor analysis

## Results

### Demographic profiles and frequencies

The percentage and frequency of each of the demographic variable is given in Table 4.

Table 4. Demographic characteristics

Category	Percentage	Frequency
<b>Gender</b>		
Male	68.9%	515
Female	31.1%	232
<b>Age Group</b>		
Below 20 years	19.3%	144
20- 22 years	65.1%	486
Above 22 years	15.7%	117
<b>Background</b>		
Urban area	64.8%	484
Rural area	35.2%	263
<b>Program of study</b>		
Business administration	22.8%	170
Computer science	21.6%	161
Electrical engineering	16.5%	123
Software engineering	14.6%	109
Telecommunication engineering	14.3%	107
Computer engineering	10.3%	77
<b>Year of Study</b>		
1 <sup>st</sup> year	11.5%	123
2 <sup>nd</sup> year	30.9%	231
3 <sup>rd</sup> year	30.8%	230
4 <sup>th</sup> year	21.8%	163
<b>Status of the HEIs</b>		
Public sector	70%	523
Private sector	30%	224

### Correlation analysis

Normality of data is checked using non-parametric test of One-Sample Kolmogorov-Smirnov Test. Data are found to be normal. Further, the strength of interrelationships using Pearson correlation is checked.

Table 5 illustrates p-values of all variable less than 0.05 and 0.01, which depicts that all the causal relationships are significant. Analysis revealed that there exists a positive association among service quality, student satisfaction and three moderating variables, indicating if service quality improves then the student satisfaction also improves.

Table 5. Summarized correlation analysis (N=747)

		Price	UR	SS	UC	SQ
Price	Pearson correlation	1				
	Sig. (2-tailed)					
UR	Pearson correlation	0.427*	1			
	Sig. (2-tailed)	0.000				
SS	Pearson correlation	0.477*	0.662*	1		
	Sig. (2-tailed)	0.000	0.000			
UC	Pearson correlation	0.438*	0.645*	0.692*	1	
	Sig. (2-tailed)	0.000	0.000	0.000		
SQ	Pearson correlation	0.430*	0.652*	0.720*	0.755*	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	

\* Correlation is significant at the 0.01 level (2-tailed).

### Moderation Analysis using Structure Equation Model (SEM)

SEM is more diverse and multipurpose as compared to most of other multivariate procedures as it permits to analyze multiple relationships between dependent and independent variables simultaneously.

Table 6. Model fit summary and baselines comparisons

Model	P	CMIN/DF	NFI Delta1	TLI rho2	CFI	RMSEA
Default model	0.034	4.508	1.000	0.990	1.000	0.069
Saturated model			1.000		1.000	0.684
Independence model	0.000	350.200	0.000	0.000	0.000	

As shown in Table 6 of CMIN,  $p$ -value is 0.034 and CMIN/DF is 4.508, representing a good model fit as described by Tabachnick and Fidell (2007). Findings suggested that the research framework proposed in this study can be utilized to identify the effect of service quality on satisfaction. Since moderators used in this relationship are the major contributors, future research can be initiated in any service industry using this framework. Baseline comparisons shows that NFI statistics is 1.000, representing a very perfect model fit. TLI is 0.990, CFI statistics is 1.000, showing a standard model fit. All these model fit indices clearly depict the causal model. RMSEA value at .069 also showed a model fit within reasonable assortments (Hair et al., 1998).

Results in Table 7 of Structural Equation Modeling (SEM) showed that service quality has a substantial positive impact on student satisfaction ( $p$ -value of  $0.00 < 0.05$ ). Beta value for direct relation is 0.671 showing a strong effect of service quality on student satisfaction.

### Estimates and Findings

Table 7. Model summary and coefficients (with moderator)

Dependent variable	Independent variable	Estimate	SE	Critical ratio	p-values	Result
Student satisfaction ← —	Service quality	0.671	0.143	4.706	0.000	Accept
<b>University reputation as moderator</b>						
Student satisfaction ← —	University reputation	-0.221	0.009	-23.761	0.000	Accept
<b>Price as moderator</b>						
Student satisfaction ← —	Price	-0.258	0.006	-44.169	0.000	Accept
<b>University culture as moderator</b>						
Student satisfaction ← —	University culture	0.400	0.041	9.771	0.000	Accept

In the presence of university reputation (as a moderator), there exists a significant negative moderating association of university reputation and price between service quality and student satisfaction. In contrast, university culture plays a substantial positive moderator in relationship of service quality and student satisfaction.

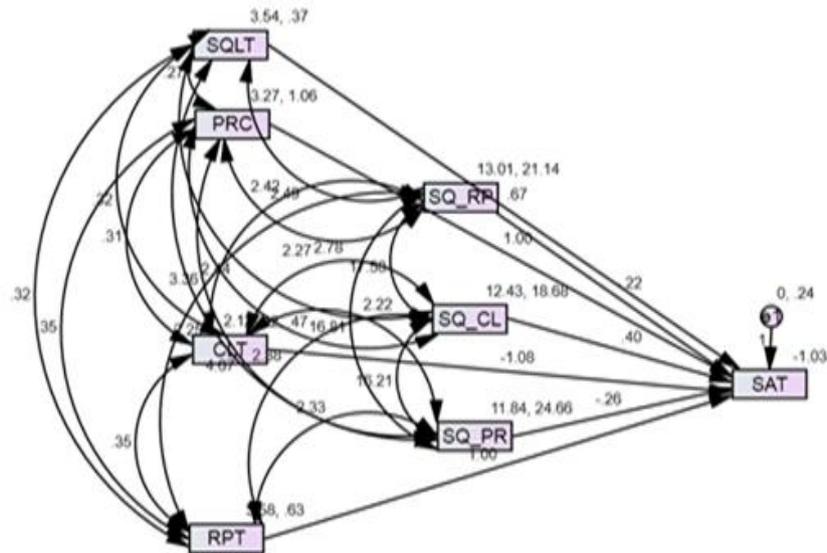


Fig. 3. Mediation model

## **Discussion**

This research investigated the relationship between service quality and student satisfaction with the moderating role of university reputation, price, and university culture. Results identified that service quality strongly and significantly impacts the students' satisfaction in education sector. Findings suggested that currently it is imperative for the Higher Education Institutes (HEIs) to guarantee quality of service for students to augment students' satisfaction. Findings are consistent with the studies accomplished by Kordshouli et al. (2016), Ferdousipour (2016), Azizi et al. (2014), Ali and Mohamed (2014), Shah (2013), Enayati et al. (2013), Rahim (2012), and Dado et al. (2012).

Along with service quality, strong university culture can bring student satisfaction into account. Findings of the study suggested that there is a substantial moderating association of university culture between service quality and student satisfaction. Findings are in accordance with the results of Uprety and Chhetri (2014).

Reputation of any university or HEI is important in determining the worth of that institute. Findings suggested that there is a substantial moderating association of university reputation between service quality and student satisfaction. Results are consistent with the studies conducted by Dib and Alnazer (2013), and Ntabathia (2013).

Outcomes suggested that there is a substantial moderating association of price between service quality and student satisfaction. These conclusions supported the study conducted by Tuan (2012).

## **Conclusion**

This study focused on the service quality of Higher Educational Institutes (HEIs) to attain student satisfaction through the moderating effect of university reputation, price and university culture. Conclusively, the association between service quality and student satisfaction is positively strengthened by the university culture, while price and university reputation negatively strengthened the relationship.

Although it was tried to collect data from all the four provinces of Pakistan, because of logistics and financial restrictions, the study is limited to only 20 Universities/HEIs out of 173.

Education sector managers are suggested to extend the quality enhancement scope to student satisfaction because satisfaction is the very next predictor influencing student's future behavioral intentions. HEIs should improve overall service for a long-term revenue generation. To meet the international standards of education, special attention is required to upgrade infrastructure and other allied facilities, as well as to improve the communication skills of the students, to establish efficient quality enhancement cells and job placement cells, and to arrange industrial visits and study tours to enhance practical skills of the students.

This research has been conducted on much wider scale but it only measures the perceptions of the students. Further studies can be done to explore the perception of other stakeholders including the academic, non-academic staff and parents. This study is a cross-sectional survey. In future, a longitudinal investigation approach will offer a foundation for more valuable clarifications and explanations. Future researchers should advance inspection of the impact of service quality on student satisfaction in the presence of customer value or on HEIs performance.

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