Analysing Moderating Effects of Demographic Variables on Customer Satisfaction: A Study of Quick Service Restaurant

Gautam Shandilya¹, Ajitabh Dubey², Praveen Srivastava³

Abstract

Customers’ perceptions of service quality are essential for service companies’ survival in today’s challenging business environment. While much research is conducted on service quality, relatively few have examined how demographic variables influence the connection between the quality of service and price on customer satisfaction in fast-food outlets or what is now known as Quick Service Restaurants (QSR). The present study attempts to gain a deeper insight into the association of Customer Satisfaction (CS) with Service Quality (SQ) and Pricing (value). Additionally, the current study explores how the demographic variables moderate the relationship between the constructs described above.

Quantitative research was carried out using a standardized, self-administered online questionnaire and a random sample technique to collect data from 360 customers of QSR in India. SPSS and Smart PLS were used to analyse the data obtained. Smart PLS was used to ascertain the impact of price and SQ on CS and the effect of moderating variables. The finding suggests that price and SQ have a positive and significant relationship with CS. The

¹ Research Scholar, Department of Management & Commerce, Jharkhand Rai University. rajshandy@gmail.com
² Associate Professor, Department of Management & Commerce, Jharkhand Rai University. ajitabh.dube@jru.edu.in
³ Assistant Professor, Department of HMCT, BIT Mesra, Ranchi, Jharkhand. psrivastava@bitmesra.ac.in
demographic variables moderate the relationship between price and customer satisfaction; only income moderates the relationship between SQ and CS. These results suggest that restaurant QSR managers/owners should strengthen Service Quality to enhance Customer Satisfaction. Hence, the manager/owner should provide value for money and quality service to their customer to satisfy them.

Key words: Demographic variable, service quality, price, customer satisfaction, QSR.

Introduction

Urban development, growth of service industries and Information Technology (IT) Industry in particular have made the environment conducive for opening fast food. Tabassum (2012) termed these restaurants as Quick Service Restaurants (QSR). In QSRs, the turnover is higher, with more focus on process-driven activities, unlike the fine dine restaurants (DiPietro & Pizam, 2008). College students are one of the major customers of QSRs (Kim et al., 2010). Fast Service and best menu variety are two of the most prominent characteristics of QSR (Knutson, 2000). In addition to that, indoor atmosphere, exterior design and the overall physical environment play a significant role in the success of any QSR (Mendocilla et al., 2020).

QSR does business in the retail sales of prepared food and beverages consumed on-premises or take away. It offers varied food choices that can be prepared fast, served fast, and finished quickly if the customer so wishes (Gregory et al., 1998; Mason et al., 2016; Nguyen et al., 2018).

Fast food is inexpensive food prepared and served quickly. Menu variety, food taste, and the consistency of food and beverage are the reasons why customers go to fast food restaurants (Kivela et al., 2000). Plating, menu variety, taste, flavour, and proper service temperature are some of the prominent factors of food and service quality that are appreciated by customers (Namkung & Jang 2007). It
is the service speed and competitive price which attract the customer to fast food restaurants. Consumers identify with iconic QSRs for their reputation (Aaker, 1991), which hinges on the quality of service provided by that restaurant (R. DiPietro, 2003). Owing to increased competition among QSRs, fast-food customers have more choices to spend their money.

Traditionally it is believed that price and service quality primarily determine customer satisfaction. However, this traditional belief has been challenged by several counter-arguments (Jana & Chandra, 2016; Sinha et al., 2021). There is a plethora of research in the past which focused on the concerns of customer satisfaction; some researchers believe that the satisfaction of a consumer is mostly determined by tangible factors (Heung et al., 2000; Nguyen et al., 2018). Others opine that it is the satisfaction level of the internal customer (staff) that will lead to satisfaction of the external customers (Gregory et al., 1998). Further, the quality of service and customer satisfaction are deemed as the most important factors in determining business success (Deng et al., 2008). Customer satisfaction lowers the degree to which consumers are sensitive to changes in selling price; it boosts the likelihood of customers making further purchases, and encourages good word-of-mouth publicity (Matzler et al., 2004). In the light of these beliefs, much research has been undertaken to determine the service or product features that result in customer satisfaction (Deng et al., 2008).

However, the moderating role of demographic variables that impacts the association between Service Quality (SQ) and Customer Service (CS), and Price and CS have not been highlighted in prior research. Present study attempts to acquire insight into the relations of SQ with CS, and Pricing with CS in Quick Service Restaurants (QSR).

Full-service restaurants make up 40% of the market value for the foodservice industry globally. Fast food and Quick-service restaurants (QSRs) are the next largest market segment, accounting for 22% of total market value. Clubs, pubs and bars make up 11% of the market value, and the remaining 9% is related to the lodging industry (Marketline, 2016).
The purposes of the present study are manifold. It aims to gain a deeper understanding of the association between Service Quality and Customer Satisfaction. It also explores the relationship between Pricing and Customer Satisfaction. Lastly, it also examines how demographic variables (age, gender, and income) can moderate the aforementioned connections.

**Review of Literature:**

**Customer Satisfaction**

Customer satisfaction is a preponderant tenet of marketing. Hence, it is of paramount importance to cater to the wants and aspirations of customers (Alshare, 2020). According to Adidti et al., (2021), satisfaction can be defined as the buyer’s cognitive condition of being sufficiently or adequately compensated for the sacrifice he/she has made. It is an interrelationship between the customer’s expectations while interacting with service and his evaluation of the service quality. It is an evaluative attitude (Torres & Kline, 2013) affected by emotions and experience of service. A degree of satisfaction is set for different levels of customer needs that are to be met (Tu, 2004). Satisfaction can be achieved at transaction points while encountering service or for the brand’s overall service (Paulose & Shakeel, 2021). The customer is happy when he/she deem a product as excellent as it should be (Grewal & Roggeveen, 2020).

Customer satisfaction at a fast-food restaurant is mainly determined by the brand image, menu variety, cleanliness, consistency, meal quality, friendliness, and speed of service (Afzal, 2013). Shamsudin et al., (2020) discovered that customer happiness might be attained through many factors, including meal quality, menu diversity, environment, consistency in food quality, and wait time. It is the ultimate marketing outcome that indicates future profits (Anderson & Fornell, 2000). It leads to customer loyalty, secures future revenues by reducing transaction costs and decreasing price elasticity, and mitigates customer defection (Pasirayi & Fennell, 2021).
Pre-requisites of Customer Satisfaction

Service Quality

Service quality is a transaction-specific metric that measures an attitude to satisfaction (Amangala & Wali, 2020). According to Parasuraman et al., (1988), service quality is the gap between customers’ expectations of businesses providing such services and their views of services supplied by a given company.

Attributes of Service Quality in QSR

Fast food diners are well informed and more demanding today, who hop from one restaurant to another for a better experience, making service quality a critical concern. While evaluating the service quality of a QSR, tangible and intangible features like hygiene, ambience, speed of service, service skills, accurate billing, employees’ empathy, and competence are considered (Markovic, S. et al., 2011).

Line and Hanks (2020) associated consumer behaviour with the physical surrounding (servicescape) in consumption settings like QSR having two elements, i.e., exterior and interior. Servicescape plays an essential role in delighting customers and differentiates customers’ perception of service quality and post-purchase behaviour (Kim and Moon, 2009). The right service scape design is industrially accepted as an essential parameter for diner’s meal experience.

The food quality also shapes the customer’s perception towards the service quality. In QSR, quality of food has a positive correlation with consumer satisfaction (Qin & Prybutok, 2008). According to Ryu and Han (2010), food quality, service, and service scape significantly predict customer satisfaction and customer’s propensity to dine at a certain QSR. Leelavathy (2017) too, emphasized that the amenities provided by the fast-food restaurant make a customer satisfied.

Additionally, Voon (2012) discovered that service quality and Pricing are important elements of consumer satisfaction. In their research, Shahzad et al. (2013) found that service quality, brand, servicescape, and promotion play a key role in customer satisfaction at a QSR.
customers’ value order accuracy, speed of service, and convenience, lead to their satisfaction in a QSR (Kelso, 2019).

Service Quality-Customer Satisfaction Link

Service quality and customer satisfaction are significant concerns in the fast-food sector, attracting both scholars and restaurateurs. Service quality has sparked many academic interests because of its link with prices (Kellogg et al., 1997), customer satisfaction, and price elasticity (Bolton and Myers, 2003). Adewale et al. (2014) concluded that consumers’ insights of service quality are connected to their satisfaction, increasing their likelihood of repurchasing services. Each effort put into service quality helps in satisfying, retaining, and making a customer loyal to the service provider (Slack & Singh, 2020). Suciptawati et al. (2019), and Fida et al. (2020) propounded that better the quality of the service, the greater the customer’s satisfaction. How well a business does in terms of supplying goods and services may be gauged by tracking customer satisfaction (Manani et al., 2013). The review of literature on service quality and customer satisfaction throw light on both to be essentially distinct but connected concepts.

Based on the findings elucidated in the research mentioned above, the following hypothesis is developed:

H1: Service quality has a significant positive relationship with customer satisfaction.

Pricing

Price is the value of any product or service and depends on the ratios of benefits to sacrifices that a service provider offers (Zeithaml, 1988). A price is a marketing tool that influences customers’ purchase decisions and can directly impact a firm’s sales and profitability (Han & Lehmann, 2001). Price is the monetary value of any product or service which a customer pays to buy, purchase or book that product or service. According to Chaerudin and Syafarudin (2021), when a consumer weighs the prices and advantages of a reasonable
or service, a specific price (value) is established, which is the driver of customer satisfaction.

These studies identify two standard parameters, namely, service quality and price, which vary depending on the research context. Also, the researchers have used different terminologies for these parameters.

**Pricing-Customer Satisfaction Link**

Reasonable Pricing for food products contributes to consumer satisfaction (Oh, 2000; Ranaweera & Neely, 2003). The competitive and right price which a customer can afford does satisfy the customers and their needs (Razak et al., 2016; Haq, 2018; Yulisetiarini & Prahasta, 2019). Satisfied customers repeatedly purchase items by trading off the expected benefits of the service for a price (Wantara & Tambrin, 2019). However, if the right price is not fixed for the products or the services, customers may get dissatisfied and switch to another service provider (Qalati et al., 2019).

Qin, H. and Prybutok (2008) explored the impact of Pricing in QSR. They discovered that pricing has an insignificant role, as fast-food items are cheaper than those in fine dining restaurants. However, pricing is a deciding factor for young consumers with lower incomes. As per the *ACSI Restaurant Report 2018-2019*, 2019 on the American QSR, QSR customers are price sensitive and are least bothered by the use of technology and up-gradation of the menu. Price gives a clue about the service quality (Tahanisaz & Shokuhyar, 2020). Ryu & Han (2010) concluded that perceived price moderates the customer’s satisfaction level.

Price, particularly in today’s uncertain market, plays a significant influence on consumer satisfaction. A fair price charged by a QSR has a favourable influence on the customer’s impression of the quality (Zhong & Moon, 2020). Customers evaluate the dining experience against the price paid for the same, which in turn, directly affect their intention to purchase and thereby, the business sustainability (Han & Lehmann, 2001).
Based on the findings on pricing in the abovementioned research, the effect of price on customer satisfaction is hypothesized as thus:

**H2: Price has a significant impact on customer satisfaction.**

**Demographic Variables as Moderators**

Demographics are significant to research for a variety of reasons. Demographic trends have shifted in the post-liberal period in leaps and bounds, as regards their needs and wants (Sheth et al., 2000). The market has grown more diversified in gender parity (female participation), income, and age. Until recently, QSR was only attentive to overall customer satisfaction ratings and did not evaluate customers’ relevant interests and preferences and their expectations towards service quality by using essential demographic variables (Mazur, 2002). Mittal & Kamakura (2001) found that customers of different demographic variables exhibit other purchase behaviours for the same level of satisfaction.

To better understand the literature available on customer satisfaction, it was grouped into: research that investigated the impact of moderator factors on the intersection between the three dimensions vis-a-vis service quality, Pricing, and customer satisfaction. However, no clear explanation for the subject in question could be obtained from prior studies. It is this gap in literature that our research seeks to address.

Additionally, the current study demonstrates: the impact of service quality and pricing on customer satisfaction; the effect of specific demographics, particularly age, gender, and income, have on satisfaction in the fast-food sector. Understanding the elements that play a role in customer satisfaction is imperative, as its customer base changes with age.

**Age**

Age is a relevant demographic to this study, as the customer base ages every day. Szmigin & Carrigan (2001) found that younger customers try new products and possibly engage in more product hopping. It could also be derived that younger customers might be satisfied, but
are more amenable to switch for a better offer. Therefore, it could be more challenging to satisfy young consumers, while senior customers could be easier to please.

Old customers make purchases based on their previous experience with the products and services and are more reluctant to change choices (Koco, 2001). Customer satisfaction is higher among younger customers because they seek more information and evaluate a significant number of options than elderly customers do, which result in higher aspirations and lower satisfaction with a service. On the other hand, older customers appear to be more satisfied because of their limitations in the search for information (Lambert-Pandraud et al., 2005).

In the light of the findings of the abovementioned study, the following hypotheses are posited:

**H3**: Age significantly moderates the relationship between service quality and customer satisfaction.

**H4**: Age significantly moderates the relationship between Pricing and customer satisfaction.

**Gender**

Until recently, most studies related to demographics were pursued in the social science literature. In terms of purchasing behaviour, women assess service differently. Women are more involved in the buying process than men, which highlights the quality of the service they get. Furthermore, it has been claimed that purchasing decisions of females are significantly influenced by the service received (Zhong & Moon, 2020). Building on these ideas, it is possible to posit that females may react more favourably to higher levels of service quality and reasonable prices of food offered in a fast-food restaurant. Contrary to this logical assumption, studies in the retail and banking sector found that gender did not have a statistically significant higher mean score on customer satisfaction (Walsh et al., 2008; Caruana, 2002).
In a study by Zhong & Moon (2020), it was found that gender had an effect on service quality, price and customer satisfaction; it was more evident in men than in women. Consequently, men when compared to women, could be inferred to be generally less pleased with the service they get. It is possible that women avoid switching to another restaurant, in order to maintain a relationship with that outlet. In contrast, men would be less engaged in the relationship with the outlet and more focused on getting the best deal as regards quality and pricing, which would drive them to switch to better outlets.

Hence, the following hypotheses are formulated:

H5: Gender significantly moderates the relationship between service quality and customer satisfaction.

H6: Gender significantly moderates the relationship between Pricing and customer satisfaction.

Income

It was found in a study by Jaffee & Hyde (2000), that lower-income groups endorse ‘price orientation.’ A survey carried out in financial institutions revealed that people of higher income groups are more likely to be attracted to better offers for service quality. Earlier studies also found that higher-income group customers are more informed, demanding, and innovative than lower-income customers (Gupta, 2019).

Income demographics seem to play a role in satisfaction, which was evident in a survey by Paymentech Polling Company (2003), that customers with higher incomes tend to rely on technology-driven processes for their financial transactions. Since they are more demanding, they may be less satisfied with subpar service. Customers with higher income seek more information, evaluate more attributes and alternatives before choosing a service (Gupta, 2019; Homburg & Giering, 2001). Consumers from higher income groups have greater expectations of service because they have more choices to assess.
As a result, they are difficult to please, than customers from lower-income groups who have lesser options to select.

After examining prior literature on income, the following hypotheses are postulated:

\[ H7: \text{Income significantly moderates the relationship between service quality and customer satisfaction.} \]

\[ H8: \text{Income significantly moderates the relationship between Pricing and customer satisfaction.} \]

**Research Gap**

In the context of customer-restaurant interaction, age, income, and gender are expected to impact consumer satisfaction. Studies in the services industry (Caruana, 2002; Lassar et al., 2000; Rudolf & Horn, 2011) either did not focus on the role of demographic variables in customer satisfaction or found statistically insignificant mean scores for these variables. Given the conflicting data on the effect of various customer-related factors, coupled with the fact that most research focuses on retail banking services or product purchases, there remains scarce research on QSR. Hence, to fill this gap in research, this paper examines the role of demographic characteristics on customer satisfaction particularly in the fast-food sector.

**Conceptual Framework**

To understand the relationship between various identified factors, authors propose a model (see Fig. 1): to investigate direct impact of Service Quality and Price on Customer Satisfaction; and to examine the moderating effect of Age, Gender and Income on the relationship between SQ and CS, and Price and CS. The hypotheses are tested and the results are reported in the last section.
Methodology

To examine the moderating role of Age, Income, and Gender on Service Quality (SQ) and Pricing (P), Smart PLS 3.0 was used. Authors have used the SERVQUAL model as their base, to examine the effect of SQ on CS (Parasuraman et al., 1985). After obtaining expert advice and based on participation in focus group discussions, a total of thirteen most significant elements from all five aspects of service quality have been identified: reliability, assurance, tangibles, empathy, and responsiveness. Similarly, the five most relevant items for price and six most relevant items for customer satisfaction were identified. These items have been appropriately modified to meet the needs of the present research. The generated model was examined to determine how items were loaded into their corresponding constructs. Those items with a loading value less than the threshold were eliminated from consideration. Service Quality SQ1 (0.589), SQ3 (0.612), SQ 8 (0.582), in Pricing, P1 (0.321) were hence removed. Further, the model was also checked for multicollinearity issues. It was found that the VIF value of CS2 (3.107) was more than the accepted threshold of 3 in this study. Based on load values and multicollinearity issues, a few items were eliminated from the model. The conceptual model was revised as shown in Fig. 2.
Data was gathered randomly in the form of responses from diverse guests visiting QSRs throughout the country. The guest who made at least three visits to a QSR (any outlet which satisfied the criteria of quick food preparation and quick food service) in the last six months, was considered as a valid respondent in the present study. There was no differentiation between stand-alone and chain QSRs. Both were considered for the purpose of data collection. When collecting data, greater focus was placed on gathering data in a more stratified randomized manner.

Stratification was accomplished by dividing geographic regions into four distinct strata: east, west, north, and south. An online questionnaire was used to capture the response. The link was shared among the respondents via different social networking sites and via email.

A total of 512 responses were obtained after four rounds of responses. Following a thorough review, 360 of the responses received were validated.
Analysis and interpretation

The measurement model was analysed to establish the internal consistency, reliability and convergent validity. PLS algorithm was applied using Smart PLS, and the results are depicted in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Cronbach's Alpha</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>0.8</td>
<td>0.84</td>
<td>0.865</td>
</tr>
<tr>
<td>Pricing</td>
<td>0.788</td>
<td>0.885</td>
<td>0.855</td>
</tr>
<tr>
<td>SQ</td>
<td>0.898</td>
<td>0.92</td>
<td>0.913</td>
</tr>
</tbody>
</table>

*Table 1 Reliability and Validity*

The result establishes the internal consistency and reliability of the model as the value of Cronbach’s Alpha and Composite Reliability was found to be greater than the acceptable value of 0.7. Convergent validity was established as the items of the constructs, which successfully explains more than 50% of their variable (Average Variance Extracted (AVE) > 0.5).

Further, Discriminant validity was analysed using the criterion laid out in Fornell & Larcker (1981). The result is given in Table 2 below.

<table>
<thead>
<tr>
<th></th>
<th>Customer Satisfaction</th>
<th>Pricing</th>
<th>Service Quality</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>0.754</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pricing</td>
<td>0.57</td>
<td>0.774</td>
<td></td>
</tr>
<tr>
<td>SQ</td>
<td>0.472</td>
<td>0.35</td>
<td>0.715</td>
</tr>
</tbody>
</table>

*Table 2 Discriminant Validity*

The result indicates that all the on-diagonal values are greater than off-diagonal values. Hence, the measures are discriminated against each other.

Test of Hypothesis:

To test the proposed hypothesis, Partial Least Squares Structural Equation Modelling (PLS SEM) was used. The direct relationship
of price and service quality was analysed using PLS Algorithm. However, to test the moderating role of gender, age, and income, Multigroup Analysis (MGA) was performed.

**Relationship of Price and Service Quality on Customer Satisfaction**

The PLS algorithm was used to find the direct relationship between price and customer satisfaction, and service quality and customer satisfaction. The model with values is shown in Fig 3:

![Hypothized model](image)

*Fig. 3 Hypothesized model*

The result suggests a direct and positive relationship between service quality and customer satisfaction (*path coefficient: 0.311*), and Pricing and customer satisfaction (*path coefficient: 0.462*). The value of $R^2$ was 0.410.

<table>
<thead>
<tr>
<th></th>
<th>R Square</th>
<th>R Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>CS</td>
<td>0.41</td>
<td>0.407</td>
</tr>
</tbody>
</table>

*Table 3 R Square*
To explore the statistical significance of the path obtained, bootstrapping with 5000 sub-samples was conducted. The result obtained is depicted in Table 4.

|                | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values |
|----------------|---------------------|-----------------|----------------------------|----------------|----------|
| Pricing -> CS  | 0.462               | 0.464           | 0.032                      | 14.298         | 0        |
| SQ -> CS       | 0.311               | 0.316           | 0.032                      | 9.768          | 0        |

Table 4 Path Coefficients

The t-value for both the paths was above the minimum prescribed threshold of 1.96. Also, the p-value was found to be less than 0.01. Hence, it can be concluded that both the paths are statistically significant (t>1.96; p<0.01).

The result, hence, supports our first two hypotheses, i.e., service quality has a direct and significant relationship with customer satisfaction, and that pricing has a significant impact on customer satisfaction.

Gender as Moderator

To evaluate the moderating impact of gender, a multigroup analysis was undertaken. Initially, data obtained were segregated gender-wise, with two different datasets for males and females created using the SPSS case tool. Next, the total impact of price and service quality and the impact of both the genders were calculated separately. Lastly, the significance of the result obtained was verified by performing bootstrapping with 5000 sub-sample. The result for total and individual impact is highlighted in Table 5. R Square values of all the groups are mentioned in Table 6.
Table 5 Multi-Group Analysis (Gender)

|                       | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values | Sig./Not Sig |
|-----------------------|---------------------|-----------------|-----------------------------|-----------------------------|----------|--------------|
| **TOTAL**             |                     |                 |                             |                             |          |              |
| Pricing -> CS         | 0.462               | 0.464           | 0.032                       | 14.298                      | 0        | Sig          |
| SQ -> CS              | 0.311               | 0.316           | 0.032                       | 9.768                       | 0        | Sig          |
| **MALE**              |                     |                 |                             |                             |          |              |
| Pricing -> CS         | 0.489               | 0.491           | 0.038                       | 12.9                        | 0        | Sig          |
| SQ -> CS              | 0.401               | 0.401           | 0.04                        | 10.065                      | 0        | Sig          |
| **FEMALE**            |                     |                 |                             |                             |          |              |
| Pricing -> CS         | 0.218               | 0.248           | 0.057                       | 3.801                       | 0        | Sig          |
| SQ -> CS              | 0.568               | 0.436           | 0.359                       | 1.579                       | 0.115    | Not Sig      |

Table 6 Comparison of Coefficient of determination (Gender)

<table>
<thead>
<tr>
<th></th>
<th>R Square</th>
<th>R Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0.41</td>
<td>0.407</td>
</tr>
<tr>
<td><strong>MALE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0.538</td>
<td>0.534</td>
</tr>
<tr>
<td><strong>FEMALE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0.507</td>
<td>0.497</td>
</tr>
</tbody>
</table>

Table 1.6 illustrates the effect of Pricing on CS, as significant for both the genders (Male = 0.491, p<0.01; Female = 0.248, p<0.01). Additionally, a greater R square value for Male ($R^2 = 0.538$) implies that the model with data on men explains the response variable (Customer Satisfaction) more, in comparison to the model with data on women($R^2 = 0.497$). Even the path coefficient of males was higher than that of females, which suggests that Pricing is of higher priority among male respondents as regards satisfaction.
Next, the path coefficient of the SQ and CS was analysed. It was observed that though the relationship was significant in males \((p<0.01)\), it was not statistically significant in females \((p>0.05)\). In conclusion, service quality does not impact satisfaction in females in the present study. As a result, further analysis of this relationship was not performed. Moreover, it was established that the association between service quality and customer satisfaction was not moderated by gender.

To find whether the differences obtained in the relationship of Pricing and CS between the two genders are statistically significant, the following formula was used to check the difference in the slopes.

\[
t = \frac{Path_{sample_1} - Path_{sample_2}}{\sqrt{\frac{(m-1)^2 \cdot S.E._{sample1}^2 + (n-1)^2 \cdot S.E._{sample2}^2}{m+n-2} + \frac{1}{m} + \frac{1}{n}}}\]

The result obtained is given in Table 7.

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size</td>
<td>250</td>
<td>110</td>
</tr>
<tr>
<td>Regression Weight</td>
<td>0.491</td>
<td>0.248</td>
</tr>
<tr>
<td>Standard Error (S.E.)</td>
<td>0.038</td>
<td>0.057</td>
</tr>
<tr>
<td>t-statistic</td>
<td>3.500</td>
<td></td>
</tr>
<tr>
<td>p-value (2-tailed)</td>
<td>0.000</td>
<td></td>
</tr>
</tbody>
</table>

*Table 7 Difference in slope test (Pricing)*

The value of t-statistics is found to be above the threshold value of 1.96, and the p-value is below 0.01 \((t>1.96; p<0.01)\). Hence, the difference is statistically significant. In this study, gender has been found to have a moderating effect on the relation between Price and CS.
Age as Moderator:

A Multigroup moderator approach was used to find the moderating role of age in the relationship of Price and CS, and SQ and CS. The questionnaire was designed in a way that divided respondents into two age groups. The first group consisted of people less than 40 years of age and the second comprised those above 40 years of age. The former was coded as Age_A, and the latter was coded as Age_B. Next, the total impact of price and service quality and the impact of both the age groups were calculated separately. The significance of the result obtained was verified by performing bootstrapping with 5000 sub-samples. The same is mentioned in Table 8. Further, the value of R Squares for all the different categories is mentioned in Table 9.

|                | Original Sample Mean (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values |
|----------------|--------------------------|-----------------|---------------------------|------------------|----------|
|                |                          |                 |                           |                  |          |
| Total          |                          |                 |                           |                  |          |
| Pricing -> CS  | 0.462                    | 0.464           | 0.034                     | 13.484           | 0        |
| SQ -> CS       | 0.311                    | 0.316           | 0.035                     | 8.982            | 0        |
|                |                          |                 |                           |                  |          |
| Age_A          |                          |                 |                           |                  |          |
| Pricing -> CS  | 0.202                    | 0.207           | 0.053                     | 3.837            | 0        |
| SQ -> CS       | 0.49                     | 0.511           | 0.052                     | 9.515            | 0        |
|                |                          |                 |                           |                  |          |
| Age_B          |                          |                 |                           |                  |          |
| Pricing -> CS  | 0.58                     | 0.58            | 0.045                     | 12.924           | 0        |
| SQ -> CS       | 0.356                    | 0.362           | 0.042                     | 8.434            | 0        |

Table 8 Multigroup Analysis (Age)
Table 8 shows that pricing impacts customer satisfaction more in those respondents whose age is above 40 years (Age_B = 0.58 > Age_A=0.207,) whereas impact of SQ on CS is more in respondents whose age is less than 40 years (Age_A = 0.511 > Age_B=0.362). All paths were found to be statistically significant. R² value of Age_B (R² =0.41) is found to be more than the R² value of Age_A (R² = 0.386), emphasizing that customer satisfaction is explained more in Age_B group respondents.

Next, the significance of differences was analysed using the formula for differences in the slopes. The difference is mentioned in Table 10 (Pricing) and Table 11 (Service Quality)

<table>
<thead>
<tr>
<th></th>
<th>Age_A</th>
<th>Age_B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size</td>
<td>240</td>
<td>120</td>
</tr>
<tr>
<td>Regression Weight</td>
<td>0.207</td>
<td>0.58</td>
</tr>
<tr>
<td>Standard Error (S.E.)</td>
<td>0.053</td>
<td>0.045</td>
</tr>
<tr>
<td>t-statistic</td>
<td>4.590</td>
<td></td>
</tr>
<tr>
<td>p-value (2-tailed)</td>
<td></td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 10 Difference in slope test (Pricing)

Table 10 shows that the difference in the results obtained for the Pricing and customer satisfaction groups is significant (t>1.96; p<0.01). Hence, age moderates this relationship.
Table 11 Difference in slope test (Service Quality)

Table 11 reveals that the difference in the result obtained between the groups for the relationship of SQ with CS is not significant (t<1.96; p>0.01). Hence, age does not affect the association between Service Quality and Customer Satisfaction, in the present study.

Income as Moderator:

A multigroup moderation approach was used to analyse the moderating role of income. Three groups were created with an income of Rs. 20,000-39,000 (Income_A), Rs. 40,000 -59,000 (Income_B) and Rs. 60,000/- and above (Income_C). Next, three multigroup analyses were performed. First, Income_A with Income_B and Income_C combined; secondly, Income_B with Income_A and Income_C combined; and lastly, Income_C with Income_A and Income_B combined. The significance of the result obtained was verified by performing bootstrapping with 5000 sub-samples. The statistical significance of differences was verified by performing the difference in slopes test. The data obtained are mentioned in Table 12.
### Table 12: Multigroup Analysis (Income)

The data given in Table 12 provide details of three groups as under:

**Income_A and income_(B&C):** The impact of Pricing on customer satisfaction is more in Income_A (0.533) in comparison to income_(B&C) (0.51). However, the impact of pricing on customer satisfaction is more in the second group (0.376), than in the first group (0.263). All paths were found to be significant (p<0.01). Since there was a difference in both groups, the slope of difference analysis was performed to determine significance of the difference. The result is depicted in Table 13 (Pricing) and Table 14 (Customer Satisfaction).

<table>
<thead>
<tr>
<th></th>
<th>Income_ (B&amp;C)</th>
<th>Income_B</th>
<th>Income_ (A&amp;C)</th>
<th>Income_C</th>
<th>Income_ (A&amp;B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pricing -&gt; CS</td>
<td>0.508</td>
<td>0.282</td>
<td>0.535</td>
<td>0.556</td>
<td>0.362</td>
</tr>
<tr>
<td>SQ -&gt; CS</td>
<td>0.374</td>
<td>0.695</td>
<td>0.244</td>
<td>0.439</td>
<td>0.437</td>
</tr>
<tr>
<td></td>
<td>0.039</td>
<td>0.061</td>
<td>0.029</td>
<td>0.049</td>
<td>0.039</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Table 12: Multigroup Analysis (Income)*
Table 13 Difference in slope test (Pricing)

The t-statistic value, as mentioned in table 14, is less than the minimum value of 1.96, and the p-value is above 0.01. Hence, the difference is not significant for pricing in the group. Thus, the relation between price and consumer satisfaction is not moderated by this group.

Table 14 Difference in slope test (Service Quality)

For service quality, the t-statistics were not found to be significant (t<1.96; p>0.01). Hence, this income group does not moderate the relationship between service quality and customer satisfaction.

**Income_B and income_(A&C):** Effect of pricing on customer satisfaction is more in income_(A&C) (0.535), in comparison to income_(B) (0.275). However, the effect of pricing on customer satisfaction is more in Income_B (0.704), than on income_(A&C) (0.253). All paths were found to be significant (p<0.01). A slope of difference test was conducted to find the significance of these differences. The result for this test is depicted in Table 15 (Pricing) and Table 16 (Customer Satisfaction).
The difference in slopes for the two groups was found to be significant, as mentioned in Table 15 ($t>1.96$; $p<0.01$). Hence, income has a moderating effect on the relation between price and customer satisfaction in the two groups in this study.

The difference for service quality test suggests that the difference is significant ($t>1.96$; $p<0.01$). Hence, the relationship between Service Quality and Customer Satisfaction is moderated by income in this group.

**Income_C and Income_(A&B):** Effect of Pricing & SQ on CS was found to be more in Income_C (0.549 & 0.447 respectively) in comparison to Income_(A&B) (0.369 & 0.434 respectively). All paths were found to be significant ($p<0.01$). The difference in slope analysis was undertaken to find the significance of the obtained differences. The finding for this test is depicted in Table 17 (Pricing) and Table 18 (Customer Satisfaction).
### Table 17 Difference in slope test (Pricing)

The finding indicates that the difference in slope is significant ($t>1.96$; $p<0.01$). Thus, income has a moderating effect on the relation between price and customer satisfaction in this group.

<table>
<thead>
<tr>
<th></th>
<th>Income_C</th>
<th>Income_A_B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size</td>
<td>120</td>
<td>240</td>
</tr>
<tr>
<td>Regression Weight</td>
<td>0.549</td>
<td>0.369</td>
</tr>
<tr>
<td>Standard Error (S.E.)</td>
<td>0.049</td>
<td>0.039</td>
</tr>
<tr>
<td>t-statistic</td>
<td></td>
<td>2.771</td>
</tr>
<tr>
<td>p-value (2-tailed)</td>
<td></td>
<td>0.006</td>
</tr>
</tbody>
</table>

### Table 18 Difference in slope test (Service Quality)

*Table 18* provide the significance of the difference in slope test for SQ. The finding suggest that the relationship is not significant ($t<0.155$; $p>0.01$). Hence, the relation between SQ and CS is not moderated by the present income group.

<table>
<thead>
<tr>
<th></th>
<th>Income_C</th>
<th>Income_A_B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size</td>
<td>120</td>
<td>240</td>
</tr>
<tr>
<td>Regression Weight</td>
<td>0.447</td>
<td>0.434</td>
</tr>
<tr>
<td>Standard Error (S.E.)</td>
<td>0.073</td>
<td>0.047</td>
</tr>
<tr>
<td>t-statistic</td>
<td></td>
<td>0.155</td>
</tr>
<tr>
<td>p-value (2-tailed)</td>
<td></td>
<td>0.877</td>
</tr>
</tbody>
</table>

Since the test for three multigroups provides two groups of income to significantly modify the relationship between pricing and CS. Also, one income group significantly modifies the association between SQ and CS. Thus, income modifies the relationship between pricing and CS, though not in all groups. Furthermore, it can be inferred that income influences the relationship between SQ and CS, but only in one of the two groups studied.
The result of the proposed hypothesis is summarized in Table 19.

| Hypothesis | Hypothesized Relation | T Statistics \(|O/STDEV|\) | P Values | Accepted / Not Accepted |
|------------|------------------------|-----------------|----------|-------------------------|
| H1         | SQ -> CS               | 9.768           | 0        | Accepted                |
| H2         | P---> CS               | 14.298          | 0        | Accepted                |
| H3         | SQ-->(AGE)--->CS       | 1.882           | 0.061    | Not Accepted            |
| H4         | P---->(AGE)---->CS     | 4.59            | 0        | Accepted                |
| H5         | SQ-->(GENDER)--->CS    | 1.579           | 0.115    | Not Accepted            |
| H6         | P-->(GENDER)---->CS    | 3.5             | 0        | Accepted                |
| H7         | SQ-->(INCOME)--->CS    | 8.521           | 0        | Accepted                |
| H8         | P-->(INCOME)---->CS    | 4.338           | 0        | Accepted                |

Table 19 Hypothesis Testing

**Result and Discussion**

The primary objective of the research was to get a deeper understanding of the relationship between Service Quality and Customer Satisfaction. The findings suggest that though for almost a decade, SQ and CS have been applied in a variety of sectors, the model’s extensibility has been restricted. Specifically, research on QSR and the effect of demographic variables on SQ and CS & Price and CS have not been tested yet. Fewer studies have examined demographics as moderating factors; nevertheless, numerous researchers have pointed out that demographics are substantial enough to function as moderators (Serenko et al., 2006). Thus, the proposed extensions by introducing the moderating role of demographic variables and examining age, gender, and income differences in the relationship of Price and CS, and SQ and CS represent essential theoretical advances in customer satisfaction under the QSR setting and satisfies the objective of getting a deeper insight into customer satisfaction and service quality.

The next objective was to analyse the importance of pricing on customer satisfaction. Relationship between pricing and customer satisfaction, and service quality and customer satisfaction were
analysed. According to the results presented in the previous section, it was found that both relationships had a statistically significant association with CS. When comparing the two exogenous latent constructs, it was found that pricing effect was a more important attribute of consumer satisfaction. The finding suggests that customers who are satisfied with a service will purchase it again, by exchanging the expected advantages of the service for a fee. The converse is true: if the correct pricing for the products or services is not established, customers may get dissatisfied with the product or service and switch to another service provider. The cost of service indicates its quality. Hence, the price works as a regulator in the customer’s degree of overall satisfaction. A reasonable price has a positive and immediate impact on the customers’ perception of the quality of products or services and, therefore, on their level of satisfaction. The findings of this study are consistent with those of earlier research (Wantara & Tambrin, 2019; Yulisetiarini & Prahasta, 2019; Haq, 2018; Razak et al., 2016; Ranaweera & Neely, 2003; Oh, 2000). However, the finding is in contrast with the outcome of Qin & Prybutok (2008).

In addition to that, SQ is found to have a substantial effect on CS, suggesting that customers’ views of service quality were connected to their level of satisfaction. Consequently, the probability of making a repeat purchase is increased. Each effort made to enhance service quality adds to the delight and hence, to the retention and development of consumer loyalty toward the service provider. Increased customer satisfaction is directly proportional to an increased degree of service quality (Kelso, 2019; Leelavathy, 2017; Shahzad et al., 2013; Voon, 2012; Markovic et al., 2011; Ryu & Han, 2010; Qin & Prybutok, 2008 & Gilbert et al., 2004).

Lastly, the objective of the study was to explore the moderating role of demographic variables on the relations between price and customer satisfaction, and service quality and customer satisfaction. Price was found to be moderated by all three demographic variables. The effect of the relationship between pricing and customer satisfaction, when gender served as a moderator, had a favourable impact for male: the
association between the two variables increased in males. The study reveals that age too moderates the relationship between pricing and customer satisfaction. The association between the two variables is higher among those above 40 years than those below 40 years. Lastly, the impact on the association between pricing and CS, where income acts as a moderator, is also positively affected.

The relation between SQ and CS was found to be moderated by only a single variable: income, as the findings of the study do not provide support for age and gender moderation between SQ and CS. It contrasts with the results of an earlier research by Jin et al. (2013) & V. Mittal & Kamakura (2001), in which it was claimed that the relationship between service quality and customer satisfaction was moderated by gender. The relationship between SQ and CS, where income acted as a moderator, provided a positive effect. The association between the two variables increased in those customers whose income ranges from Rs.40,000 to Rs. 59,000, in comparison to those who earned more or less than this category. Hence, service quality is moderated by the income level of the guest in QSR.

**Managerial Implications**

SQ and CS have been conceived identically in the research. Hence, they may well be viewed as a single construct based on their similarity in conceptualization. While some scholars conceive differences, it may be more intriguing conceptually to treat the two as separate, since doing so would involve speculating on unique places in presumably more complicated networks, which might be fascinating. The study hence provides an insight into the concept of SQ and CS by adding to the existing body of knowledge. It will assist the future researcher to understand the concept better as well the service provider to enhance their service quality and achieve higher customer satisfaction.

Traditionally, markets have been divided to better understand the requirements and expectations of their clients. This segmentation can be done based on the demographical profiling of the customers. The demographical parameters suggested in this research vis-à-vis age, gender, and income, if included in organized QSR, may certainly
position their products in the target market. Implementing the moderating role of age, gender, and income on pricing and service quality with customer satisfaction may leverage marketers. Hence, the findings of the study can be incorporated by organised QSRs to develop products customized for different demographic groups and thus help cement their positions across product line and customer base.

The pricing was found to be moderated by all the demographic variables. The requirements of different age groups differed in terms of portion size to price ratio. The findings should be applied in the industry to attract a broader and diverse customer base. Gender was found to moderate the relation between pricing and satisfaction. The impact is more in males than in females, which indicates that the satisfaction is moderated by price in mostly males, in comparison to females. Thus, male customers would evaluate the overall meal experience in tandem with its price and will be satisfied if it was deemed to be of value for money spent. A product or service offered at a very low price may suggest that it is less attractive or of poor quality, than a comparable product or service at a greater price. An extremely low price for a product or service may increase the buyer’s probability of any defects or perceived deficiencies (Shamsudin et al., 2020; Ariyanto, 2020). Hence, QSR should try to give the product a competitive price and advertise it in their target cohort.

**Novelty / Significance of the study**

As a result of the proliferation of numerous branded and non-branded stores around the nation, the QSR sector has developed significantly. While certain brands are concentrated in specific geographical areas, most companies have a widespread presence. This increase is driven by improving market circumstances, an increasing working-class, urban growth, nuclear family structures, student expenditure, mushrooming of shopping centres and multiplexes, and availability of improved logistics.

However, there is a dearth of research in QSRs. It is essential to have more research in this area, to comprehend its customers. Thus, the
current study contributes to the increasing body of literature on customer satisfaction in general, and the direct and indirect effects of numerous factors on QSR customer satisfaction. The present study attempted to investigate the direct impact of service quality and price and the moderating impact of demographics in this particular cohort. Hence, the study is of importance to academicians, researchers, and industry practitioners alike.

Limitation of the Study

The research was carried out on customers of QSRs in a developing country, i.e., India. Hence, the finding cannot be generalized to other parts of the globe. Moreover, the total number of respondents was 360, which certainly does not represent India’s populace. Hence, further research with more respondents will help to understand the relationship in a more comprehensive way. A survey was done in select few internationally organized fast-food brands, and other QSRs that do not belong to any brand considered in the present study, which limited the purview of this study to branded QSR.

Future Scope

To understand the extent and implication of the present research, similar kind of research may be carried out in other service sectors like hotels, retail sector, banking sector and telecom sector. This will help compare key point indicators of customer satisfaction across the sectors. The future studies shall include more respondents from different geographical locations, providing the researchers with a bigger sample. In addition to that, the survey on non-branded QSR will give an insight into the view of a customer who prefers these outlets. Apart from the moderating variables selected in the present study, a researcher may explore other moderating variables, which may give an interesting result and will thus help to validate the findings of the present study.

References:


Gautam, Ajitabh & Praveen Analysing Moderating Effects of Demographic Variables on Customer Satisfaction: A Study of Quick Service Restaurant


Marketline. (2016). *Food service global industry data*.


Ryu, K., & Han, H. (2010). Influence of the quality of food, service, and physical environment on customer satisfaction and behavioural


