# CHAPTER 4

# ASSESSMENT OF CUSTOMER VALUE PERCEPTION AND RELATIONSHIP WITH LOYALTY

In the previous chapters of the thesis, topics like the aim of research, literature support, tools, and techniques have been discussed. This chapter seeks to find the outcome for the first objective that has mentioned in section 1.5. The factors that are perceived by the customers and hypothesized relationship among those factors are discussed in section 2.2. Here, in this chapter, the study's background is discussed first, then the structural equation modeling is applied to test the relationship among factors. The steps involved in structural equation modeling were explained in section 3.1.

## 4.1 Introduction

In this decade, traditional retailers face significant disruptions to keep a sustainable market position (Mena et al., 2016). Traditional players and new entrants are attracted to organized retailing in India. The Indian retail market is the mirror of a unique blend of Indian values and western lifestyle (Kautish and Sharma, 2018). Therefore, competition will be fierce due to the drastic change in the level of customers' awareness about service quality (Gopalan and Satpathy, 2015) and due to the entry of foreign retailers. To achieve a competitive position in the customers' mind, it is essential to know the factors that the customer can perceive. These factors can help retailers achieve the position in the market by utilizing the resources in a better way and providing an enhanced level of customer experience (Siebers et al., 2013). The customers need the best value for their money and also want to save their time during shopping. The customers today are well informed and seek service quality rather than only product quality. Apparel retailers understand the importance of these requirements and put their efforts to fulfill them in a better way (Gopalan and Satpathy, 2015).

Apparel retailers are trying to differentiate their stores in comparison with their competitors. Therefore, the resource-based view (RBV) can help retailers in this regard. Retailers can adopt any strategy from differentiation, cost leadership, and responsiveness. In the apparel retailing scenario, it is tough for traditional and new entrants to stand in front of foreign and domestic corporate players concerning cost leadership and responsiveness (Singh and Samuel, 2018). According to Heizer et al. (2018), differentiation stands for "*Distinguishing the offerings of an organization in a way that the customer perceives as adding value*". Customer satisfaction can measure the customer perceived value (Siebers et al., 2013). This study explores the link between retailers' offerings and customer satisfaction and checks the relationship between customer satisfaction and customer loyalty. Based on the above discussion, this study seeks to find the answer to the following questions.

**RQ1:** What are the customers' value perceptions?

**RQ2:** Which of them are better predictors for customer satisfaction?

**RQ3:** Is customer satisfaction affecting behavioral outcomes such as loyalty?

## 4.2 Research design and methodology

### 4.2.1 Measurement

Each construct was modeled as a latent variable and measured using multiple item scales taken from the extant literature. The six-item scale for measuring the store environment (STENV) was adopted from Castaldo et al. (2016). A Three-item scale for measuring the merchandise assortment (MDASRT) and a three-item scale for store communication (STCO) were adopted from Guenzi et al. (2009). Two-item scale for measuring the on-shelf availability (SHSO), the two-item scale for measuring ease of return of product (RTRN), the two-item scale for measuring ease of product

accessibility (PRAC), the four-item scale for measuring the shopping facilities (SHFA), the four-item scale for measuring the product-related information (PRINFO) were adopted from Bouzaabia et al., (2013). A five-item scale for measuring the employee attribute (EMP) was adopted from Kumar and Kim (2014). The three-item scale for measuring customer satisfaction (CUSA) was adopted from Seiders et al. (2005), and the two-item scale for measuring customer loyalty (CULO) is adopted from Sirhoi (1998). The three-item scale was adopted from Jinfeng and Zhilong (2009) for measuring the Perceived Price (PPRC). A questionnaire was developed using a seven-point Likert scale (1 for strongly disagree and 7 for strongly agree) for data collection.

### 4.2.2 Pre-test and pilot test

Hindi and English language were used to develop the questionnaire. A total of 39 statements was used to define the research construct except for the demographic data. To check the questionnaire's suitability for questions, format, language and length, a pre-test was conducted (Roy et al., 2017). In the first step, two experts and three doctoral candidates were involved in modifying the statements to make them contextually relevant. Then, a pilot test was conducted with 30 respondents to check the reliability of the instrument. The Cronbach alpha for all the constructs was greater than 0.700 to confirm the reliability (Nunnally, 1978).

### 4.2.3 Sampling and data collection

To validate the theoretically developed model (figure 2.1), an empirical study was conducted in a natural field setting. This approach offers sufficient variance across the factors that are required to test the model. Data were collected from the customer immediately after their shopping experience to minimize carry-over effects from experience. Primarily, the responses were collected from the top apparel retail outlets located in a tier-II city in India.

The survey was divided into three sections. In the first section, the objective and context of the research were explained in detail. The second section has questions that are related to the socio-demographic data of respondents. The third section has the measurement items for the research constructs. Data were collected from July 2017 to October 2017. A total of 648 respondents filled the questionnaire. Upon discarding the erroneous or incomplete responses, we finally obtained 601 usable data analysis responses in SPSS Amos. Of the respondents, 63.56 percent were male, and 36.44 percent were female. Of the respondent, 32.28 were married. Of the respondents, 9.65 percent were below age 20, 52.75 percent were between the age of 20 and 30, 21.13 percent were between the age of 30 and 40, 12.31 percent were between the age of 40 and 50, and 4.16 percent were above the age of 50. Of the respondents, 3.66 percent have high school qualifications, 11.15 percent have intermediate, 52.25 percent have graduated, 24.46 percent have postgraduate, and the remaining 8.49 percent have other qualifications.

### 4.3 Data analysis and result

#### 4.3.1 Measurement model

The questionnaire was selected based on the previously developed and tested scale from a different country and work field. Since the questionnaire was administered to a new set of respondents, location, and field, the scale was going through exploratory factor analysis (EFA). The Kaiser–Meyer–Olkin value was 0.865, which shows the sample was adequate to conduct factor analysis. The observed significance level for the Bartlett test of sphericity was 0.000. The relationship strength among the items was strong that allow proceeding with EFA. A principal component with varimax rotation was used. The rotated component matrix produced a twelve-factor matrix with no cross-loadings. The eigenvalue of all the twelve factors was greater than 1. The lowest factor loading

for item “There were enough employees in the store to service customers” was 0.548 that failed to get threshold (0.600) as suggested by Hair et al. (2016). Thus, this item was removed from further analysis. The total percent of variance explained by the twelve factors was 83.822. The items were interpretable and could be grouped as named based on past studies.

Further, two measurement models were used. First, the measurement model for in-store logistics was tested. Second, the measurement model with ISL, store environment, store communication, perceived Price, merchandise assortment, customer satisfaction and loyalty was tested.

The first measurement model tested the In-store logistics as a second order factor for the five sub-dimensions (ease of return, on-shelf availability, product accessibility, shopping convenience, and product information). The current study is trying to examine the robustness of the construct with regard to customer perception. To test the second-order factor with sub-construct, the study employed confirmatory factor analysis (CFA) for first-order constructs to check the model's validity and fitness. The result of the CFA has been seen in figure 4.1. Model’s fitness indices achieved the required level of fitness. The required level of fitness indices are as follows: CMIN/df (ratio of minimum discrepancy and degree of freedom) <= 3, CFI (comparative fit index) > 0.90, TLI (Tucker-Lewis index) > 0.90, GFI (goodness of fit index) > 0.90, IFI (Incremental fit index) > 0.90, AGFI (adjusted goodness of fit index) > 0.90 and RMSEA (root mean square error of approximation) < 0.06 (Hair et al., 2010).

Further, the convergent and discriminant validity of the model construct was assessed. Standardized loading estimates were observed for the reliability of constructs. The acceptable loading estimate is ideally 0.700, and a good rule of thumb for loading

estimate is 0.5 or higher (Hair et al., 2010). All the items have a loading estimate more than the acceptable value. Thus, no items have been removed.

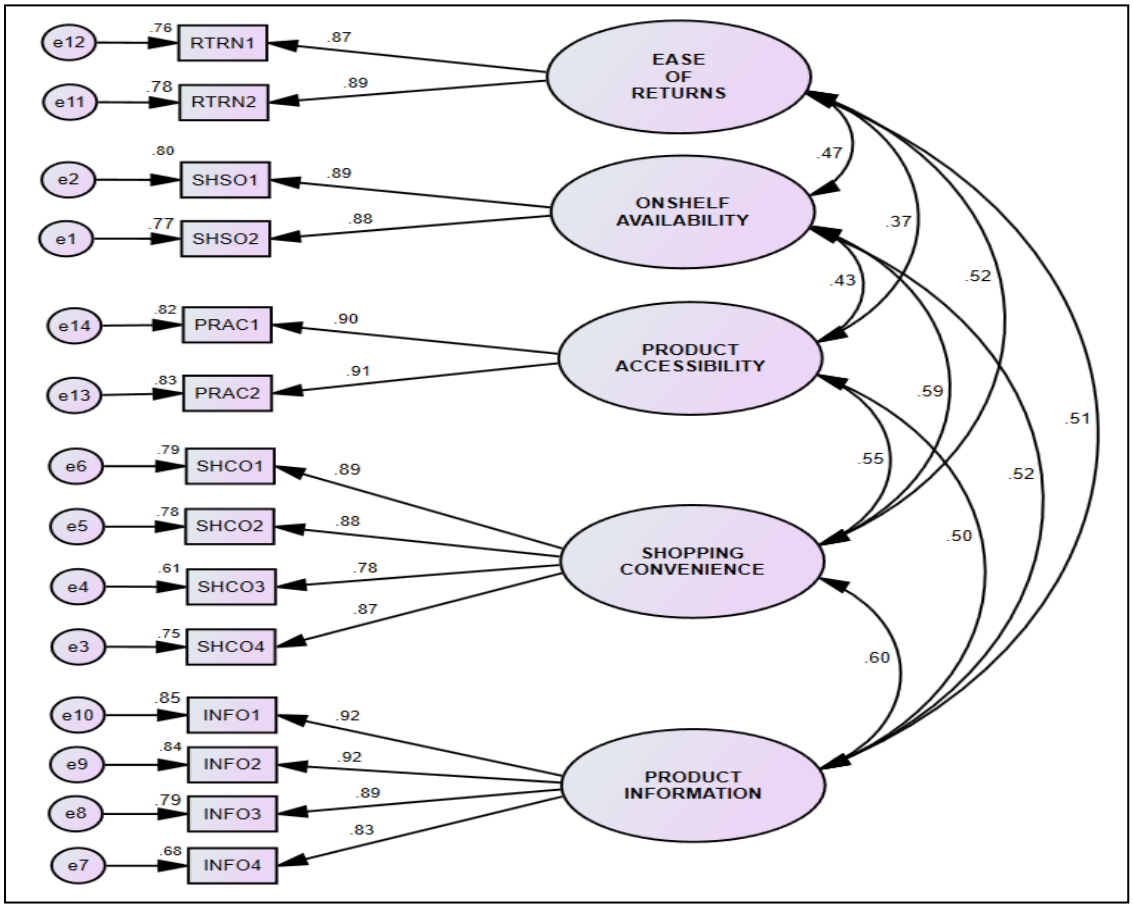


**Figure 4.1**: CFA for the ISL. Fitness indices: CMIN/DF = 2.551, GFI = 0.959, AGFI = 0.939, CFI = 0.984, TLI = 0.979, NFI = 0.973, IFI = 0.984 and RMSEA = 0.051.

In the next step, construct reliability (CR) and average variance extracted (AVE) were measured to observe items' relatedness within constructs. The acceptable values for CR and AVE are 0.7 and 0.5, respectively (Hair et al., 2010). In the next step, the discriminant validity was checked with the square root of AVE and inter-construct correlations. If the square root of AVE is greater than inter-construct correlations, then this confirms the discriminant validity. Table 4.1 shows the convergent and discriminant measures, and the result showed that all values are in an acceptable range.

**Table 4.1:** Convergent and discriminant validity for ISL components

| | CR | AVE | Product Information | On-shelf Availability | Shopping Convenience | Ease of Returns | Product Accessibility |
|---|---|---|---|---|---|---|---|
| **Product Information** | **0.938** | **0.792** | **0.890** | | | | |
| **On-shelf Availability** | **0.878** | **0.783** | 0.522 | **0.885** | | | |
| **Shopping Convenience** | **0.916** | **0.733** | 0.600 | 0.586 | **0.856** | | |
| **Ease of Returns** | **0.870** | **0.770** | 0.508 | 0.472 | 0.523 | **0.878** | |
| **Product Accessibility** | **0.903** | **0.823** | 0.503 | 0.426 | 0.551 | 0.366 | **0.907** |

After CFA, it is required to examine the significance of ISL on every sub-construct. For this purpose, the regression path coefficient (Figure 4.2) should be used.

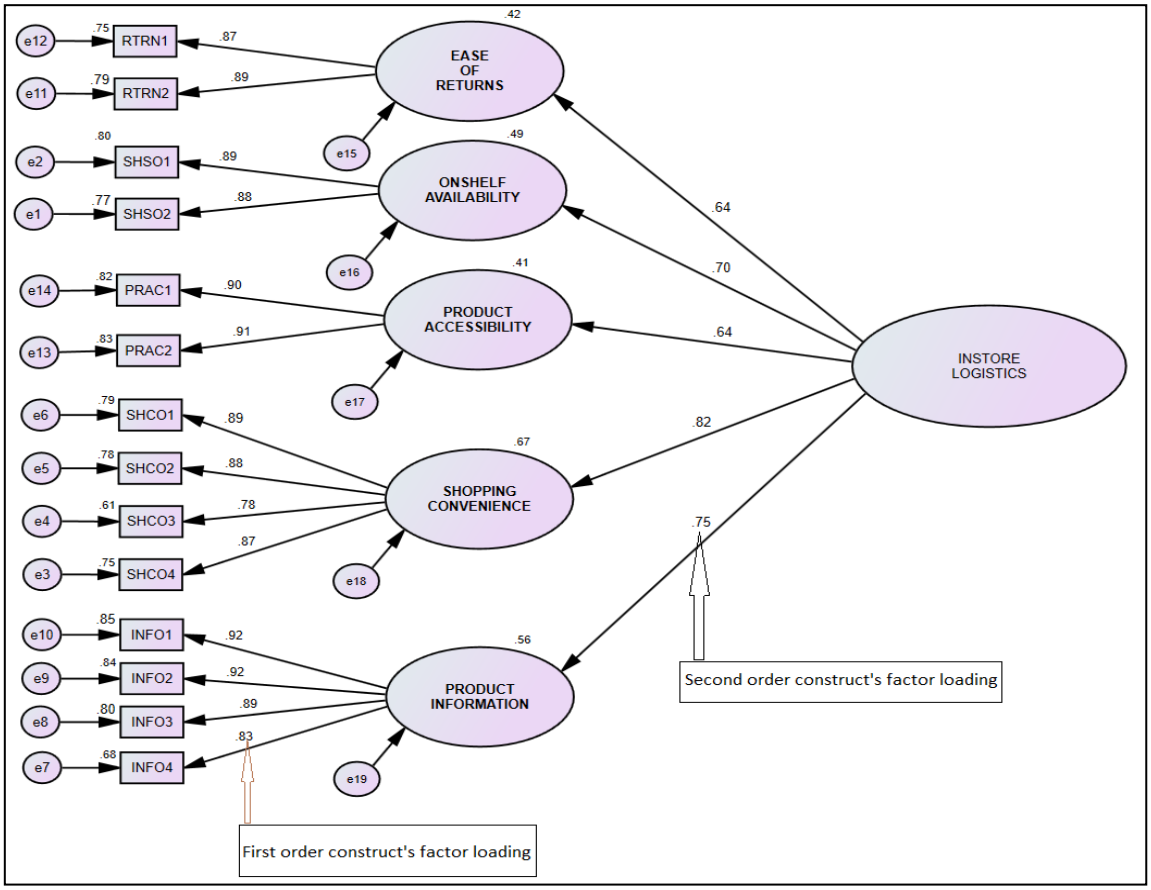


**Figure 4.2:** The regression path coefficient of ISL. Fitness indices: CMIN/DF = 2.489, GFI = 0.957, AGFI = 0.940, CFI = 0.983, TLI = 0.980, NFI = 0.972, IFI = 0.983 and RMSEA = 0.050.

Standardized loading estimate (factor loading) of ease of return, on-shelf availability, product accessibility, shopping convenience, and product information are 0.64, 0.70, 0.64, 0.82, and 0.75, respectively. Thus, the factor loading achieved the acceptable value as per the rule of thumb for factor loading (Hair et al., 2010; Hair et al., 2016). Further, it is required to examine the output of regression coefficients to check the significance of ISL on every sub-construct (Awang, 2012), and the result has been shown in table 4.2. Result confirms that ISL significantly shows the effect on all sub-constructs. Therefore, the first hypothesis (**H1**) is accepted.

**Table 4.2:** The regression path coefficient and its significance for ISL

| Component | Path | Construct | Estimate | S.E. | C.R. | P | Result |
|---|---|---|---|---|---|---|---|
| Product Information | <--- | In-store Logistics | 0.776 | 0.059 | 13.205 | 0.001 | Significant |
| On-shelf Availability | <--- | In-store Logistics | 0.802 | 0.056 | 14.380 | 0.001 | Significant |
| Shopping Convenience | <--- | In-store Logistics | 0.727 | 0.054 | 13.424 | 0.001 | Significant |
| Ease of Returns | <--- | In-store Logistics | 1 | Reference Point | | | |
| Product Accessibility | <--- | In-store Logistics | 0.926 | 0.061 | 15.236 | 0.001 | Significant |

In the second measurement model, the entire constructs have been considered, including ISL. To check the robustness of the entire constructs, again CFA has been employed. In the next step, Standardised loading estimates were examined for the reliability of constructs (Table 4.3).

**Table 4.3:** Descriptive statistics and reliability

| Constructs | Items | | Loading |
|---|---|---|---|
| In-store Logistics | On-shelf Availability | In this store, the shelves are well-stocked (0.892*) | 0.701 |
| | | During my visit, I noticed a product was available that of my interest (0.878*) | |
| | Ease of Return | One can easily return unwanted and defective product (0.869*) | 0.652 |
| | | No problems when returning the merchandise (0.885*) | |

| | | | |
|---|---|---|---|
| | Shopping Convenience | In this store, sufficient carrier bags are provided by the cashiers (0.891*) | 0.808 |
| | | In this store, there are enough shopping carts (0.882*) | |
| | | In this store, the number of cash registers open during peak hours is sufficient (0.781*) | |
| | | This store has convenient hours of operation (0.867*) | |
| | Product Accessibility | In this store, supply bothers me during the visit (rc = 0.096) (0.904*) | 0.639 |
| | | In this store, all products can be easily reached (0.910*) | |
| | Product Information | Washing and care information was available on the label | 0.765 |
| | | Prices on the product labels are correct | |
| | | In the store, information was available about stock-outs | |
| | | In this store, information of product features is sufficient. | |
| **Customer Satisfaction** | I am completely satisfied with the shopping experience in this store | | 0.918 |
| | I am pleased with the overall service delivered by this store. | | 0.922 |
| | Shopping in this store is a pleasant experience. | | 0.901 |
| **Loyalty** | I will keep on buying products and services from this store. | | 0.934 |
| | I will suggest this store to my friends | | 0.924 |
| **Store Environment** | I like a lot the layout of this store | | 0.837 |
| | The store environment is very tidy | | 0.865 |
| | In this store, I feel comfortable. | | 0.889 |
| | I found it easy to orient myself in this store | | 0.856 |
| | In this store the display of merchandise is excellent | | 0.833 |
| | In this store, the layout is modern | | 0.869 |
| **Merchandise** | In this store, merchandise quality is very high. | | 0.864 |
| | In this store, merchandise breadth (products of a different variety) is very high. | | 0.924 |
| | In this store, merchandise depth (products in each variety) is very high. | | 0.896 |
| **Store Communication** | Communication in this store is reliable | | 0.787 |
| | Communication in this store is clear | | 0.944 |
| | Communication in this store is complete | | 0.876 |
| **Employee** | The employees were well-dressed and appeared neat. | | 0.788 |
| | The employees were knowledgeable. | | 0.913 |
| | The employees were friendly. | | 0.909 |

| | | |
|---|---|---|
| | The employees were helpful. | 0.862 |
| **Price** | I get value for my money at this store | 0.873 |
| | I can purchase products for less at this store | 0.928 |
| | The Price at this store are fair | 0.899 |
| *** shows the first-order construct factor loading** | | |

Further, convergent and discriminant validity have been observed. In convergent validity, the CR and AVE should be equal or more than their cut-off level, 0.700 and 0.500, respectively. The square root of AVE should be higher than inter-construct correlations to satisfy the discriminant validity. Table 4.4 confirmed all the reliability and validity measures.

**Table 4.4:** Convergent and discriminant validity of the overall model

| | **CR** | **AVE** | **Store Communication** | **Employee** | **In-store Logistics** | **Customer Satisfaction** | **Loyalty** | **Store Environment** | **Merchandise** | **Perceived Price** |
|---|---|---|---|---|---|---|---|---|---|---|
| **Store Communication** | 0.904 | 0.759 | **0.871** | | | | | | | |
| **Employee** | 0.925 | 0.756 | 0.197 | **0.869** | | | | | | |
| **In-store Logistics** | 0.839 | 0.513 | 0.120 | 0.152 | **0.716** | | | | | |
| **Customer Satisfaction** | 0.938 | 0.835 | 0.367 | 0.336 | 0.299 | **0.914** | | | | |
| **Loyalty** | 0.926 | 0.863 | 0.198 | 0.162 | 0.178 | 0.429 | **0.929** | | | |
| **Store Environment** | 0.944 | 0.737 | 0.188 | 0.193 | 0.089 | 0.387 | 0.118 | **0.858** | | |
| **Merchandise** | 0.923 | 0.801 | 0.231 | 0.086 | 0.221 | 0.385 | 0.206 | 0.189 | **0.895** | |
| **Perceived Price** | 0.928 | 0.811 | 0.180 | 0.149 | 0.105 | 0.414 | 0.260 | 0.131 | 0.222 | **0.900** |

To improve the model fit, modification indices (MI) were used to identify the correlated items with high MI (more than 15) (Awang, 2012). The result shows that (e20, e21) and (e22, e23) have MI more than 15, which correlates between a pair the

measurement error (e20 ↔ e21 and e22 ↔ e23). The final CFA model with indices (figure 4.3) was acceptable.

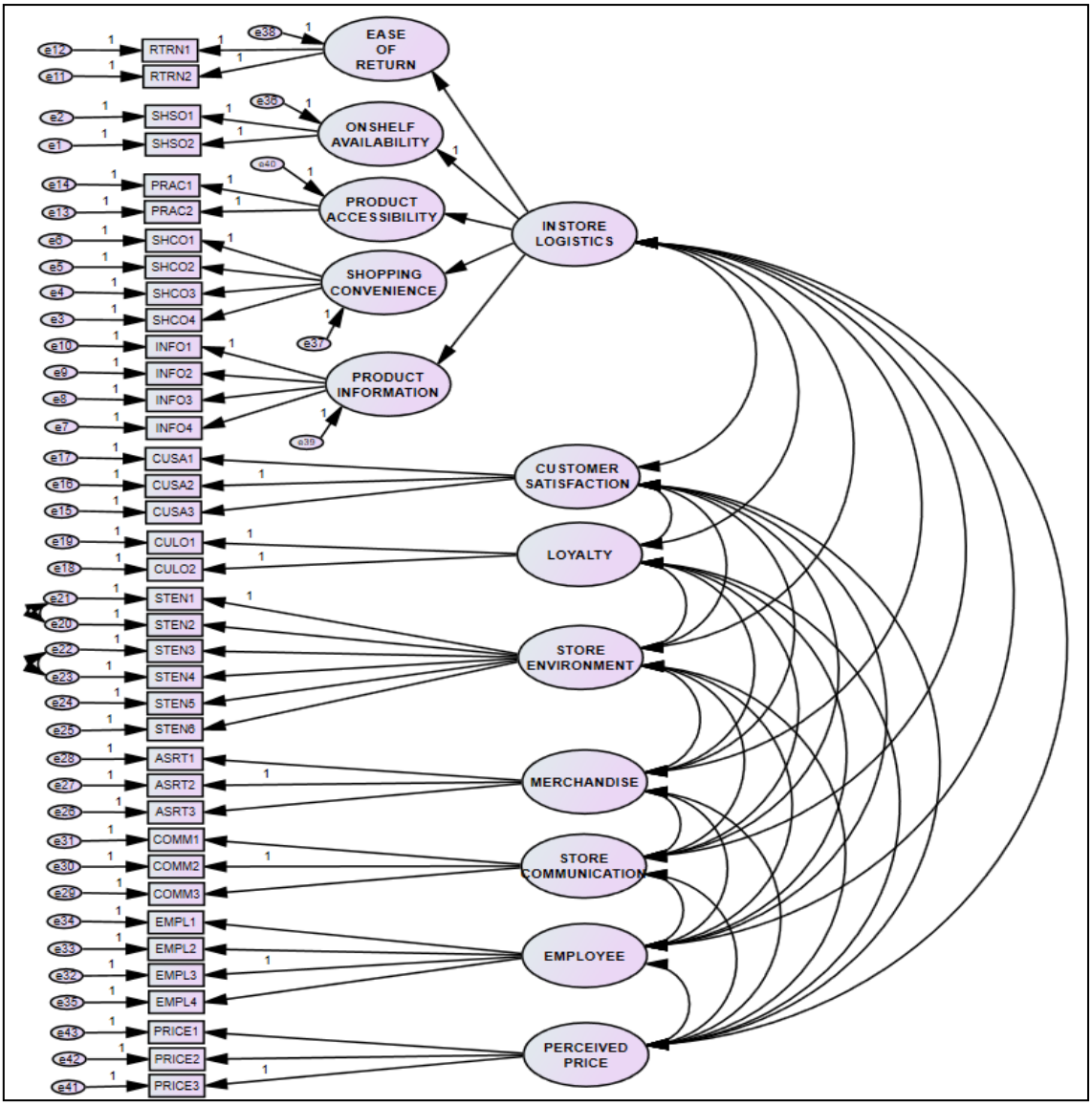


**Figure 4.3**: CFA of all constructs. CMIN/DF = 1.767, GFI = 0.919, AGFI = 0.905, CFI = 0.979, TLI = 0.976, NFI = 0.947, IFI = 0.979 and RMSEA = 0.033

### 4.3.2 Hypothesis testing

After confirmation of the overall model was valid and acceptable, structural equation modeling (SEM) was tested for the hypothesized relationships. Fit indices for the SEM are analyzed in terms of CMIN/df, CFI, TLI, GFI, IFI, AGFI, and RMSEA (Hair et al.,

2010). Figure 4.4 shows the SEM with fit indices, which shows a good fit between data and model.

The results indicate that ISL positively influences the customer satisfaction (β = 0.18, p = .000) in apparel retailing scenario. Based on a significant p-value and positive path coefficient (β), **H2** is accepted. The third hypothesis tested the effect of store environment on customer satisfaction. The result shows that the store environment positively influences customer satisfaction (β = 0.26, p = .000) in the apparel retailing scenario, **H3** is accepted. Similarly, findings confirm the acceptance of H4, H5, H6, H7, and H8. Table 4.5 summarises the parameter estimates and results of SEM analysis. Results also depicted that H6 and H3 have the strongest path coefficient, respectively.

**Table 4.5:** Structural equation model result

| Hypothesis | β | t-value | p-value | Result |
|---|---|---|---|---|
| **H2$^{+}$:** ISL → Customer satisfaction | 0.18 | **4.462** | *** | Supported |
| **H3$^{+}$:** Store Environment → Customer satisfaction | 0.26 | **6.928** | *** | Supported |
| **H4$^{+}$:** Store communication → Customer satisfaction | 0.21 | **5.478** | *** | Supported |
| **H5$^{+}$:** Merchandise Assortment → Customer satisfaction | 0.22 | **5.935** | *** | Supported |
| **H6$^{+}$:** Perceived Price → Customer satisfaction | 0.30 | **7.974** | *** | Supported |
| **H7$^{+}$:** Employee → Customer satisfaction | 0.20 | **5.446** | *** | Supported |
| **H8$^{+}$:** Customer satisfaction → Loyalty | 0.40 | **9.604** | *** | Supported |
| *****p < 0.001** | | | | |

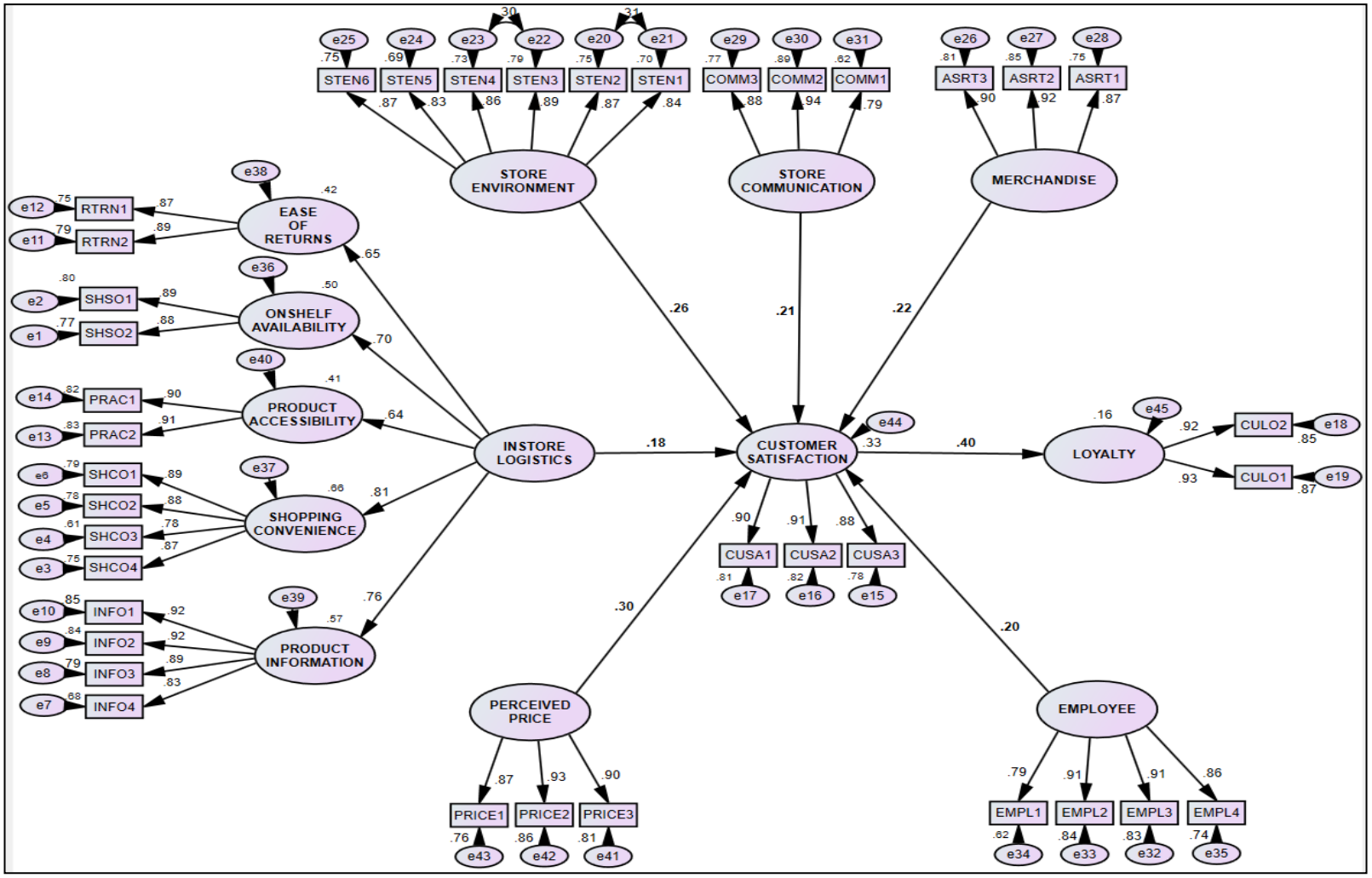


**Figure 4.4:** Structural equation model. CMIN/DF = 1.865, GFI = 0.903, AGFI = 0.890, CFI = 0.970, TLI = 0.968, NFI = 0.938, IFI = 0.970 and RMSEA = 0.038

## 4.4 Discussion

In the apparel retail sector, it is required to consider the customers' perception of the values offered. This study assesses the customers' responses to know the values that customers can perceive during the shopping. Further, the impact of customer satisfaction on loyalty has been checked. There are ten factors identified as the perceived value like On-shelf Availability, Ease of Return, Shopping Convenience, Product Accessibility, Product Information, Store Environment, merchandise, store communication, perceived Price, and employee attribute. Based on theory and model 5, factors are used as indicator/observed variables for In-store logistics like On-shelf Availability, Ease of Return, Shopping Convenience, Product Accessibility, Product Information. Therefore, a total of six factors were tested as perceived value like ISL, store Environment, merchandise, store communication, perceived Price, and employee. Customer satisfaction is used as an effect factor for customers' perceived value factors.

The result demonstrates that all six factors can satisfy the customers. The result also shows that the perceived price and store environment, from six factors, potentially affect customer satisfaction. The finding shows the positive effect of perceived Price on customer satisfaction from western and Indian metro cities. In further discussion, ISL with five indicators/observed latent factors also affects customer satisfaction. Bouzaabia et al. (2013) introduce the ISL as the fresh perspective in Belgian grocery-store. This factor mainly deals with the functions that the customers are not directly perceived, but the outcome in terms of five mentioned factors can make it a valuable perceived factor. The findings of this study also support the outcome of Bouzaabia et al. (2013).

## 4.5 Conclusion

This study is divided into two steps. In the first step, the hypothesis tests the five factors as indicator/observable variables for the in-store logistics. In the second step,

hypotheses were tested to check the impact of in-store logistics and other five factors on customer satisfaction. The findings show that all factors positively influence customer satisfaction. Further, the hypothesis is tested for the impact of customer satisfaction on loyalty. The result positively influences loyalty. Here, no hypothesizes have been rejected. The perceived price has the potential importance in tier II city and opposes the findings of Indian metro and western results.

In this study, in-store logistics was used as the second-order construct and being used first time in any Indian retailing context. The role of communication in the store cannot be ignored. Castaldo et al. (2016) argued that the merchandise assortment and transparent communication between firm and customer increase trust. Findings support the above argument. Hence, all six factors can be perceived by the customers. Therefore, policymakers should carefully consider these findings.