
Impact of Higher Education Service Quality on Students' Satisfaction: The Moderating Role of Demographic Attributes

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A B S T R A C T

Present attitudes of the students are more proximity with service quality determinants which are offered by the universities, and that they open door to create favourable perception about high level of satisfaction in competitive environments. Moreover, student satisfaction may differ under different demographic background of the students. The main objective of this research study is to identify the moderating effect of demographic attributes on the relationship between higher education service quality and students' satisfaction with special reference to students who are studying in higher education institutes in Southern province of Sri Lanka. The quantitative research approach was used for the study and data were collected through a structured questionnaire from 250 randomly selected full-time students who were studying in state and private universities in Southern province. Collected data were analysed through ANOVA test, correlation and multiple regression techniques through IBM SPSS 23. The results of the regression analysis reveal that, there is a significant positive impact of service quality of universities on students' satisfaction. Furthermore, four demographic attributes, namely age level, occupation level, income level and gender level were used as the construct of the study to measure the moderating effect of demographic attributes on the relationship between higher education service quality and students' satisfaction. The three attributes of age level, occupation level and income level have increased the relationship between higher education service quality and students' satisfaction.

Keywords: customer satisfaction, higher education, service quality

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1. Introduction

The incredible growth of the service sector has been changing the way of corporations conduct business with customers in the last few decades. The growth of service industries can be traced to the economic development of society and the social-cultural changes that have accompanied it. Therefore, the portion of the service sector is virtually increasing throughout the countries in the world. When the national economy develops gradually, the relative share of employment between agriculture, industry (including manufacturing and mining), and service changes dramatically. As far as emerging economies are concerned, the service output is growing rapidly and often represents at least half of the gross domestic product (GDP) (Lovell et al., 2011).

Among the services industries, higher education sector plays a significant role at present compared with the past due to advances in information and communication technology in all over the world by unleashing potential through effective service quality determinants. It is evident that the higher education systems in Europe as well as in Asia have gone through recently substantial restructuring processes to enhance their competitiveness and the hierarchical positioning within their own countries and in the global marketplace (Deem, Mok, & Lucas, 2008). As far as Sri Lankan context is concerned, higher education industry is most commonly dominated by the state universities. However, as a result of increasing internationalization expansion, the private universities are also playing a major role by delivering special degree programs for the Sri Lankan students. The students who are enrolled in state and private universities are from different demographic backgrounds.

According to Armstrong and Kotler (2005), the demographic segmentation divides customers into segments based on demographic values such as age, gender, family size, family life cycle, income, occupation, education, religion, race, generation, social class and nationality. So, the level of satisfaction as a result of service quality may be influenced by these demographic factors. However, satisfying customers is not an easy task, because of its complexity. Accordingly, institutions of higher education are highly focused on student satisfaction as they face intense competitive pressure than ever before (Arokiasamy, 2012; Paswan & Ganesh, 2012). Hence, in this study a special attention has been paid to analyse the impact of service quality on student satisfaction, giving special consideration to higher educational students' demographic environmental differences.

1.1. Research problem

Unlike in the past, at present customers are attracted to the service by observing the quality dimensions. Even in the educational industry, the students' attraction to a specific course is dependent on the quality of the service delivered by the universities teaching in competitive environments. In terms of products and services that are offered by the private universities, it is very similar in the industry level, but the distinguishing factor is the level of quality of service and how the customers perceive it.

Students in the present educational institutes are knowledgeable and make informed decisions with rapidly developing information technology and advanced communication channels. The present competitive business environment facilitates students to switch universities easily seeking better options for higher level of satisfaction. This is a major challenge to the universities nowadays. Further, any university is very sensitive to external changes as well. As far as Sri Lankan context is concerned, the literature on service quality is extensive. Nevertheless, a relatively low priority has been given to identifying service quality

determinants in the higher education sector from students' perspective as the primary customers (Abdullah, 2006). Students' experience becomes one of the most critical determinants of service quality and performance indicators in higher education (Abdullah, 2006). Similarly, no or less attention has been paid to analyse the impact of service quality on customer attraction with special reference to higher education students' different demographic backgrounds. So, the impact of these quality dimensions on student satisfaction in higher education sector is a researchable issue due to inadequacy and scarcity of studies in the existing literature. Therefore, the present study was conducted to examine the effect of service quality on customer satisfaction of higher education students in different demographic backgrounds.

1.2. Research question and objectives

RQ1: Is there a significant moderating impact of demographic features of higher education students on the relationship between the service quality and students' satisfaction who have enrolled in the higher education sector in Southern province of Sri Lanka?

RO1: To identify the relationship between the quality of the service of the higher education and students' satisfaction who are studying in higher education institutes in Southern province of Sri Lanka.

RO2: To analyse the moderating impact of demographic features of higher education students on the relationship between the service quality and students' satisfaction.

2. Review of the literature

Parasuraman (1985), (1988), defines service quality is the difference between customers' perception of the current service which is being provided by a given organization and customers' expectations of excellent service within that given industry. According to Lovelock et al. (2012), service quality stems from the user's perspective which describes consistently meeting or exceeding customer expectations. Marketing's stimulus in service quality is obvious: Poor quality creates disadvantages for a company in competitive markets which potentially driving away dissatisfied customers. The services are offered by the service organizations are very similar in the industry level. But the distinguisher is the quality level of the service and customers perceptions on it. Parasuraman (1988), have conducted intensive research on service quality and identified service quality model with five dimensions. To measure customer satisfaction with various aspects of service quality, Valarie Zeithamal and her colleagues developed a survey instrument called SERVQUAL. It is based on the idea that the customer can assess the service quality of the firm by comparing their impression of their service to their expectations.

Customer satisfaction is defined as the extent to which a product's perceived performance matches a buyer's expectations (Kotlar & Amstrong, 2014). Customer satisfaction depends upon the perceived performance of the product that is relative to a buyer's expectations. If the product's performance is unable to meet the buyer's expectations, the customer is dissatisfied. If performance can match expectations of the buyer, the customer is satisfied and if the level of performance surpasses buyer's expectations, the customer is highly satisfied or delighted. Highly satisfied customers make repurchases and tell others about their positive experiences with positive word of mouth regarding the product

or services. Customer assessment of a product or service depends on many factors and especially the type of the loyal relationship the customer has towards the brand. The consumers those who have often formed more favorable perceptions of a product or service with a brand they already feel positive about (Kotler et al., 2012). According to Oldfield and Baron (2000), education is identified as a pure service and Thureau et al. (2001) identify that, educational services have been categorized into the field of services marketing. Increasingly, higher education institutions are resulting that, higher education is recognized as a rapidly growing business industry in the services marketing industry. Hence, institutions are beginning to focus more on meeting or even exceeding the needs of the students (Deshields et al, 2005; Gruber et al, 2010). When examining the previous literature, the latter authors have also suggested that education service also differs from other professional services in many ways. In terms of the service industry is concerned, the education service industry has been identified as a huge future investment project towards the long-term success of the industry. Education services play a significant role in the students' lives and students requires huge amount of inspiration and intellectual skills to reach their ultimate goals as well (Gruber et al, 2010). In addition to that, educational services are consisted of with several service characteristics. In general, intangible, perishable, heterogeneous and the teaching efforts of the lecturers are simultaneously produced and consumed with both tutor and student being part of the experience (Deshields et al., 2005; Gruber et al., 2010).

According to Kotler (2006), Demography is the study of human populations in terms of size, density, location, age, gender, race, occupation, and other statistics. According to Armstrong and Kotler (2005), the demographic segmentation divides customers into segments based on demographic values such as age, gender, family size, family life cycle, income, occupation, education, religion, race, generation, social class and nationality. According to Kotler (1998), one of the main values is population which includes the size and growth rate of population in cities, regions, and nations. Age distribution and ethnic mix educational levels, household patterns and regional characteristics and movement are included as well. In this research study, current study level, age, gender, occupation, and income were selected as the demographic environment factors of higher education students. When considering the previous research findings, Ali and Raza (2017), have conducted a study to measure relationship between service quality and customer satisfaction in banking industry, and the results have revealed that the service quality is positively and significantly associated with customer satisfaction. Hishamuddin, Hasan, Azleen, Rahida, Rahman, Zulkeflee, and Razak (2008) revealed that, there is a positive relationship between service quality and student satisfaction. Athiyaman (1997) stated that, the relationship between consumer satisfaction and perceived quality using a scenario specific to higher education. Petruzzellis, Angela, and Romanazzi (2006) stated that, universities have to concentrate their efforts on the improvement of teaching and non-teaching service qualities, in order to promptly respond to the target, and foster a stronger relationship with surrounding economic and productive systems. So, the universities' service quality may impact on students' satisfaction.

3. Methods

The aim of this present study is to identify the key factors affecting the university service quality and students' satisfaction with the moderating effect on demographic factors of higher education students in Sri Lanka. Theoretical population of the present study can be identified as, students of state and private universities in Sri Lanka who represent different demographic backgrounds. Accordingly, the students who study at the selected state and private universities in Southern province have been selected as the study sample due to the

time frame restrictions. In this study, the researcher used the convenience sampling method. Close Ended questionnaires with Five Point Likert type scale as Strongly Disagree denoting 1, Disagree denoting 2, Moderate denoting 3, Agree denoting 4, and Strongly Agree denoting 5 were distributed among 250 students of well-known universities located in Southern Province to collect primary data. Table 1 exhibits some of the characteristics of the composition of the sample.

Table 1: Sampling Distribution of Students

Category	Subcategory	Frequency
Study Level	Certificate	22
	Diploma	115
	HND	76
	Bachelor	37
Age	18-27	80
	28-37	108
	38-47	60
	Above48	02
Occupation	Non- Employee	49
	Managerial	104
	Non- Managerial	97
Gender	Male	159
	Fe-male	91
Income	10000-19999	65
	20000-29999	75
	30000-39999	87
	40000-49999	08
	Above 50000	15

Source: Survey Data, 2019

3.1. Conceptual Framework

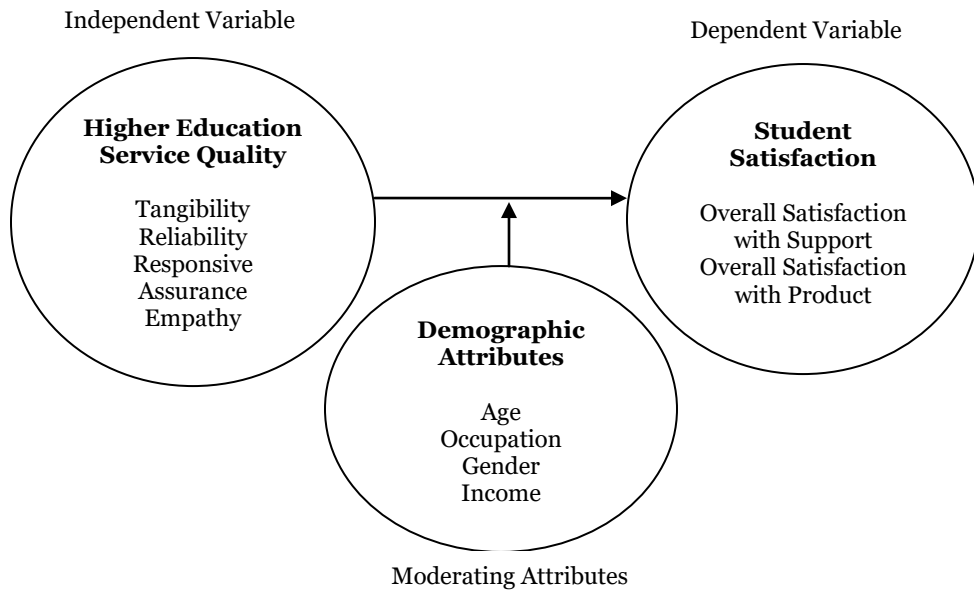


Figure 1: Conceptual Framework of the Study

The conceptual framework depicted in Figure 1 developed by guiding the literature survey and the requirement of the study. As far as the independent variable is concerned, it can be identified as Higher Education Service Quality which is measured by using Service Quality Measurement Model (SERVQUAL) developed by Parasuraman (1989). Dependent variable of Student Satisfaction is measured by using the Quality Dimension Model developed by Hayes (1998). Additionally, higher educational students' demographic environment is considered a moderating variable to analyse whether students from different demographic environments, i.e., age, occupation, gender, income are satisfied with differently or not.

Table 2: Service Quality Measures

Variable	Operational definition	Measurement item
Tangibility	Appearance of physical facilities, equipment, personnel and communication materials	<ul style="list-style-type: none"> - Modern looking equipment - Physical facilities are visually appealing - Near in appearance - Service is visually appealing
Reliability	Ability to perform the promised service dependably and accurately.	<ul style="list-style-type: none"> - Promise to do something by a certain time, they do so - Show sincere interest in solving questions - Perform the service right and first - Provide their service at the time they promise to do so - Insist in error free records
Responsiveness	Willingness to help customers and provide prompt service.	<ul style="list-style-type: none"> - Tell customers exactly when service performed - Give prompt service - Always willing to help - Never too busy to respond
Assurance	Possession of the skills and knowledge required to perform the service (competence), politeness, respect, consideration, and friendliness of contact personnel (courtesy), trustworthiness, believability, honesty (credibility) and security of the service provider.	<ul style="list-style-type: none"> - In still confidence in customers - Safe in transaction - Consistently courteous with customers - Knowledge to answer questions
Empathy	Approachability and ease of contact (access), listening to customers and keeping them informed in language they can understand (communication) and customer understanding.	<ul style="list-style-type: none"> - Individual attention - Opening hours are convenient - Personal attention - Understand specific needs of the customers

Source: Lovelock et al. (2011) Services Marketing, Seventh Edition, Pg. 410,431

3.2. Variable selection and hypotheses development

The SERVQUAL Model is based on the premises that customers can evaluate a firm's service quality by comparing their own expectations. As per the scholars' point of view, SERVQUAL has been identified as a generic measurement tool that can be applied across a broad

spectrum of service industries (Lovelock et al., 2011). The scale in SERVQUAL Model contains 21 perception items and series of expectation items, reflecting the five dimensions of service quality (Table 2). In Quality Dimension Model developed by Hayes (1998), the scale contains 10 perception items, reflecting the two dimensions of satisfaction i.e., overall satisfaction with support and overall satisfaction of product. Considering the students' demographic factors of the research study, it contains four factors that moderately impact the existing relationship between the service quality and students' satisfaction.

Table 3: Overall Satisfaction Measures

Overall satisfaction with support
The quality of the way the staff treated me is high
The way the staff treated me meet my needs.
The way the staff treated me meet my expectations
I'm happy with the way the staff treated me
I'm satisfied with the way the staff treated me.
I'm satisfied with the service I received.
The quality of the service meets my expectations.
Overall satisfaction with product
The quality of the final job they provided is high.
The job meets my expectations.
I'm satisfied with the job the staff provided.

Source: Bob E. Hayes (1988), *Measuring Customer Satisfaction*, Second Edition.

Based on the above framework, following hypothesis have been formulated for this study.

Table 4: Research Hypotheses

Hypotheses	Statement
<i>H1</i>	There is a Significant Positive impact of Services Quality on Students' Satisfaction.
<i>H2</i>	There is a Significant Moderating impact of the Age Level of Higher Education Students on the relationship between the Service Quality and Students' Satisfaction
<i>H3</i>	There is a Significant Moderating impact of the Occupation Level of Higher Education Students on the relationship between the Service Quality and Students' Satisfaction
<i>H4</i>	There is a Significant Moderating impact of the Gender Level of Higher Education Students on the relationship between the Service Quality and Students' Satisfaction
<i>H5</i>	There is a Significant Moderating impact of the Income Level of Higher Education Students on the relationship between the Service Quality and Students' Satisfaction

Source: Survey Data, 2019

4. Data analysis

4.1. Reliability of study variables

Cronbach's alpha is used as a statistical measurement to measure internal consistency of a set of data. This coefficient varies from 0 - 1, and the value 0.6 or less generally indicates unsatisfactory internal consistency reliability.

Table 5: Cronbach's Alpha and Descriptive Statistics

Dimension	Cronbach's Alpha	No. of Items
Tangibility	0.726	04
Reliability	0.670	05
Responsiveness	0.728	04
Assurance	0.717	04
Empathy	0.721	04
Satisfaction	0.922	10

Source: Survey Data, 2019

As far as the Cronbach's alpha value for five dimensions are concerned, it showed higher acceptable reliability values that indicates the reliability level is good for all most all the item scales of the services quality. When it comes to the customer satisfaction dimension of the study that represents ten items and all items are good measurements of measuring the customer satisfaction. It is proved by the alpha value for ten items showed higher acceptable reliability value which is recorded as 0.922.

4.2. Services quality and customer satisfaction

Table 6: Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Tangibility	250	1.00	3.50	1.81	.41135
Reliability	250	1.00	4.00	1.82	.42433
Responsiveness	250	1.00	4.00	1.86	.41668
Assurance	250	1.00	3.00	1.73	.44919
Empathy	250	1.00	3.50	1.75	.48308
Customer satisfaction	250	1.00	3.00	1.62	.48211
Valid N (listwise)	250				

Source: Survey Data 2019

The Table 6 illustrates the summarized view of the descriptive statistics of the study variables. As per the information given by the above table is concerned, mean value of all most all service quality dimensions are very much closer to 2.0. Thus, it expresses that, the service quality which is offered by the universities are in good condition. Further, mean value of customer satisfaction is closer to 2.0 as well. Thus, it shows that the students are satisfied with the service which is offered by the universities. The standard deviation values indicate that most of the responses for these values are located between either agree or strongly agree level.

4.3. Correlations

4.3.1. Correlation between Service Quality and Students' Satisfaction

Table 7: Correlations

Variable	Pearson Correlation	Sig. (2-tailed)
Tangibility	.407**	.000
Reliability	.684**	.000
Responsiveness	.611**	.000
Assurance	.571**	.000
Empathy	.777**	.000
SERVQUAL	.747**	.000

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

Source: Survey Data, 2019

According to the Table 7 the significant value of tangibility is less than 0.01 and it indicates that there is a relationship between tangibles part of services quality and customer satisfaction. These values are highly correlated with customer satisfaction recorded as 0.407 as well. Based on the result of correlation findings of reliability part of the services quality, it seems that there is a relationship between these two variables. This indicates that correlation significant value is less than 0.01. The result shows that there is a correlation between responsiveness and customer satisfaction, because P value is less than 0.01 as 0.000. Also, the correlation value is indicated the strength of relation is recorded as 0.611. According to the findings of above table, it indicates that an assurance is having a correlation in between services quality with P value as 0.571. As well as the correlation value is shown as 0.000 for the assurance part of the services quality dimension. As far empathy part of the services quality dimension is concerned, it seems that, the significant value is less than 0.01 and it reveals that, there is a relationship between the selected variable and customer satisfaction as the dependent variable of the research study. According to the findings, the empathy variable is highly correlated with customer satisfaction which is proven by the P value recorded as 0.777. When it comes to the overall correlation analysis for each main variable of the services quality as the independent variable of the research study, it reveals that almost all five dimensions are having significant correlation with significant values. All of the variables have recorded less than 0.01 significant levels as well.

Therefore, it reveals that, five dimensions expressed as tangibles, reliability, responsiveness, assurance and empathy have relationship with customer satisfaction. As far as the correlation of SERVQUAL scale and customer satisfaction is concerned, it has a favourable relationship as well. The SERVQUAL Scale includes five dimensions: tangibility, reliability, responsiveness, assurance, and empathy which measures consumer perceptions of services quality (Parasuraman et al, 1988). According to the findings, the overall relationship between service quality of universities and students' satisfaction indicates a significant, positive relationship ($r=0.747$, $p<0.05$). Therefore, it can be concluded that, there is a relationship between SERVQUAL model and services quality which is positive as well as strong.

4.4. Model summary

4.4.1. Moderating effect of age level

Table 8: Model Summary (Moderating Effect – Age)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	.747 ^a	.558	.557	.32100	.588	313.664	1	248	.000
2	.804 ^b	.647	.644	.28771	.088	61.710	1	247	.000

a. Predictors: (Constant), SERVQUAL

b. Predictors: (Constant), SERVQUAL, AGE

Source: Survey Data, 2019

Model o1- Satisfaction = a + (b1SQ + b2AGE) + e

Model o2 –Satisfaction =a + (b1SQ + b2AGE + b3INTERACTION) + e

As far as the above Model Summary shown in Table 8, first model says there is a significant positive impact of service quality of universities on students' satisfaction and 55% change in students' satisfaction is explained by the services quality offered by the universities. However, after introducing Age to the model, the above value increases up to 64%. So, it can be concluded that Age will increase additional 9% significant level of Consumer Satisfaction. Further, it is suggested there is a significant moderating impact of the age level of higher education students on the relationship between the service quality and students' satisfaction. It demonstrates that the alternative hypothesis is accepted rejecting the null hypothesis.

4.4.2. Moderating effect of occupation level

Table 9: Model Summary (Moderating Effect – Occupation)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				Sig. F Change
					R Square Change	F Change	df1	df2	
1	.747 ^a	.558	.557	.32100	.558	313.664	1	248	.000
2	.760 ^b	.577	.574	.31471	.019	11.015	1	247	.001

a. Predictors: (Constant), SERVQUAL

b. Predictors: (Constant), SERVQUAL, OCCUPATION

Source: Survey Data, 2019

Model o1- Satisfaction = a + (b1SQ + b2OCCUPATION) + e

Model o2 –Satisfaction =a + (b1SQ + b2OCCUPATION + b3INTERACTION) + e

In terms of the above Model Summary of Table 9, there is a significant positive impact of service quality of universities on students' satisfaction and 55% change in students' satisfaction is explained by the services quality offered by the universities. However, this percentage has increased up to 57% after introducing occupation to the second model and there is a significant moderating effect showed by occupation level of higher education students on the relationship between the service quality and students' satisfaction. Finally, it indicates that alternative hypothesis is accepted rejecting the null hypothesis.

4.4.3. Moderating effect of gender level

Table 10: Model Summary (Moderating Effect – Gender)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. Change	F
1	.747 ^a	.558	.555	.32165	.558	156.203	2	247	.000	
2	.747 ^b	.558	.553	.32230	.000	.005	1	246	.944	

a. Predictors: (Constant), SERVQUAL

b. Predictors: (Constant), SERVQUAL, GENDER

Source: Survey Data, 2019

Model 01- Satisfaction = a + (b1SQ + b2GENDER) + e

Model 02 –Satisfaction =a + (b1SQ + b2GENDER + b3INTERACTION) + e

As for the above Model Summary shown in Table 10, model one says that 55% change in Students' Satisfaction is explained by University's Services Quality. However, model 02 is concerned, there is no significant impact from students' Gender to change the existing relationship between Services Quality and Students' satisfaction giving same R square values for both models. So, there is no moderating effect from Gender to change current relationship between the independent and the dependent variable.

4.4.4. Moderating effect of income level

Table 11: Model Summary (Moderating Effect – Income)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. Change	F
1	.747 ^a	.558	.557	.32100	.558	313.664	1	248	.000	
2	.755 ^b	.571	.567	.31723	.012	6.933	1	247	.009	

a. Predictors: (Constant), SERVQUAL

b. Predictors: (Constant), SERVQUAL, INCOME

Source: Survey Data, 2019

Model 01- Satisfaction = a + (b1SQ + b2INCOME) + e

Model 02 –Satisfaction =a + (b1SQ + b2INCOME + b3INTERACTION) + e

According to the above Model Summary Table of 11, there is a significant impact of service quality of universities on students' satisfaction and 55% change in students' satisfaction is explained by the services quality offered by the universities. However, after introducing Income to the model, the above value increases up to 56% and significant moderating effect shown by income level of higher education students on the relationship between the service quality and students' satisfaction. Finally, it indicates that the alternative hypothesis is accepted rejecting the null hypothesis.

5. Results and discussion

The analysis of quantitative data of the research study reveals the following key findings and that there is a significant positive impact of service quality of universities on students' satisfaction and 55% change in students' satisfaction is explained by the services quality offered by the state and private universities. Further, there is a zero insignificant moderating

effect showed by the gender of student. But a significant moderating effect showed with the demographic factors of income, occupation and age of students. Out of five dimensions of the service quality, Empathy and Reliability have the greatest impact on students' satisfaction in higher education sector. 'Providing promised time', 'willing to help', 'personal attention' and 'understand students' specific needs' are the most crucial determinants on students' satisfaction of higher education sector. The analysis of the study data revealed that, there is an issue of customer switch in the higher education sector. So, above two determinants are also the most influential items on CS-attitude, CS-recommend and CS-switch in higher education sector.

6. Conclusion

This study was conducted to evaluate the impact of higher education service quality on students' satisfaction with the moderating role of demographic attributes. According to the findings, there is a significant, positive impact of higher education service quality on students' satisfaction and there is a significant moderating impact of the income level, age and occupation of the higher education students on the relationship between the service quality and students' satisfaction. Generally, the service quality in private and state universities significantly influences the students' satisfaction. Based on the above study it was empirically established that the perceived service quality has a greater impact on students' satisfaction.

The higher education industry is highly competitive and is very sensitive to the external changes. It can be identified as a huge potential investment at present. It is highly focused on service quality and its complexity more than ever before, because of globalization, demographic trends, regulatory shifts, modern technologies and new communication modes. The education service cannot release their full potential, unless they are aware of their customers' needs and wants. The new knowledge on perceived service quality determinants and demographics of customers will help the higher education sector to unleash potential in the industry.

According to the research findings, to satisfy the students in higher education sector, service quality plays an important role. Even though, universities/institutions are more concerned about the higher education students' demographic attributes on the relationship between service quality and students' satisfaction which caused to uplift the satisfaction level as much. Finally, several limitations need to be considered in this research. Although Sri Lanka has many other state and private universities, this research focused on five universities including one state university which is the first limitation identified for this study. Also, the limited scope of the study does not permit generalising across all the students in the higher education sector. The second limitation was that there might be more demographic attributes that are significantly associated with students' satisfaction in higher education sector. Third limitation is that the gathered data were more quantitative, and the questionnaires were unable to grasp the subjective responses of the participants.

Conclusions were made through the statistical analysis, which does not support human feelings to some extent, sentiments and aspirations. Therefore, a qualitative longitudinal study and a rich interview could have impacted to draw different conclusions. This study can be extended to include more universities and higher education institutions in government sector, private sector or both. Furthermore, by using more moderating factors than few such as culture, higher education level and so on. This study can be used as a reference point for future studies. It is clear that, students can be satisfied by providing

higher level of service quality beyond their expectations. This study is concerned about service quality with moderating attributes. Further studies can be done on other variables which illustrate the significant insight into further industry implications.

References

- Abdullah, F. (2006). The development of HEDPERF: a new measuring instrument of service-quality for the higher education sector. *International Journal of Consumer-Studies*, 30 (6), 569–581.
- Ali, M., & Raza, S.A. (2017). Service quality perception and customer satisfaction in Islamic banks of Pakistan: the modified SERVQUAL model. *Total Quality Management & Business Excellence*, 28 (5), 559-577.
- Athiyaman, A. (1997). Linking student satisfaction and service quality perceptions: the case of university education. *European Journal of Marketing*, 31(7), 528-540.
- Cerny, C.A., & Kaiser, H.F., (1977). A Study Of A Measure Of Sampling Adequacy For Factor-Analytic Correlation Matrices.
- Deem et al. (2008). Transforming Higher Education in Whose Image? Exploring the Concept of the 'World-Class' University in Europe and Asia. 21, 83–97.
- Gruber et al. (2010). Examining Student Satisfaction with Higher Education Services: Using a New Measurement tool." *International Journal of Public Sector Management*, 23(2), 105-123.
- Hayes, B. E. (1998). *Measuring Customer satisfaction and Loyalty* (2nd ed.)- Survey, Design, Use and Statistical Analysis Method.
- Hishamuddin Fitri Abu Hasan et al. (July, 2008). Service Quality and Student Satisfaction: A Case Study at Private Higher Education Institutions. Retrieved from <https://ccsent.org/journal.html>.
- Kaiser, H.F. (1974). An index of factorial simplicity. *PSYCHOMETRIK*, 39(1).
- Kotler, P. (1998). *Marketing Management*, Pearson Education Inc.
- Kotler, P. (2006). *Marketing Management*, Millenium Edition, Prentice-Hall, Inc.
- Kotler et al. (2012). *Marketing Management*, A South Asian Perspective, Pearson Education Inc.
- Lovelock et al. (2011). *Services Marketing*, Pearson Education.
- Luca Petruzzellis et al. (2006). Student satisfaction and quality of service in Italian universities. 16 (4), 349-364.
- Oldfield, B. & Baron, S., (2000). Student perceptions of service quality in a UK university-business and management faculty. *Quality Assurance in Education*, 8(2), 85–95.
- Parasuraman et al. (1998). The SERVQUAL Scale, SERVQUAL: A Multiple Items Scale for Measuring Consumer Perceptions of Services Quality, *Journal Retailing*, 64. 12-40
- Kotler, P. & Armstrong, G. (2005). *Principles of Marketing*, Pearson Education Inc.
- Thorsten Henning et al. (2001). Modeling and Managing Student Loyalty: An Approach-Based on the Concept of Relationship Quality, *Journal of Service Research*.

