

CHAPTER 5

UNDERSTANDING THE INTERRELATIONSHIP OF FACTORS TO ACHIEVE THE RETAIL COMPETITIVE POSITION

In the previous chapter, ten factors have been identified that the customers can perceive during shopping. Further, these ten factors were used to determine the functional requirements of retail from the literature survey (chapter 2) and validated by experts. In this study, the background of the research and interrelationships among strengthening factors has been discussed. To find the interrelationship among factors interpretive structural model (ISM) is used. The steps involved in the ISM have been discussed in chapter 3.

5.1 Introduction

Concerning the number of employees and establishments for doing business, apparel retailing is the second largest sector after grocery retailing (Deloitte, 2014). Shoppers are at the center of focus in the current business scenario, and their pain is the primary driver (Bingham, 2004) of offerings. The demand of shoppers has changed now. Shoppers need value for their money and time. In this contrast, if retailers do something to provide value for their customers and customers perceive it as a value, it will add a competitive advantage for the retailer (Porter and Miller, 1985). Grewal et al. (2010, p. 29) stated that in the future, those retailers who pursue cost control and value differentiation simultaneously would succeed in the coming decade.

The apparel retail industry of India has the highest number of outlets in the world. Indian retail market is expected to grow from USD 672 billion in 2017 to USD 1.1 trillion in 2020 at the rate of 13 percent Compound Annual Growth Rate (CAGR) (IBEF report, 2017). By 2020, India will become the world's youngest population country, and this fragment drives retailers to innovate in product development, service

offerings, and delivery (Deloitte, 2014). Brand personality is also an important aspect that positively influences purchase intention. The more the brand personality, the higher will be the purchase intention (Phau and Lau, 2001).

Competition in the Indian retail sector is growing day by day due to globalization and the new Foreign Direct Investment (FDI) policy of the Government of India (GoI). Therefore, the competition is frightening and needs to rethink competitive strategy and provide more value to shoppers. Competitive positioning practices with some strategic supply chains can be a solution for survival and growth. Some criteria for the competitive advantage are as follows. First, it must be associated with a value-added attribute that is of relevance to the shopper segment. Second, the shopper must comprehend it. Third, the competitors must not easily copy it (Morschett et al., 2006). Fourth, with many foreign apparel players waiting to enter India through FDI, it has become a research destination (Venkatesh et al., 2015).

This study aims to investigate and analyze selective SFs to achieve competitiveness in the realm of research. This contextual relationship is established through ISM and followed by a Fuzzy Matriced' Impacts Cruoses Multiplication Applique a un Classement (FMICMAC) analysis to classify factors. Thus, our anticipated model is based on a perception that each factor is linked with numerous which either drive or depend on them. In this framework, the first step is to identify and analyze the SFs of the competitive positioning. The focus is to propose a methodology based on FMICMAC analysis to analyze and classify the SFs of competitive positioning of retail context. Therefore, that appropriate strategies could design to improve competitive retail position (CP).

Competitive positioning is at the center of market-focused management to choose the target market in which a firm will operate. Amonini et al. (2010) consider CP attributes of service firms by focusing on the utilization of relationships, service quality, brand reputation, and value. A combination of the RBV (internal factors) and the industrial organization view (external factors) is essential because of positioning decisions that require finding a profitable match between market requirements and the ability to satisfy them (Hooley and Greenley, 2005). Therefore, the following questions were posed to explore the knowledge:

RQ1. What are the strengthening factors in achieving a competitive position in the retail market?

RQ2. How are the strengthening factors interrelated with each other?

This study is an effort to answer the research questions mentioned above by designing an interpretive structural model. A brief description is given below, followed by an introduction to the Indian apparel retail store to choose the strengthening factors. Table 2.2 present the factors, their descriptions, and sources.

5.2 Interrelationship among strengthening factors

Here, ISM is used to establish the interrelationship among strengthening factors. The ISM and FMICMAC are discussed in section 3.2. The process starts with the identification and finalization of items. A total of 9 items for this issue have been identified that are discussed in chapter 2 under section 2.3. Further, to develop the structural self-interaction matrix (SSIM), the semi-structured questionnaire has presented before the experts from reputed retail stores in Varanasi city. A total of 25 experts have been contacted from both industry and academia with at least ten years or

more experience and requested to complete the questionnaire. A total of 36 questions were asked to experts with a semi-structured questionnaire.

5.2.1 Development of Structural Self-Interaction Model (SSIM)

Here, a total of nine factors and their resultant contextual relationships were shown in table 5.1. For the relationship, the majority count of the specific relationship between two factors has been taken from experts’ responses.

- SF1 influences the SF9 and the relationship denoted as ‘V’. It means the direction of factors is in one direction from SF1 to SF9 (SF1 → SF9).
- SF2 is influenced by the SF7 and the relationship denoted as ‘A’. It means the direction of factors is in one direction from SF7 to SF2 (SF7 → SF2).
- SF3 and SF7 influence each other, and the relationship denoted as ‘X’. It means the direction of factors is in both directions from SF3 to SF7 (SF3 ↔ SF7).
- SF1 and SF8 are not related to each other, and the relationship is denoted as ‘O’.

Table 5.1: Structural Self-Interaction Matrix (SSIM)

No.	Strengthening factors	9	8	7	6	5	4	3	2	1
1	SF1	V	O	A	O	A	X	A	O	
2	SF2	V	X	A	A	O	O	O		
3	SF3	V	V	X	O	V	V			
4	SF4	V	A	O	O	A				
5	SF5	V	V	O	O					
6	SF6	V	O	V						
7	SF7	V	V							
8	SF8	V								
9	SF9									

5.2.2 Developing the initial reachability matrix

Based on the rules discussed in section 3.2.2, the SSIM is converted into the initial reachability matrix shown in table 5.2.

Table 5.2: Initial reachability matrix

No.		1	2	3	4	5	6	7	8	9
1	SF1	1	0	0	1	0	0	0	0	1
2	SF2	0	1	0	0	0	0	0	1	1
3	SF3	1	0	1	1	1	0	1	1	1
4	SF4	1	0	0	1	0	0	0	0	1
5	SF5	1	0	0	1	1	0	0	1	1
6	SF6	0	1	0	0	0	1	1	0	1
7	SF7	1	1	1	0	0	0	1	1	1
8	SF8	0	1	0	1	0	0	0	1	1
9	SF9	0	0	0	0	0	0	0	0	1

5.2.3 Developing final reachability matrix

To get the final reachability matrix, some of the rules are given below, and the final reachability matrix has shown in table 5.3.

- Multiply the initial reachability matrix by itself to get the transitivity.
- After the multiplication, in the obtained matrix, the number for a particular relationship greater than 1 (> 1) will be converted into 1. Continue the multiplication process until transitivity achieve.
- Obtained transitivity matrix is the final reachability matrix with driving and dependence.

Table 5.3: Final reachability matrix

No.		1	2	3	4	5	6	7	8	9	Driver
1	SF1	1	0	0	1	0	0	0	0	1	3
2	SF2	1*	1	0	1*	0	0	0	1	1	5
3	SF3	1	1*	1	1	1	0	1	1	1	8
4	SF4	1	0	0	1	0	0	0	0	1	3
5	SF5	1	1*	0	1	1	0	0	1	1	6
6	SF6	1*	1	1*	1*	1*	1	1	1*	1	9
7	SF7	1	1	1	1*	1*	0	1	1	1	8
8	SF8	1*	1	0	1	0	0	0	1	1	5
9	SF9	0	0	0	0	0	0	0	0	1	1
Dependence		8	6	3	8	4	1	3	6	9	

5.2.4 Level Partitioning

According to Warfield (1974), the reachability and antecedent set are found from the final reachability matrix. The reachability set includes the SF itself and other SFs, which it may help achieve, whereas the antecedent set includes the SF itself and other SFs, which may help achieve it. For level, partitioning creates three columns as Reachability set, Antecedent set, and Intersection set. The intersection of reachability set and antecedent set formed the interaction set. If the membership of the reachability set is the same as the membership of the intersection set, it may assign level numbers. As in table 5.4, SF9 has the same reachability set and intersection set. Now, the customer value proposition is placed at level 1.

This top-level element will not reach any higher level from its level. Therefore, in the next step, remove the particular factor and number from reachability and antecedent sets and perform similar procedures as mentioned above until all partitioning has been completed.

Table 5.4: First iteration of level partitioning

SFs Code	Reachability set	Antecedent set	Intersection set	Level
SF1	1,4,9	1,2,3,4,5,6,7,8	1,4	I
SF2	1,2,4,8,9	2,3,5,6,7,8	2,8	
SF3	1,2,3,4,5,7,8,9	3,6,7	3,7	
SF4	1,4,9	1,2,3,4,5,6,7,8	1,4	
SF5	1,2,4,5,8,9	3,5,6,7	5	
SF6	1,2,3,4,5,6,7,8,9	6	6	
SF7	1,2,3,4,5,7,8,9	3,6,7	3,7	
SF8	1,2,4,8,9	2,3,5,6,7,8	2,8	
SF9	9	1,2,3,4,5,6,7,8,9	9	

Here, further partitioning has shown from table 5.5 to table 5.9.

Table 5.5: Second Iteration of level partitioning

SFs Code	Reachability set	Antecedent set	Intersection set	Level
SF1	1,4	1,2,3,4,5,6,7,8	1,4	II
SF2	1,2,4,8	2,3,5,6,7,8	2,8	
SF3	1,2,3,4,5,7,8	3,6,7	3,7	II
SF4	1,4	1,2,3,4,5,6,7,8	1,4	
SF5	1,2,4,5,8	3,5,6,7	5	
SF6	1,2,3,4,5,6,7,8	6	6	
SF7	1,2,3,4,5,7,8	3,6,7	3,7	
SF8	1,2,4,8	2,3,5,6,7,8	2,8	

Table 5.6: Third Iteration of level partitioning

SFs Code	Reachability set	Antecedent set	Intersection set	Level
SF2	2,8	2,3,5,6,7,8	2,8	III
SF3	2,3,5,7,8	3,6,7	3,7	
SF5	2,5,8	3,5,6,7	5	
SF6	2,3,5,6,7,8	6	6	III
SF7	2,3,5,7,8	3,6,7	3,7	
SF8	2,8	2,3,5,6,7,8	2,8	

Table 5.7: Fourth Iteration of level partitioning

SFs Code	Reachability set	Antecedent set	Intersection set	Level
SF3	3,5,7	3,6,7	3,7	IV
SF5	5	3,5,6,7	5	
SF6	3,5,6,7	6	6	
SF7	3,5,7	3,6,7	3,7	

Table 5.8: Fifth Iteration of level partitioning

SFs Code	Reachability set	Antecedent set	Intersection set	Level
SF3	3,7	3,6,7	3,7	V
SF6	3,6,7	6	6	
SF7	3,7	3,6,7	3,7	V

Table 5.9: Sixth Iteration of level partitioning

SFs Code	Reachability set	Antecedent set	Intersection set	Level
SF6	6	6	6	VI

5.2.5 Developing the canonical matrix

Arrange the final reachability matrix in order of their levels. The matrix found from this method is in lower triangular. This lower triangular matrix is a canonical matrix shown in Table 5.10.

Table 5.10: Canonical Matrix

Nos.	SFs	9	1	4	2	8	5	3	7	6
9	SF9	1	0	0	0	0	0	0	0	0
1	SF1	1	1	1	0	0	0	0	0	0
4	SF4	1	1	1	0	0	0	0	0	0
2	SF2	1	1	1	1	1	0	0	0	0
8	SF8	1	1	1	1	1	0	0	0	0
5	SF5	1	1	1	1	1	1	0	0	0
3	SF3	1	1	1	1	1	1	1	1	0
7	SF7	1	1	1	1	1	1	1	1	0
6	SF6	1	1	1	1	1	1	1	1	1

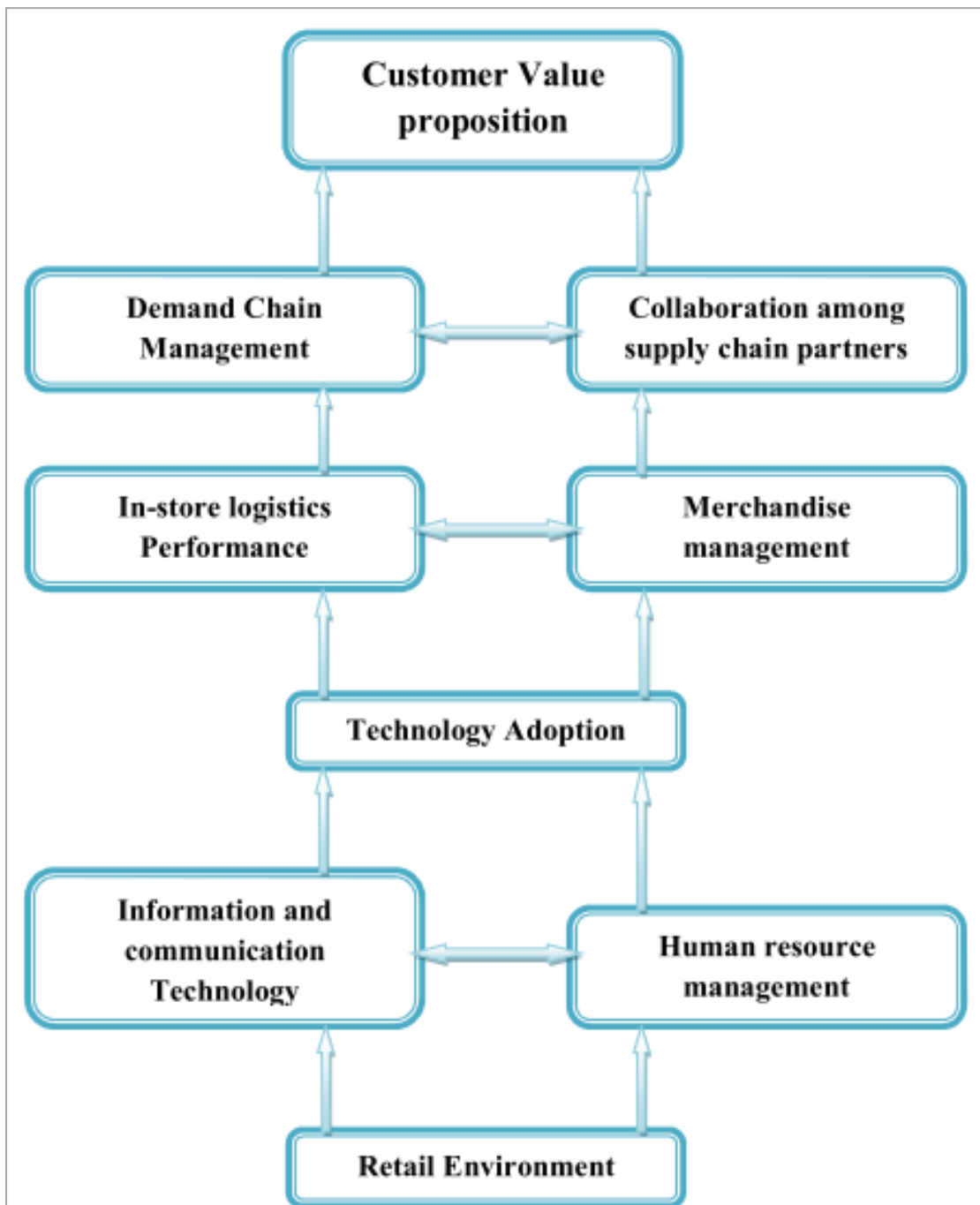


Figure 5.2: An Interpretive structural model for the SFs.

5.2.7 FMICMAC analysis

The FMICMAC analysis stands for Fuzzy Matrice d’Impacts Croises Multiplication Applique’ an Classment. The MICMAC classification is based on the driving and dependence power obtained from the final reachability matrix. In the final reachability matrix (table 5.3) relationship of SF6 with SF2, SF3 and SF7 are equal, and the value of

the relationship is '1'. To add strength and overcome the above issue, the FMICMAC is used. Steps involved in the FMICMAC are discussed in section 3.2.8.

In the first step, to obtain the DRM, the transitivity should ignore, and the diagonal numbers converted into zero. Table 5.11 shows the direct relationship matrix.

Table 5.11: Direct relationship matrix

No.	SFs	1	2	3	4	5	6	7	8	9
1	SF1	0	0	0	1	0	0	0	0	1
2	SF2	0	0	0	0	0	0	0	1	1
3	SF3	1	0	0	1	1	0	1	1	1
4	SF4	1	0	0	0	0	0	0	0	1
5	SF5	1	0	0	1	0	0	0	1	1
6	SF6	0	1	0	0	0	0	1	0	1
7	SF7	1	1	1	0	0	0	0	1	1
8	SF8	0	1	0	1	0	0	0	0	1
9	SF9	0	0	0	0	0	0	0	0	0

After getting the direct relationship matrix, the next step is to find the fuzzy direct relationship matrix. For this method, a fuzzy scale would use, as shown in table 5.12.

Table 5.12: Fuzzy reachability scale

Possibility of reachability	No	Very low	Low	Medium	High	Very high	Complete
Value	0	0.1	0.3	0.5	0.7	0.9	1

The same experts are contacted again and requested to assign the value from the fuzzy reachability scale for each relationship that showed the relationship with entries '1' in the direct relationship matrix and then take the majority value of all the entries. Table 11 shows the final direct relationship matrix. Now the obtained matrix is a fuzzy direct relationship matrix that is shown in table 5.13.

Table 5.13: Fuzzy Direct Relationship Matrix

No.	SFs	1	2	3	4	5	6	7	8	9
1	SF1	0	0	0	0.7	0	0	0	0	0.7
2	SF2	0	0	0	0	0	0	0	0.7	0.7
3	SF3	0.9	0	0	0.7	0.7	0	0.5	0.9	0.5
4	SF4	0.5	0	0	0	0	0	0	0	0.3
5	SF5	0.7	0	0	0.7	0	0	0	0.9	0.7
6	SF6	0	0.5	0	0	0	0	0.7	0	0.7
7	SF7	0.3	0.7	0.3	0	0	0	0	0.5	0.7
8	SF8	0	0.7	0	0.5	0	0	0	0	0.7
9	SF9	0	0	0	0	0	0	0	0	0

After getting the fuzzy direct relationship matrix, the next step is to find the stabilized matrix through fuzzy matrix multiplication using equation 3.1. Matrix multiplication will continue until the finding of the stabilized matrix. Stabilized fuzzy matrix is shown in table 5.14. Driving power is determined by summing the entries of possibilities of interactions in the rows. The dependence power is determined by summing the entries of possibilities of interactions in the columns.

Table 5.14: Converged Direct Relationship Matrix

No.		1	2	3	4	5	6	7	8	9	Driver
1	SF1	0.5	0	0	0	0	0	0	0	0.3	0.8
2	SF2	0	0.7	0	0.5	0	0	0	0	0.7	1.9
3	SF3	0.5	0.7	0.3	0.5	0	0	0	0.7	0.7	3.4
4	SF4	0	0	0	0.5	0	0	0	0	0.5	1
5	SF5	0.5	0.7	0	0.5	0	0	0	0	0.7	2.4
6	SF6	0.5	0.7	0.3	0.5	0	0	0	0.5	0.7	3.2
7	SF7	0.5	0.5	0	0.5	0.3	0	0.3	0.7	0.7	3.5
8	SF8	0.5	0	0	0	0	0	0	0.7	0.7	1.9
9	SF9	0	0	0	0	0	0	0	0	0	0
Dependence		3	3.3	0.6	3	0.3	0	0.3	2.6	5	

Duperrin and Godet (1973) introduced the MICMAC method. MICMAC enables one to confirm the importance of certain items and uncover certain items, indirectly

playing an important role and not recognized by direct classification. In the FMICMAC analysis, the factors are classified into autonomous, dependent, linkage, and driver.

5.3 Result and discussion

The first cluster is autonomous, with a weak driver and weak dependence power, and relatively disconnected from the system. Figure 5.3 shows that there are no factors under this cluster. It means the managers can consider any factor from the nine SFs for improvement and creating any unique offerings. The second cluster is dependent, which has weak driving power but strong dependence power. DCM (SF1), Collaboration among supply chain partners (SF4), and Customer value proposition (SF9) are encompassed in this cluster. These factors are at a high level in the ISM hierarchy (see figure 5.2). The managers should give high priority when tackling these factors. The third cluster is a linkage, which has strong driving power and strong dependence power. These factors affect other factors and get affected by other factors.

In-store logistics performance (SF2) and Merchandise management (SF8) are coming under this cluster. The fourth cluster is a driver or says independent with strong driver power and weak dependence power. Information and communication technology (SF3), Technology adoption (SF5), retail environment (SF6), and Human Resource Management (SF7) are considered in this cluster. The managements need more focus on these factors and treat them as the main factors of all SFs. These SFs help to achieve other SFs that are at a top-level in the ISM hierarchy.

Many works are done on leanness, agility, and other efficiency improvement techniques in the manufacturing sector. Still, it is also essential to attract and retain the customer in the retail industry by the product quality and the unique offerings that the customers recognize. For a retail store, competitive positioning strategy is responsible

for reducing cost and takes customer-oriented actions by which customer shows loyalty to store. No single factor would self-sufficient, so it is required to identify and classify the factors.

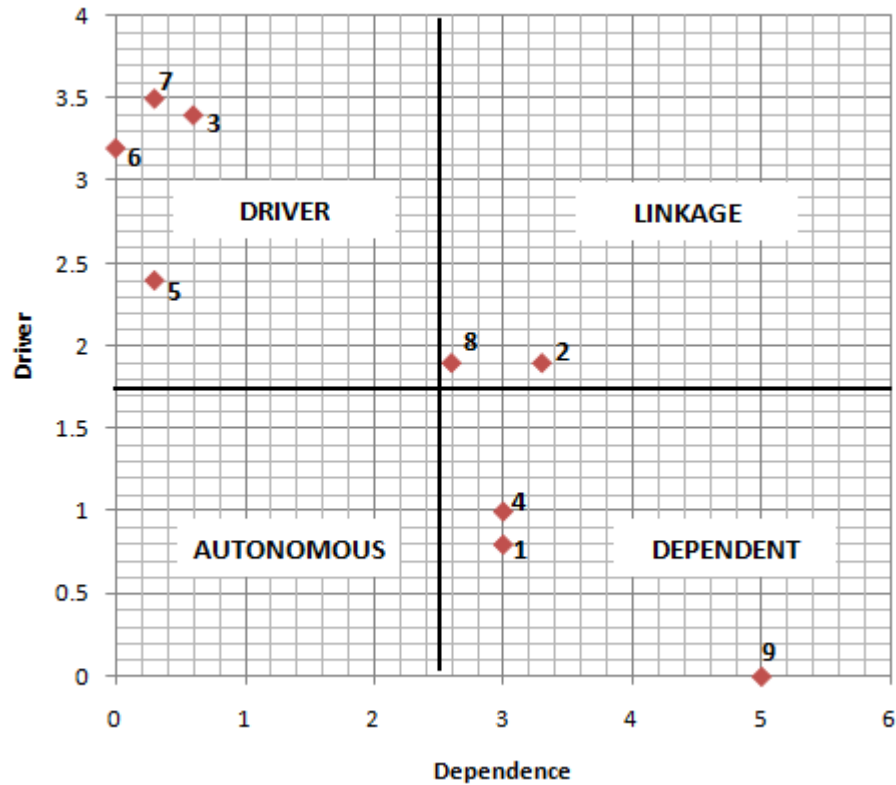


Figure 5.3: Classification of factors

In this research study, we have developed an integrated model using ISM and FMICMAC, which may help the retail managers.

5.4 Theoretical implications

- From this study, an attempt has been made to identify the major SFs for positioning a retail store in the market. Many research papers show many SFs, but no article has attempted to understand the interrelationship among SFs. Also, there is no study available on the classification of strengthening factors based on the fuzzy MICMAC method in best of author's knowledge. This study helps top management of retail

and practitioners understand the relationship framework; hence, this research is essential.

- A key finding of the research is that the retail environment (SF6) is the significant strengthening factor for any retail store. Three other factors have the highest driver power, namely: information and communication technology (SF3), technology adoption (SF5), and human resource management (SF7). Therefore, managers should focus on these factors and provide some unique offerings to add value to the customers.
- This ISM-based model of SFs can help the practitioners and academics during planning for a competitive positioning strategy. They could not randomly pick any of SFs, and the managers should thoroughly see the action of the hierarchy of Factors.
- The in-store logistics performance is used first time in the Indian context to the best of the author's knowledge. Another finding of the study is that in-store logistics performance (SF2) and merchandise management (SF8) are at the upper and right corner of figure 5.3. This corner is linkage and plays the middle-level role in which the factors are unstable and have the high driver and high dependent power. There is a need for careful study on the factors, and these factors have significantly higher driver power and affect the topmost factors.

5.5 Managerial implications

Jurevicius (2013) stated that combining internal and external factors could help achieve sustainable competitive advantage. There are few papers on the competitive positioning of retail stores and focused only on internal factors (skills and capabilities). Therefore, it is required to find both the factors internal (resource-based view) and external. ISM

method renovates unclear and unstructured variables related to an issue into visible, well-formatted models, which is valuable for many purposes.

The retail store management needs to understand the characteristics and interrelationship among factors for achieving a market position. With this study's help, top management of retail stores can better understand the interaction of factors (internal and external) and aware of the hierarchy of factors, and use them one by one as per organization requirements. A retailer can achieve a competitive position in the market if they successfully implement the developed hierarchy. Some key points of the clusters are as follows.

- In the first cluster (Autonomous), there are no SFs that fall under this cluster. This cluster has a weak driver and weak dependence and relatively disconnected from the system. Therefore, they do not have much influence on the system. Hence, the managers should not take lightly any of the factors.
- In the second cluster (Dependent), three factors come under this cluster: customer value proposition, DCM, and Collaboration among supply chain partners. They are at the top of the hierarchy (figure 5.2). They require all other SFs to maximize the effect of SFs on the implementation of competitive positioning strategy. Therefore, management should give high priority.
- In the third cluster (Linkage), two factors come under this cluster, like In-store logistics performance and merchandise management. Any change that occurs in these factors can affect other factors, and it can feedback itself. Therefore, these are unstable, and managers should carefully handle these factors.
- In the fourth cluster (Driver), Information and communication technology, Technology adoption, retail environment, and Human Resource Management are strong driver but weak dependent. Therefore, it is also known as an independent

cluster. Thus, management should focus more cautiously on these factors. These factors can help achieve those factors at the top of the ISM hierarchy model.

5.6 Conclusion

To formulate the strategies for competitive positioning, the managers and decision-makers need to understand the characteristics and interrelationship of strengthening factors. A hierarchy of strengthening factors, identified from ISM and FMICMAC, helps the managers and decision-makers to understand the focal area that needs attention to make the positioning strategy successful. In the present work, nine strengthening factors are identified based on the perceived values of the previous chapter and expert opinion. The interrelationship and importance of each of the strengthening factors are studied with the help of interpretive structural modeling.