Understanding e-Loyalty in Online Grocery Shopping

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ABSTRACT
Online grocery stores are becoming more popular than ever. As the number of consumers of online grocery stores increases, understanding e-loyalty in this context is pivotal. Despite its growing importance, e-loyalty in online grocery shopping is a less explored area in expanding e-commerce literature. The purpose of this research is to examine and understand the mediating role of e-satisfaction on e-loyalty in context of online grocery shopping. Predictors (convenience, merchandising, site design, and financial security) identified in Szymanski and Hise’s e-satisfaction model are used to further extend the model by examining their relationship with e-loyalty through mediation from e-satisfaction. The proposed model was tested on a sample of 351 online shoppers through the database of two large online grocery stores in Pakistan. The results were measured through regression analysis. Findings suggest that there is no significant relationship between any of the variables under study. Moreover, the mediating effect of e-satisfaction on e-loyalty was also not found. The results indicate significant contribution in three main areas: provides new insights for understanding e-loyalty, rejects Szymanski and Hise’s e-satisfaction model in the context of online grocery shopping, and validates findings of previous researchers who had suggested distinguish nature of online grocery shopping. Managers need to adopt different strategies for online grocery shopping due to the perishable and variable nature of the products. Some other variables can also be added to the model, such as e-trust and e-service quality, to further validate the research model.

Keywords: Convenience, e-commerce, e-Loyalty, e-Satisfaction, financial security, merchandising, online business, online grocery shopping, site design, website design

1. Introduction:
Businesses face difficulties in retaining customers online because of easier product comparisons and abundance of options; E-loyalty is a critical issue in the world of e-commerce (Lu et al., 2013). Online platforms allow consumers to visit online stores, browse product information, compare prices, and purchase products without relying on any one particular online store (Chiu, Wang, Fang, & Huang, 2014). Consequently, online business faces a tremendous challenge in creating a long-term profitable and sustainable business model due to low customer loyalty (Yen, 2010).

The popularity of online grocery stores has increased over the years and is expected to thrive in the years to come (Belavina, Girotra, & Kabra, 2016). Online grocery store segment is cluttered with pure-play, multi-format, and multichannel grocery e-tailers (Jayasankaraprasad & Kathyayani, 2014). Existing online grocery stores face great challenge of building customer loyalty in such a crowded online atmosphere (Mortimer et al., 2016). Many researchers have
called for more research on online grocery shopping to understand the dynamics and difference (Mortimer et al., 2016; Harris et al., 2017; Rodrigues et al., 2017).

Knowledge in the area of e-loyalty in relation to online grocery shopping remains less explored and provides a strong case for ongoing research. Initial work has laid the foundation for the development of holistic models (Anesbury et al., 2016; Nenycz-Thiel et al., 2016; Siddiqui & Tripathi, 2016; Sreeram et al., 2017). However, there are many limitations in understanding the concept of loyalty in online grocery shopping. The experience of online grocery shopping is different from other online shopping because of the variability and perishability of the products (Mortimer et al., 2016). Shoppers who have experienced satisfactory purchases are more likely to engage in repeat purchase behavior from the online grocery store (Ha et al., 2010). Therefore, examining e-loyalty of online grocery shopping will add to the theoretical knowledge of online shopping. For practitioners and managers, we have applied an empirical model to a real online grocery context which can help in understanding and developing strategies related to online grocery shopping.

The main aim of the research is to address two main gaps in the knowledge of online grocery shopping. First, we address the calls (Mortimer et al., 2016; Harris et al., 2017; Rodrigues et al., 2017) to investigate the factors that play a critical role in online grocery shopping. Second, although some elements of e-loyalty are examined in online grocery shopping (Anesbury et al., 2016; Nenycz-Thiel et al., 2016; Siddiqui & Tripathi, 2016; Sreeram et al., 2017), the full extent of online grocery shopping experience has not been examined. E-loyalty, particularly in relation to online grocery shopping, is of vital importance (Belavina et al., 2016); as such, we investigate the role of e-satisfaction and how it mediates between e-loyalty and the variables derived from E-satisfaction model (Szymanski & Hise, 2000).

There are two main objectives of the study. First, to examine the specific relationship between convenience, merchandising, site design, and financial security with e-satisfaction and e-loyalty in online grocery shopping. Second, to investigate the mediating role of e-satisfaction in the research model.

An online survey was designed to collect data from shoppers of two major online grocery store of Pakistan. The online survey was sent to 5,221 customers from the database of the online grocery store. The questionnaire compromised of 23 validated scale items. The study provides practical insight for online grocery stores and contributes to the ongoing theoretical development and understanding of e-loyalty.

2. Literature Review:

In this section, we give a review of prior significant studies related to e-loyalty, particularly highlighting some researches in the context of online grocery shopping. We then explain the foundation of the conceptual framework of e-satisfaction related variables (convenience, merchandising, site design, and financial security) in explaining the role of e-satisfaction in creating e-loyalty in online shopping.

2.1 E-Loyalty:

The high penetration of online shopping has caused many researchers to put considerable efforts on understanding e-loyalty (Srinivasan et al., 2002, Anderson & Srinivasan, 2003; Semeijn et al., 2005; Chen et al., 2015). It is critical to identify and understand the factors which have been explored in previous researches. Srinivasan et al. (2002) investigated the consequences and antecedents of online customer loyalty, results revealed that willingness to pay more and word of mouth promotion has the most significant impact on e-loyalty. Semeijn et al. (2005) tested the cumulative effects of service components (online and offline) on consumer responses. Cross-sectional data of four different industries revealed that offline order fulfillment was equally important as online performance. Chen and Yen (2014) explained e-loyalty with the help of DeLone and McLean’s IS Success Model. They identified that trust and customer satisfaction act as mediators in the relationship between service quality and e-loyalty.

There have been attempts made to develop models explaining the variables having the most significant impact on e-loyalty (Kim et al., 2008; Zheng et al., 2017). Kim et al. (2009) developed an integrative model by investigating the influence of aspects of e-tail quality, e-satisfaction, and e-trust on e-loyalty. Results showed a significant relationship between e-satisfaction and e-trust. Yoo et al. (2014) developed a research model on the basis of identification theory and motivation theory to understand e-loyalty through the role of e-word of mouth. Zheng et al.
(2017) developed and tested research model which examined the moderating role of coupons and value consciousness on e-loyalty.

This, in this competitive environment, it has become vital to gain an in-depth understanding of factors influencing e-loyalty in a different context. E-loyalty has been examined in different industries such as retail (Long-Chuan Lu et al., 2013; Giovanis & Athanasopoulou, 2014; Zehir et al., 2014), fashion (Chou et al., 2015), airline (Elkhani, Soltani, & Jamshidi, 2014), banking (Al-Hawari, 2014; Othman et al., 2016), travel (Ponnam, 2017), and healthcare (Crutzen et al., 2014). We aim to extend the knowledge of e-loyalty in the domain of online grocery stores.

2.2 Online Grocery Story:
The experience of online shopping of grocery is different from other forms of online shopping (Mortimer et al., 2016). The tendency of repeat purchases in online grocery shopping is more frequent than other online shopping (Opre ana, 2013) due to the habitual and repetitive nature of grocery shopping (Mortimer & Weeks, 2011). The general nature of online shopping is as such that it produces feelings of enjoyment, joy, and excitement (Wolfinbarger & Gilly, 2001), as consumers look for novel and exclusive products. On the other hand, grocery shopping is a routine task (Dawes & Nenycz-Thiel, 2014).

Many researchers have studied various dimensions of online grocery shopping (Ramus & Nielsen, 2005; Hansen, 2006; Huang & Oppewal, 2006). Ramus and Nielsen (2005) explored the beliefs of consumers about online grocery shopping in which he developed an in-depth understanding of pros and cons of shifting from traditional to online platform. Results revealed that the nature of online grocery shopping is entirely different because of sporadic decision making of consumer. Huang and Oppewal (2006) studied the effect of situational factors on online grocery shopping. They also highlighted that perishability of products such as baked goods, meat, and fresh produce items pose a great threat to online platforms. Hansen (2006) examined the repeat buying behavior of consumers and concluded that perceived risk was not a barrier in online grocery shopping while online complexities hindered the process of loyalty.

A few studies have investigated e-loyalty in the context of online grocery shopping (Rafiq & Fulford, 2005; Rafiq et al., 2013; Giovanis & Athanasopoulou, 2014). Rafiq and Fulford (2005) examined the process of converting store loyalty to e-loyalty by surveying UK supermarkets. Results showed that the stores need to achieve a higher level of services in order to build e-loyalty which poses a great challenge to even the well-established retailers. Similarly, Rafiq et al. (2012) investigated the challenges of building e-loyalty in e-tailing (which included grocery). Findings suggested that affective commitment, perceived relational investment, and relationship satisfaction have a positive and strong relationship with e-loyalty. Giovanis and Athanasopoulou (2014) studied e-loyalty by empirically testing research model. The impact of e-satisfaction and e-trust on e-loyalty was tested and it was concluded that e-satisfaction plays a mediating role between service dimensions and loyalty.

A comprehensive understanding of e-loyalty in the context of online grocery shopping is yet to be established. In our research, we aim to identify the gap between theoretical and practical gaps identified in the literature.

3. E-satisfaction Model:
Szymanski and Hise (2000) proposed a model for e-satisfaction which we have used in our research. They examined the role of convenience, merchandising, site design and financial security in assessing e-satisfaction in e-retailing. The study revealed that convenience, financial security, and site design are the most dominant factors in resulting satisfied online consumers.

The researchers developed the model by testing it with a sample of consumers in America. To the best knowledge of the researcher, the model was first replicated in Germany in which the researchers tested the model on retail (Evanschitzky, Iyer, Hesse, & Ahlert, 2004). Findings further validated Szymanski and Hise (2000) e-satisfaction model. Convenience was the most significant factor of all in determining e-satisfaction. In spite of the favoring results, authors suggested the model to be examined in other countries and industries. When Bachleda and Selmouni (2014) applied Szymanski and Hise (2000) e-satisfaction model on Moroccan online consumers, the results came out to be slightly different. Product information (Merchandizing) came out to be the most significant factor instead of convenience. The contrasting results show that cultural background plays a vital role in how consumers perceive websites and their satisfaction levels.
Chen et al. (2008) in their critical review of e-satisfaction indicated that there is a need for replication of established models in different contexts to validate the e-satisfaction scales. The present study is aimed to examine Szymanski and Hise (2000) e-satisfaction model in the context of online grocery shopping. Also, it adds to the model by including e-loyalty as a further extension. If the results of the present study support Szymanski and Hise (2000) e-satisfaction model, it would further validate the model. Based on the previous studies which have validated the authenticity of the model. We propose the following research model for our research:

3.1 Convenience:
Convenience refers to minimization of stress or sacrifice related to the purchase due to a reduction in time and effort (Berry, 2016). Online convenience refers to the customers’ perception of user-friendliness, simplicity, and intuitiveness of a website while purchasing as it minimized the exhaustion caused by information searches, lessens mistakes and increases satisfaction resulting in repeat purchases (Srinivasan et al., 2002).

Convenience plays a critical role in developing consumer behavior and consumers’ experience of convenience helps in determining satisfaction (Seiders et al., 2005). Online grocery stores enable customers to shop online at any place or time. The customer usage of online grocery shopping is strongly related to consumers’ perception of saving time and superior convenience levels (Morganosky & Cude, 2000; Jiang et al., 2013; Droogenbroeck & Hove, 2017).

Ramus and Nielsen (2005) examined several factors which influence consumer decision making about choosing internet grocery shopping. Convenience was one of the main advantages in the minds of the consumers. Convenience helps predict e-satisfaction; however, it does not have a significant impact with e-loyalty directly (Christodoulides & Michaelidou, 2010).

Therefore, proposed hypothesis is:

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H1: \text{E-satisfaction increases as perceptions of convenience become more positive.}
\]

3.2 Merchandising:
Merchandising in context to online shopping is the availability of the right quantity of the right product at the right price on the right website (Nagyová et al., 2016). E-satisfaction levels are positively associated with online merchandising which includes two main parts; product offerings and product information (Szymanski and Hise, 2000). Product assortments can also
increase the probability of meeting customers' requirements and expectations (Bhatnagar & Syam, 2014).

Chiu et al. (2012) studied the impact of merchandising on repeat purchase behavior in the context of large online store with multiple product offerings. The study indicated a correlation between e-loyalty and merchandising. Customer satisfaction cannot be achieved until a complete range of products is made available which meet the desired needs (Wu, 2013). In grocery shopping, consumers' desires are not widely distributed hence proper merchandizing can play a vital role in satisfying customer needs (Narayan & Chandra, 2015).

Therefore, we develop the following hypothesis:

**H2: E-satisfaction increases as perceptions of merchandizing become more positive.**

### 3.3 Site Design:

Site design plays an important role in establishing an online relationship and has the ability to influence brand image, customer loyalty, and customer satisfaction (Sanchez-Franco & Rondan-Cataluña, 2010). Image of a website has an even more important role in online context as the exchange process takes place in the virtual space, increasing risk, and uncertainty (Mostafa, Wheeler, & Jones, 2005). Consumers prefer beautiful websites which creates the perception of being user-friendly (Kim & Niehm, 2009), homepage becomes critical in forming a perception about the website (Pandir & Knight, 2006). Other crucial elements include graphics, zoom functions, and video contents of the website as customers cannot examine or feel products; in addition some new elements such as zoom functions, 3D images, and close up pictures also helps in building and enhancing consumer perceptions about the website (Kim et al., 2008). Innovative, comprehensive, and visually pleasing websites help in attracting new customers and retain existing customers (Kim et al., 2008).

In previous studies, site design was a key factor for increasing customer satisfaction (Chou et al., 2015). Online stores' performance is measured by perceived value in view of the customer regarding the user-friendliness of the online store (Lin, 2007). Many measurement tools and templates are available on which designs can be evaluated based on empirical experiences, preferences, and heuristics (Ghasemaghaei & Hassanain, 2016; Ainsworth & Ballantine, 2017; Rodrigues, Costa, & Oliveira, 2017).

Thus, proposed hypothesis is that site design positively influences e-satisfaction.

**H3: E-satisfaction increases as perceptions of site design become more positive.**

### 3.4 Financial Security:

The term financial security refers to the protection of financial transaction from unsanctioned outflows or intrusions (Nyseveen et al., 2005). Security measures are often violated, even in the most reputed websites, although security techniques have improved drastically in the recent years (Chou et al., 2015). Financial security is considered as one of the most crucial factors in online shopping (Lauer & Deng, 2007; Shukla, 2014). The inability of online firms to prevent their platforms from damages and attacks influences negative attitudes of customers as they consider it a financial risk (Lauer & Deng, 2007; Teoh et al., 2013). Financial security is a major barrier to customer satisfaction in online shopping. Thus, we hypothesize that:

**H4: E-satisfaction increases as perceptions of financial security become more positive.**

### 3.5 E-satisfaction and E-Loyalty:

The term e-satisfaction has gained relevance and importance in the field of marketing research and literature (Szymanski & Hise, 2000; Anderson & Srinivasan, 2003; Evanschitzky, Iyer, Hesse, & Ahlert, 2004; Bachleda & Selimouni, 2014). Satisfaction in online commerce is considered as one of the primary predictors of business’ success and durability (Christodoulides & Michaelidou, 2010). The term satisfaction can be described as one’s feelings of disappointment or pleasure as a consequence of perceived performance of a product/service against his/her expectations (Kotler & Armstrong, 2015). Satisfaction is an affective state (Westbrook & Oliver, 1981). E-satisfaction, in this paper, is defined as the consumer's contentment with his/her purchase experience with online store (Anderson & Srinivasan, 2003).

The concept of loyalty becomes quite sophisticated and complex when applied to the virtual market (Gommans, Krishnan, & Scheffold, 2001). The concept of e-loyalty is comparable to the repeat purchase behavior in traditional stores in which customer loyalty is measured through the repeat number of visits and purchases that the customer makes (Corstjens & Lal, 2000).
Similarly, e-loyalty is defined as the intention of the customer to revisit a website (Cyr et al., 2008) and make further purchases (Doong et al., 2008) in the future from the same online seller.

Customers are more willing to interact repetitively with a website when they are satisfied with the website which results in loyal customers (Fang et al., 2011). Customers have a tendency to remain loyal to online shops because of many benefits they get from sticking to any online store, such as low switching costs (Dahlia-El-Manstrly, 2016), enhanced customer service (Ng, David, & Dagger, 2017), and low search costs (Aral, Bakos, & Brynjolfsson, 2017). Element of uncertainty plays a critical role in triggering customers to stick to the same website so that they can receive the same level of service and satisfaction from the same website consistently (Ahrholdt, Gudergan, & Ringle, 2017).

Anderson and Srinivasan (2003) studied the impact of e-satisfaction on e-loyalty. Findings revealed that there is a significant impact of e-satisfaction on e-loyalty, additionally, the relationship is moderated by individual and business level factors. Lin and Sun (2009) explored the association of e-satisfaction and e-loyalty by taking into consideration some internal (holdup costs) and external (service and technology acceptance) factors. The relationship between e-satisfaction and e-loyalty was further established through their research. Christodoulides and Michaelidou (2010) studied the relationship of e-satisfaction and e-loyalty through assessment of motives of online shopping. Findings revealed that e-satisfaction is a strong determinant of e-loyalty.

4. Methodology:
The population of the study consists of consumers in Pakistan who purchase grocery from online grocery stores. Nonprobability purposive sampling technique was used for data collection. The sample size for the study is 351. The sample consisted of almost equal participation of both the genders (Female 47% and Male 53%). The education level of respondents ranged from Intermediate Education to Doctorate.

4.1 Procedure:
An online questionnaire was designed using Google forms and was sent to 5,221 customers through email portal of two major online grocery store of Pakistan. The response rate is 6% (351 out of 5,221). Consent was taken from the participants beforehand; anonymity and confidentiality of the data were assured. Participants were also informed about the purpose of the research.

4.2 Statistical Analysis:
The data was collected online and then tabulated on Microsoft Excel. SPSS (Version 21) was used for all the statistical analysis. Demographic information was assessed through descriptive statistics. The impact of convenience, merchandising, site design, financial security, and e-satisfaction on e-loyalty was assessed through performing linear regression analysis.

5. Results:
The sample size consists of 47% females and 53% of males. Almost half of the respondents (51%) were aged in the range of 21-30. Majority of the respondents had graduate degrees (66%).
Table 1: Respondents’ Profile

| Gender  | Female | 166 | 47 |
|---------|--------|-----|----|
|         | Male   | 185 | 53 |

| Age     | Under 21 | 30 | 9 |
|---------|-----------|----|---|
|         | 21-30     | 178| 51|
|         | 31-40     | 112| 32|
|         | 41-50     | 28 | 8 |
|         | 51 and above | 3 | 0 |

| Qualification | Up to intermediate | 38 | 11 |
|---------------|---------------------|----|----|
|               | Graduation          | 231| 66 |
|               | Masters             | 80 | 22 |
|               | Doctorate           | 2  | 1  |

Table 2: Descriptive Statistics

|                | Cronbach Alpha | Mean | Std. Deviation | Skewness | Kurtosis |
|----------------|----------------|------|----------------|----------|----------|
| Convenience    | 0.79           | 3.91 | 1.46           | -0.12    | -0.89    |
| Merchandizing  | 0.79           | 4.16 | 1.32           | -0.25    | -0.72    |
| Site Design    | 0.92           | 4.07 | 1.63           | -0.10    | -1.18    |
| Financial Security | 0.90     | 4.17 | 1.68           | -0.12    | -1.24    |
| E-Satisfaction | 0.89           | 4.02 | 1.60           | -0.14    | -1.14    |
| E-Loyalty      | 0.93           | 4.10 | 1.68           | -0.16    | -1.07    |

Table 2 illustrates that e-loyalty (α=0.93, M=4.10, SD=1.68) has the highest reliability, whereas merchandizing has the lowest reliability (α=0.79, M=4.16, SD=1.32). All the six constructs have reliability greater than 0.7 which shows that data has reasonable internal consistency (Leech, Barrett, & Morgan, 2015).

Table 2 also illustrates that site design (Mean=4.07, SD=1.63) has the lowest skewness (-0.10), whereas the highest skewness (-0.25) is of Merchandizing (Mean=4.16, SD=1.32). Merchandising (M=4.16, SD=1.32) has the lowest kurtosis (-0.72), whereas the highest skewness (-1.24) is of Financial Security (Mean=4.17, SD=1.68). Univariate normality is confirmed as the constructs are within range of +3.5. Normal tendency of the data is reinforced as all the constructs have kurtosis and skewness values within the range of ±1.5 (Hair et al., 2010).

Table 3 shows that each variable has reliability greater than 0.7 and variance explained greater than 0.40, fulfilling the requirement of convergent validity.

Table 3: Convergent Validity

|                | Mean | Std. Deviation | Reliability | Variance Exp |
|----------------|------|----------------|-------------|--------------|
| Convenience    | 3.91 | 1.46           | 0.79        | 71.74%       |
| Merchandizing  | 4.16 | 1.32           | 0.79        | 62.16%       |
Discriminate validity was used to evaluate the distinctiveness and uniqueness of each of the variable. Table 4 shows that the square root of the variance explained is greater than the square of each pair (correlation) fulfilling the requirement of discriminate validity (Green et al., 2012).

### Table 4: Discriminate Validity

|                      | C       | M       | WD      | FS       | E-SAT   | E-LOY   |
|----------------------|---------|---------|---------|----------|---------|---------|
| Convenience          | Pearson Correlation | 0.85    |         |          |         |         |
| Merchandizing        | Pearson Correlation | 0.00    | 0.79    |          |         |         |
| Site Design          | Pearson Correlation | 0.00    | 0.00    | 0.91     |         |         |
| Financial Security   | Pearson Correlation | 0.00    | 0.00    | 0.00     | 0.88    |         |
| E-satisfaction       | Pearson Correlation | 0.00    | 0.00    | 0.00     | 0.00    | 0.87    |
| E-loyalty            | Pearson Correlation | 0.10    | 0.00    | 0.00     | 0.00    | 0.00    | 0.91    |

5.1 Regression Analysis:

**Hypothesis 1: Convenience and E-Satisfaction**

### Table 5.1: Model Summary

| Model | R       | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---------|----------|-------------------|----------------------------|
| 1     | .049<sup>a</sup> | .002     | .000              | 1.602                      |

a. Predictors: (Constant), Convenience

### Table 5.2: ANOVA<sup>a</sup>

| Model | Sum Squares | df | Mean Square | F     | Sig. |
|-------|-------------|----|-------------|-------|------|
| 1     | 2.183       | 1  | 2.183       | .850  | .357<sup>a</sup> |

<sup>a</sup>
Table 5.3: Coefficients

| Model | Unstandardized Coefficients | Standardized Coefficients | t    | Sig. |
|-------|-----------------------------|---------------------------|------|------|
| 1     | (Constant)                  |                           |      |      |
|       | B  | Std. Error | Beta |      |      |
|       | 3.813 | .244   | 15.624 | .000 |      |
|       | Convenience                 |                           |      |      |
|       | .054 | .058   | .049 | .922 | .357 |

The results from the regression analysis indicate that there is no significant relationship between convenience and e-satisfaction as the significance value (0.35) is greater than 0.05. The value of R square is 0.02, showing that only 2% change in e-satisfaction is due to convenience. Hence, we fail to reject the null hypothesis.

Hypothesis 2: Merchandizing and E-Satisfaction

Table 6.1: Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---|----------|-------------------|---------------------------|
| 1     | .003* | 0.000 | - .003 | 1.604 |

Table 6.2: ANOVA

| Model    | Sum of Squares | df | Mean Square | F     | Sig. |
|----------|----------------|----|-------------|-------|------|
| 1       | Regression     | .008 | 1 | .008 | .003 | .956 |
|          | Residual       | 898.486 | 349 | 2.574 |     |
|          | Total          | 898.494 | 350 |     |     |

Table 6.3: Coefficients

| Model            | Unstandardized Coefficients | Standardized Coefficients | t    | Sig. |
|------------------|-----------------------------|---------------------------|------|------|
|                  |                             |                           |      |      |
The results from the regression analysis indicate that there is no significant relationship between merchandising and e-satisfaction as the significance value (0.95) is greater than 0.05. The value of R square is 0.00, showing that no change in e-satisfaction is due to merchandising. Hence, we fail to reject the null hypothesis.

**Hypothesis 3: Site Design and E-Satisfaction**

**Table 7.1: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---|----------|-------------------|---------------------------|
| 1     | .018<sup>a</sup> | 0.000 | -.003 | 1.604 |

* a. Predictors: (Constant), Site Design

**Table 7.2: ANOVA<sup>a</sup>**

| Model       | Sum of Squares | df | Mean Square | F | Sig. |
|-------------|----------------|----|-------------|---|------|
| Regression  | .276           | 1  | .276        | .107 | .743 |
| Residual    | 898.217        | 349| 2.574       |     |      |
| Total       | 898.494        | 350|             |     |      |

* a. Dependent Variable: E-satisfaction

* b. Predictors: (Constant), Site Design

**Table 7.3: Coefficients<sup>a</sup>**

| Model       | Unstandardized Coefficients | Standardized Coefficients |
|-------------|-----------------------------|---------------------------|
|             | B | Std. Error | Beta | t | Sig. |
| 1 (Constant)| 4.093 | .230 | .003 | .000 |
| Site Design | -.017 | .052 | -.018 | -.328 | .743 |

* a. Dependent Variable: E-satisfaction

The results from the regression analysis indicate that there is no significant relationship between site design and e-satisfaction as the significance value (0.74) is greater than 0.05. The value of R square is 0.00, showing that no change in e-satisfaction is due to site design. Hence, we fail to reject the null hypothesis.

**Hypothesis 4: Financial Security and E-Satisfaction**

**Table 8.1: Model Summary**
The results from the regression analysis indicate that there is no significant relationship between financial security and e-satisfaction as the significance value (0.13) is greater than 0.05. The value of R square is 0.00, showing that no change in e-satisfaction is due to financial security. Hence, we fail to reject the null hypothesis.

**Hypothesis 5: E-satisfaction and E-loyalty**

**Table 9.1: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---|----------|------------------|---------------------------|
| 1     | .033a | .001 | -.002 | 1.682 |

a. Predictors: (Constant), E-satisfaction

**Table 9.2: ANOVAa**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|-------|----------------|----|-------------|---|------|
| 1 Regression | 1.083 | 1 | 1.083 | .383 | .537 |

a. Predictors: (Constant), E-satisfaction
The results from the regression analysis indicate that there is no significant relationship between e-satisfaction and e-loyalty as the significance value (0.53) is greater than 0.05. The value of R square is 0.00, showing that no change in e-loyalty is due to e-satisfaction. Hence, we fail to reject the null hypothesis.

**Mediating Role of E-satisfaction**

In order to assess the mediating role of e-satisfaction on the dependent variable (e-loyalty) of independent variables (convenience, merchandising, site design, and financial security), we first calculate the direct effect of the independent variables on the dependent variable.

**Direct Effect**

**Table 10.1: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---|----------|-------------------|----------------------------|
| 1     | .086<sup>a</sup> | .007     | -.004            | 1.684                      |

<sup>a</sup> Predictors: (Constant), Convenience, Merchandizing, Site Design, Financial Security

**Table 10.2: ANOVA<sup>a</sup>**

| Model | Sum of Squares | df | Mean Square | F    | Sig.  |
|-------|----------------|----|-------------|------|-------|
| 1     | Regression     | 7.361 | 4  | 1.840 | .649  | .628  |
|       | Residual       | 981.738 | 346 | 2.837 |      |      |
|       | Total          | 989.100 | 350 |      |      |      |

<sup>a</sup> Dependent Variable: E-loyalty

**Table 10.3: Coefficients<sup>a</sup>**

| Model | Unstandardized Coefficients | Standardized Coefficients | t    | Sig.  |
|-------|-----------------------------|---------------------------|------|-------|
| 1     | (Constant)                  | 3.966                      | -.243| 16.317 | .000  |
|       | E-satisfaction              | .035                       | .056 | .033  | .618  | .537  |

<sup>a</sup> Dependent Variable: E-loyalty

b. Predictors: (Constant), Convenience, Merchandizing, Site Design, Financial Security
The results from the regression analysis indicate that the model is insignificant as the significance value (0.62) is greater than 0.05. The value of R square is 0.00, showing that no change in e-loyalty is due to the independent variables.

**Indirect Effect**

**Table 10.1: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---|----------|-------------------|---------------------------|
| 1     | .091\(^a\) | .008 | - .006 | 1.686 |

\( a. \) Predictors: (Constant), E-satisfaction, Convenience, Merchandizing, Site Design, Financial Security

**Table 10.2: ANOVA\(^a\)**

| Model | Sum of Squares | df | Mean Square | F | Sig. |
|-------|----------------|----|-------------|---|------|
| 1     | Regression     | 8.270 | 5 | 1.654 | .582 | .714 |
|       | Residual       | 980.830 | 345 | 2.843 |       |      |
| 1     | Total          | 989.100 | 350 |        |       |      |

\( a. \) Dependent Variable: E-loyalty

\( b. \) Predictors: (Constant), E-satisfaction, Convenience, Merchandizing, Site Design, Financial Security

**Table 10.3: Coefficients\(^a\)**

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|---------------------------|---|------|
| 1     | (Constant)                  |                           | 4.450 | .566 | 7.866 | .000 |

\( a. \) Dependent Variable: E-loyalty

\( b. \) Predictors: (Constant), E-satisfaction, Convenience, Merchandizing, Site Design, Financial Security
The results from the regression analysis indicate that the model is insignificant as the significance value (0.71) is greater than 0.05. The value of R square is 0.00, showing that no change in e-loyalty is due to the independent variables. There is no role of mediator as the relationship between the independent and dependent variable is insignificant.

### 6. Conclusions and Discussions:

Szymanski and Hise (2000) e-satisfaction model was not supported. None of the relationships proposed were significant. A possible reason for such results is that online grocery shopping has unique dynamics (G. Mortimer et al., 2016b). The habitual and repetitive nature (G. S. Mortimer & Weeks, 2011) of online grocery shopping is different from fashion, tourism, airline, healthcare, and banking (Crutzen et al., 2014; Elkhani et al., 2014; Rodrigues et al., 2017; S & Ponnam, 2017; Shihyu Chou et al., 2015). The online consumer experience of grocery shopping is also different as it is considered a mundane task (Dawes & Nenycz-Thiel, 2014) while the general nature of online shopping when buying exclusive products, results in feelings of joy, enjoyment, and excitement (Wolfinbarger & Gilly, 2001).

The results indicate contribution in three main areas. First, the research empirically tests a well-established e-satisfaction model on a significant but neglected area of online grocery shopping. On the basis of literature review, online grocery shopping has rarely been studied in the context of e-loyalty, the study provides new insights by forming a better understanding of e-loyalty; hence it addresses research gap. Second, the results suggest that Szymanski and Hise (2000) e-satisfaction model is not valid in the context of online grocery shopping. None of the predictors in the model have a significant impact on e-satisfaction and e-loyalty. These results contribute to future research and academia by enhancing the understanding of e-loyalty, specifically in the context of online grocery shopping. Third, the present study validates findings of previous studies (Anusha Sreeram et al., 2017; Dawes & Nenycz-Thiel, 2014; Droogenbroeck & Hove, 2017; Hansen, 2006; Huyghe et al., 2016; Morganosky & Cude, 2000; Narayan & Chandra, 2015; Rafiq et al., 2013; Siddiqui & Tripathi, 2016; Yan Huang & Harmen Oppewal, 2006) regarding the differing nature of online grocery shopping to other forms of online stores. In all, the three contributions fulfill the literature and theoretical gap. It also extends the prior knowledge of Szymanski and Hise (2000) e-satisfaction model.

### 7. Managerial Implications:

On the basis of findings of this study, e-loyalty in online grocery shopping is not affected by e-satisfaction nor the variables (convenience, merchandising, site design, and financial security). Online grocery store managers should not put considerable effort into these dimensions as these do not result in repeat purchases as e-loyalty is not achieved. Another important takeaway from this study for managers is that they need to differentiate their strategies from e-commerce strategies adopted by other online businesses as the nature of online grocery shopping is quite different due to perishability and variability of the products.

### 8. Limitations and Future Research:

Although there were three major contributions, some limitations need to be addressed. The results of this study cannot be generalized to other online industries as each industry has unique features. Future researchers can apply this model in different industries to study if this research model is valid or not. Secondly, this research is focused on analyzing e-loyalty through e-satisfaction; however, there are many other variables that affect e-loyalty, such as e-trust and e-servqual. Future research can get a complete picture of e-loyalty by extending the proposed model. Third, the data for the study was collected through a self-administered questionnaire sent to the database of two online grocery stores in Pakistan. Culture plays an important part in...
determining online consumer experience; hence, findings may turn out to be different in other cultures. A longitudinal methodology can be built to assess different stages of e-loyalty.

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10. Appendix: Questionnaire

This questionnaire is designed to conduct research on e-loyalty in online grocery stores. Following are some questions regarding your personal information. Kindly tick (√) the appropriate box against each question.

Q1. Age

- [ ] Less than 21
- [ ] 21-30
- [ ] 31-40
- [ ] 41-50
- [ ] 51 and above

Q2. Qualification

- [ ] Up to Intermediate
- [ ] Graduation
- [ ] Masters
- [ ] Doctorate

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Q3. Gender

○ Male ○ Female

SECTION-ONE

Please circle one number per statement to indicate your view towards the statements below, where 1 means that you strongly disagree (or dislike) and 7 means that you strongly agree (or like). Questionnaire Items adopted from (Szymanski & Hise, 2000)

| Convenience                                      | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|--------------------------------------------------|---|---|---|---|---|---|---|
| Shopping from this online store is convenient.   | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Shopping from this online store saves my time.   | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| Browsing items is easy from this online store.   | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

SECTION-TWO

Please circle one number per statement to indicate your view towards the statements below, where 1 means that you strongly disagree (or dislike) and 7 means that you strongly agree (or like). Questionnaire Items adopted from (Szymanski & Hise, 2000)

| Merchandizing                        | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|--------------------------------------|---|---|---|---|---|---|---|
| I am satisfied with the number of products available. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| I am satisfied with the variety of offerings available. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| There is sufficient product information available. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| The product information is helpful in making decisions. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

SECTION-THREE

Please circle one number per statement to indicate your view towards the statements below, where 1 means that you strongly disagree (or dislike) and 7 means that you strongly agree (or like). Questionnaire Items adopted from (Shihyu Chou, Chi-Wen Chen, & Jiun-You Lin, 2015)

| Site Design                               | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|-------------------------------------------|---|---|---|---|---|---|---|
| The online store provides in depth information. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| It is easy to complete a transaction at this online store. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| This online store offers appropriate personalized services. | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| This online store has good selection.     | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

SECTION-FOUR

Please circle one number per statement to indicate your view towards the statements below, where 1 means that you strongly disagree (or dislike) and 7 means that you strongly agree (or like). Questionnaire Items adopted from (Shihyu Chou, Chi-Wen Chen, & Jiun-You Lin, 2015)
Financial Security

| Statement                                                                 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|---------------------------------------------------------------------------|---|---|---|---|---|---|---|
| I believe that the online store implements security measures to protect Internet shoppers. |   |   |   |   |   |   |   |
| I believe that the online store has a very safe online paying mechanism.  |   |   |   |   |   |   |   |
| I believe that the online store has the superior ability to handle online hijackings. |   |   |   |   |   |   |   |
| I believe that transactions are protected by the state-of-the-art security technique at this online store. |   |   |   |   |   |   |   |

SECTION-FIVE

Please circle one number per statement to indicate your view towards the statements below, where 1 means that you strongly disagree (or dislike) and 7 means that you strongly agree (or like). Questionnaire Items adopted from (Shihyu Chou, Chi-Wen Chen, & Jiun-You Lin, 2015)

| E-satisfaction                                                                 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|--------------------------------------------------------------------------------|---|---|---|---|---|---|---|
| I like to purchase products from this online store.                           |   |   |   |   |   |   |   |
| I am pleased with the experience of purchasing products from this online store. |   |   |   |   |   |   |   |
| I think purchasing products from this online store is a good idea.            |   |   |   |   |   |   |   |
| Overall, I am satisfied with the experience of purchasing products from the online store. |   |   |   |   |   |   |   |

SECTION-SIX

Please circle one number per statement to indicate your view towards the statements below, where 1 means that you strongly disagree (or dislike) and 7 means that you strongly agree (or like). Questionnaire Items adopted from (Shihyu Chou, Chi-Wen Chen, & Jiun-You Lin, 2015)

| E-loyalty                                                                 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
|----------------------------------------------------------------------------|---|---|---|---|---|---|---|
| If the online store continues maintaining current service performances, I will not switch to other online stores. |   |   |   |   |   |   |   |
| As far as product types sold at this online store are concerned, I don’t quite consider purchasing at other online stores. |   |   |   |   |   |   |   |
| I like to utilize this online store.                                       |   |   |   |   |   |   |   |
| To me, this online store is the best site from grocery shopping            |   |   |   |   |   |   |   |

Thank you very much for your responses.