



## A STUDY ON FACTORS DETERMINING THE SUPPLY CHAIN MANAGEMENT PRACTICES IN SUPERMARKETS IN TAMIL NADU

Mr. P. Senthilkumar\* Dr. R. Ganapathi\*\*

\*Ph.D. (Part-Time) Research Scholar, Department of Management Studies, PRIST University, Thanjavur, Tamil Nadu State.

\*\*Assistant Professor, Directorate of Distance Education, Alagappa University, Karaikudi, Tamil Nadu State.

### Abstract

A supermarket is a business enterprise that provides a service. It does not produce a physical product of its own in the usual sense. Instead, it adds value by acquiring existing products from remotely-located suppliers, assembling them in regional warehouses, distributing them to local stores, and finally selling the supplier's products to local customers. The uncertainty, business environment, value added process and business management are the factors determining the supply chain management practices in supermarkets. There is significant difference between profile of supermarkets and factors determining the supply chain management practices. Therefore, these factors should be considered while implementing supply chain management practices by supermarkets. The enhanced competitive advantage and increased performance of supermarkets could have improved the levels of SCM practices. The increased competitiveness of supermarkets may enable them to implement higher level of SCM practice due to the need to outperform its competitors.

**Key Words:** Exploratory Factor Analysis, Supermarkets, Supply Chain Management Practices.

### Introduction

A supermarket is a business enterprise that provides a service. It does not produce a physical product of its own in the usual sense. Instead, it adds value by acquiring existing products from remotely-located suppliers, assembling them in regional warehouses, distributing them to local stores, and finally selling the supplier's products to local customers. Unlike western countries where supermarkets are prominently visible, in our country this is lacking. The supermarkets largely concentrate on selling food related products and are considerably smaller in size. The supermarkets offer relatively less assortments but focus on specific product categories. They do not play the game on price rather use convenience and affordability as their salient features.

The modern supermarket model is an accelerator of structural change towards vertical coordination. The supermarkets have been at the forefront of applying the principles of 'lean retailing' and supply chain management (SCM) in the management of risk and defence of quality, consistency and assurance to customers, especially in support of own brands. Rather than trading through wholesale and arms-length markets, SCM is built around 'partnerships' with preferred suppliers in a rationalized supply base, using national and cross-border systems to coordinate procurement. The costs of operating SCM are outweighed by the benefits of reliability and continuity of supply, consistency, quality and scale, shorter lead times and lower prices. Customer expectations are more clearly fed along the food chain than with arms-length and bulk commodity markets. Many supermarket requirements relating to volume, consistency, quality and safety, as well as services (such as delivery of product on time to supermarket distribution centres, and compensation in the event of any problems) are difficult to meet for many small firms and producers, as they require capital, technology, specialization and organization. The result is the exclusion of those firms that are generalists, financially weak or immobile. The incompatibility of SCM and the capacity of smaller producers are starkly contrasted when supermarket chains decide to source some local products in response to customer demands (Venkata and Ravilochanan, 2014). Therefore, the present study is made to identify the factors determining the supply chain management practices in supermarkets in Tamil Nadu.

### Methodology

Among the different states in India, Tamil Nadu state has been purposively selected for the present study. There are 12 municipal corporations in Tamil Nadu state namely, Chennai, Madurai, Coimbatore, Tiruchirappalli, Tirunelveli, Erode, Salem, Thoothukkudi, Vellore, Tirupur, Thanjavur and Dindigul. These municipal corporations in Tamil Nadu have been selected purposively for the present study. The supermarkets from these municipal corporations have been selected by adopting multi stage random sampling technique. The data have been collected from 678 supermarkets through pre-tested and structured questionnaire. In order to study the profile of supermarkets, the frequency and percentage analysis have been worked out. In order to identify the factors determining the supply chain management practices in supermarkets, the exploratory factor analysis has been employed. In order to examine the difference between profile of supermarkets and factors determining the supply chain management practices, the Analysis of Variance (ANOVA) test has been applied.

## Results and Discussion

### Profile of Supermarkets

The profile of supermarkets was analyzed and the results are presented in Table-1. The results show that 71.24 per cent of supermarkets are operating as sole proprietorship, while, 28.76 per cent of supermarkets are operating in partnership. It is clear that 30.97 per cent of supermarkets have the investment of Rs.6 – 10 lakhs, 27.73 per cent of supermarkets have the investment of Rs.11 – 15 lakhs, 24.78 per cent of supermarkets have the investment of Rs.16 – 20 lakhs, 8.70 per cent of supermarkets have the investment of more than Rs.20 lakhs and 7.82 per cent of supermarkets have the investment of less than Rs.5 lakhs.

**Table-1. Profile of Supermarkets**

Profile	Number of Supermarkets	Percentage
<b>Nature of Ownership</b>		
Sole Proprietorship	483	71.24
Partnership	195	28.76
<b>Investment</b>		
Less than Rs.5 Lakhs	53	7.82
Rs.6 – 10 Lakhs	210	30.97
Rs.11 – 15 Lakhs	188	27.73
Rs.16 – 20 Lakhs	168	24.78
More than Rs.20 Lakhs	59	8.70
<b>Source of Finance</b>		
Nationalized Bank	299	44.10
Private Bank	66	9.73
Private Finance	89	13.13
Own	224	33.04
<b>Establishment</b>		
Own	201	29.65
Leased	255	37.61
Rented	222	32.74
<b>Business Experience</b>		
Less than 1 year	68	10.03
2 – 3 years	194	28.61
4 – 6 years	227	33.48
7 – 9 years	91	13.42
10 – 12 years	80	11.80
More than 12 years	18	2.66
<b>Employment</b>		
Less than 5	237	34.96
6 – 10	242	35.69
11 – 15	121	17.85
More than 15	78	11.50

The results indicate that the nationalized bank is the source of finance for 44.10 per cent of supermarkets, own money is the source of finance for 33.04 per cent of supermarkets, the private finance is the source of finance for 13.13 per cent of supermarkets and the private bank is the source of finance for 9.73 per cent of supermarkets. It is observed that 37.61 per cent of supermarkets are operating in leased establishments, 32.74 per cent of supermarkets are operating in rented establishments and 29.65 per cent of supermarkets are operating in owned establishments.

The results reveal that 33.48 per cent of supermarkets have business experience of 4 – 6 years, 28.61 per cent of supermarkets have business experience of 2 – 3 years, 13.42 per cent of supermarkets have business experience of 7 – 9 years, 11.80 per cent of supermarkets have business experience of 10 – 12 years, 10.03 per cent of supermarkets have business experience of less than 1 year and 2.66 per cent of supermarkets have business experience of more than 12 years. It is apparent that 35.69 per cent of supermarkets provide employment for 6 – 10 employees, 34.96 per cent of supermarkets provide employment for less than five employees, 17.85 per cent of supermarkets provide employment for 11 – 15 employees and 11.50 per cent of supermarkets provide employment for more than 15 employees.

### Factors Determining The Supply Chain Management Practices in Supermarkets

In order to identify the factors determining the supply chain management practices in supermarkets, the exploratory factor analysis has been employed. The principal component method of factor analysis has been carried out with Eigen values greater than one through varimax rotation and the results obtained through rotated component matrix are presented in Table-2. The results of Kaiser-Meyer-Olkin (KMO test) measure of sampling adequacy (KMO = 0.854) and Bartlett's test of Sphericity (Chi-square value = 0.0016; Significance = 0.000) indicates that the factor analysis method is appropriate.

There are four factors which are extracted accounting for a total of 76.05 per cent of variations on 20 variables. The each of the four factors contributes to 26.20 per cent, 20.12 per cent, 16.75 per cent and 12.98 per cent respectively.

**Table-2. Factors Determining the Supply Chain Management Practices in Supermarkets**

Factor	Item	Rotated Factor Loadings	Eigen Value	% of Variation	Factor Name
<b>I</b>	Unexpected changes of supplier	0.68	2.91	26.20	<b>Uncertainty</b>
	Unexpected changes of customers	0.69			
	Unexpected changes of competitor	0.70			
	Unexpected changes of technology	0.65			
	Government support	0.66			
	Political uncertainties	0.67			
<b>II</b>	Relationship with supplier	0.71	2.36	20.12	<b>Business Environment</b>
	Relationships with customers	0.66			
	On time delivery	0.70			
	Level of rivalry	0.68			
	Trust and commitment	0.65			
<b>III</b>	Quality expectations	0.67	1.24	16.75	<b>Value Added Process</b>
	Value addition	0.70			
	Material sourcing	0.65			
	Process strategy	0.68			
	Flexibility	0.63			
<b>IV</b>	Supplier performance	0.66	1.05	12.98	<b>Business Management</b>
	Process performance	0.63			
	Innovativeness	0.61			
	Effective communication	0.65			
	Cumulative % of Variation	-	-	76.05	-
	Cronbach's Alpha	-	-	-	0.87

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Rotation converged in 9 iterations.

Factor-I: From the results, it is inferred that out of 20 variables, six variables have their high, relatively tightly grouped factor loadings on factor-I.

This factor consists of:

- Unexpected changes of supplier (0.68)
- Unexpected changes of customers (0.69)
- Unexpected changes of competitor (0.70)
- Unexpected changes of technology (0.65)
- Government support (0.66)
- Political uncertainties (0.67)

Hence, this factor is named as “**Uncertainty**”.

Factor-II: is formed with:

- Relationship with supplier (0.71)
- Relationships with customers (0.66)
- On time delivery (0.70)
- Level of rivalry (0.68)
- Trust and commitment (0.65)

These variables are named as “**Business Environment**”.

Factor-III: This factor includes:

- Quality expectations (0.67)
- Value addition (0.70)
- Material sourcing (0.65)
- Process strategy (0.68)
- Flexibility (0.63)

These variables are named as “**Value Added Process**”.

Factor-IV: This factor is formed with:

- Supplier performance (0.66)
- Process performance (0.63)
- Innovativeness (0.61)
- Effective communication (0.65)

This factor is named as “**Business Management**”.

The Cronbach’s Alpha of the scale was 0.87 indicating that each measure demonstrated acceptable internal consistency. It is inferred that uncertainty, business environment, value added process and business management are the factors determining the supply chain management practices in supermarkets.

### **Profile of Supermarkets And Factors Determining The Supply Chain Management Practices**

The distribution of supermarkets on the basis of factors determining the supply chain management practices was analyzed and the results are presented in Table-3. The responses of supermarkets about factors determining the supply chain management practices has been classified into low level, moderate level and high level based on “Mean  $\pm$  Standard Deviation (SD)” criterion. The mean score is 90.12 and the SD is 5.61.

**Table-3. Distribution of Supermarkets on the Basis of Factors Determining the Supply Chain Management Practices**

Sl. No.	Level of Factors Determining the Supply Chain Management Practices	Number of Supermarkets	Percentage
1.	Low	125	18.44
2.	Moderate	357	52.65
3.	High	196	28.91
	<b>Total</b>	<b>678</b>	<b>100.00</b>

The results show that 52.65 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level followed by high level (28.91 per cent) and low level (18.44 per cent).

### **Nature Of Ownership And Factors Determining The Supply Chain Management Practices .**

The relationship between nature of ownership of supermarkets and factors determining the supply chain management practices was analyzed and the results are presented in Table-4.

**Table-4. Nature of Ownership and Factors Determining the Supply Chain Management Practices**

Sl. No.	Nature of Ownership	Level of Factors Determining the Supply Chain Management Practices			Total	F-Value	Sig.
		Low	Moderate	High			
1.	Sole Proprietorship	57(11.80)	268(55.49)	158(32.71)	<b>483(71.24)</b>	158.586	.003
2.	Partnership	68(34.87)	89(45.64)	38(19.49)	<b>195(28.76)</b>		
	<b>Total</b>	<b>125(18.44)</b>	<b>357(52.65)</b>	<b>196(28.91)</b>	<b>678(100.00)</b>	-	-

(The Figures in the parentheses are per cent to total)

Out of 483 sole proprietorships, 55.49 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 32.71 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level and 11.80 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 195 partnerships, 45.64 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 34.87 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level and 19.49 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level.

The F-value of 158.586 is significant at one per cent level indicating that there is a significant difference between nature of ownership of supermarkets and factors determining the supply chain management practices. Therefore, the null hypothesis of there is no significant difference between nature of ownership of supermarkets and factors determining the supply chain management practices are rejected.

### Investment and Factors Determining The Supply Chain Management Practices

The relationship between investment of supermarkets and factors determining the supply chain management practices was analyzed and the results are presented in Table-5.

**Table-5. Investment and Factors Determining the Supply Chain Management Practices**

Sl. No.	Investment	Level of Factors Determining the Supply Chain Management Practices			Total	F-Value	Sig.
		Low	Moderate	High			
1.	Less than Rs.5 Lakhs	2 (3.77)	15 (28.30)	36 (67.93)	<b>53</b> <b>(7.82)</b>	18.313	.000
2.	Rs.6 – 10 Lakhs	34 (16.19)	95 (45.24)	81 (38.57)	<b>210</b> <b>(30.97)</b>		
3.	Rs.11 – 15 Lakhs	47 (25.00)	108 (57.45)	33 (17.55)	<b>188</b> <b>(27.73)</b>		
4.	Rs.16 – 20 Lakhs	42 (25.00)	97 (57.74)	29 (17.26)	<b>168</b> <b>(24.78)</b>		
5.	More than Rs.20 Lakhs	0 (0.00)	42 (71.19)	17 (28.81)	<b>59</b> <b>(8.70)</b>		
	<b>Total</b>	<b>125</b> <b>(18.44)</b>	<b>357</b> <b>(52.65)</b>	<b>196</b> <b>(28.91)</b>	<b>678</b> <b>(100.00)</b>	-	-

(The Figures in the parentheses are per cent to total)

Out of 53 supermarkets has the investment of less than Rs.5 lakhs, 67.93 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level, 28.30 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level and 3.77 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 210 supermarkets has the investment of Rs.6 – 10 lakhs, 45.24 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 38.57 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level and 16.19 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 188 supermarkets has the investment of Rs.11 – 15 lakhs, 57.45 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 25.00 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level and 17.55 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level.

Out of 168 supermarkets has the investment of Rs.16 – 20 lakhs, 57.74 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 25.00 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level and 17.26 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level.

Out of 59 supermarkets has the investment of more than Rs.20 lakhs, 71.19 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level and 28.81 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level The F-value of 18.313 is significant at one per cent level indicating that there is a significant difference between investment of supermarkets and factors determining the supply chain management practices. Therefore, the null hypothesis of there is no significant difference between investment of supermarkets and factors determining the supply chain management practices are rejected.

### Source of Finance and Factors Determining The Supply Chain Management Practices

The relationship between source of finance of supermarkets and factors determining the supply chain management practices was analyzed and the results are presented in Table-6.

**Table-6. Source of Finance and Factors Determining the Supply Chain Management Practices**

Sl. No.	Source of Finance	Level of Factors Determining the Supply Chain Management Practices			Total	F-Value	Sig.
		Low	Moderate	High			
1.	Nationalized Bank	28 (9.36)	215 (71.91)	56 (18.73)	<b>299</b> <b>(44.10)</b>	7.482	.000
2.	Private Bank	29 (43.94)	1 (1.52)	36 (54.54)	<b>66</b> <b>(9.73)</b>		
3.	Private Finance	15 (16.85)	58 (65.17)	16 (17.98)	<b>89</b> <b>(13.13)</b>		
4.	Own	53 (23.66)	83 (37.05)	88 (39.29)	<b>224</b> <b>(33.04)</b>		
	<b>Total</b>	<b>125</b> <b>(18.44)</b>	<b>357</b> <b>(52.65)</b>	<b>196</b> <b>(28.91)</b>	<b>678</b> <b>(100.00)</b>	-	-

(The Figures in the parentheses are per cent to total)

Out of 299 supermarkets avail the finance from nationalized bank, 71.91 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 18.73 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level and 9.36 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 66 supermarkets avail the finance from private bank, 54.54 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level, 43.94 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level and 1.52 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level.

Out of 89 supermarkets avail the finance from private finance, 65.17 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 17.98 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level and 16.85 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 224 supermarkets has own source of finance, 39.29 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level, 37.05 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level and 23.66 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

The F-value of 7.482 is significant at one per cent level indicating that there is a significant difference between source of finance of supermarkets and factors determining the supply chain management practices. Therefore, the null hypothesis of there is no significant difference between source of finance of supermarkets and factors determining the supply chain management practices are rejected.

### Establishment and Factors Determining The Supply Chain Management Practices

The relationship between establishment of supermarkets and factors determining the supply chain management practices was analyzed and the results are presented in Table-7.

**Table-7. Establishment and Factors Determining the Supply Chain Management Practices**

Sl. No.	Establishment	Level of Factors Determining the Supply Chain Management Practices			Total	F-Value	Sig.
		Low	Moderate	High			
1.	Own	79(39.30)	78(38.81)	44(21.89)	<b>201(29.65)</b>	108.562	.000
2.	Leased	32(12.55)	156(61.18)	67(26.27)	<b>255(37.61)</b>		
3.	Rented	14(6.31)	123(55.40)	85(38.29)	<b>222(32.74)</b>		
	<b>Total</b>	<b>125(18.44)</b>	<b>357(52.65)</b>	<b>196(28.91)</b>	<b>678(100.00)</b>	-	-

(The Figures in the parentheses are per cent to total)

Out of 201 supermarkets operating in own establishments, 39.30 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level, 38.81 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level and 21.89 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level.

Out of 255 supermarkets operating in leased establishments, 61.18 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 26.27 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level and 12.55 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 222 supermarkets operating in rented establishments, 55.40 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 38.29 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level and 6.31 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

The F-value of 108.562 is significant at one per cent level indicating that there is a significant difference between establishment of supermarkets and factors determining the supply chain management practices. Therefore, the null hypothesis of there is no significant difference between establishment of supermarkets and factors determining the supply chain management practices are rejected.

#### **Business Experience and Factors Determining The Supply Chain Management Practices**

The relationship between business experience of supermarkets and factors determining the supply chain management practices was analyzed and the results are presented in Table-8.

**Table-8. Business Experience and Factors Determining the Supply Chain Management Practices**

Sl. No.	Business Experience	Level of Factors Determining the Supply Chain Management Practices			Total	F-Value	Sig.
		Low	Moderate	High			
1.	Less than 1 year	18(26.47)	38(55.88)	12(17.65)	<b>68(10.03)</b>	18.260	.000
2.	2 – 3 years	21(10.82)	113(58.25)	60(30.93)	<b>194(28.61)</b>		
3.	4 – 6 years	29(12.77)	125(55.07)	73(32.16)	<b>227(33.48)</b>		
4.	7 – 9 years	30(32.97)	38(41.76)	23(25.27)	<b>91(13.42)</b>		
5.	10 – 12 years	19(23.75)	37(46.25)	24(30.00)	<b>80(11.80)</b>		
6.	More than 12 years	8(44.45)	6(33.33)	4(22.22)	<b>18(2.66)</b>		
	<b>Total</b>	<b>125(18.44)</b>	<b>357(52.65)</b>	<b>196(28.91)</b>	<b>678(100.00)</b>	-	-

(The Figures in the parentheses are per cent to total)

Out of 68 supermarkets have business experience of less than 1 year, 55.88 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 26.47 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level and 17.65 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level.

Out of 194 supermarkets have business experience of 2 – 3 years, 58.25 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 30.93 per cent of supermarkets perceived that

the level of factors determining the supply chain management practices at high level and 10.82 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 227 supermarkets have business experience of 4 – 6 years, 55.07 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 32.16 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level and 12.77 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 91 supermarkets have business experience of 7 – 9 years, 41.76 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 32.97 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level and 25.27 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level.

Out of 80 supermarkets have business experience of 10 – 12 years, 46.25 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 30.00 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level and 22.50 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 18 supermarkets have business experience of more than 12 years, 44.45 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level, 33.33 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level and 22.22 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level.

The F-value of 18.260 is significant at one per cent level indicating that there is a significant difference between business experience of supermarkets and factors determining the supply chain management practices. Therefore, the null hypothesis of there is no significant difference between business experience of supermarkets and factors determining the supply chain management practices are rejected.

### Employment Generation and Factors Determining The Supply Chain Management Practices

The relationship between employment generation of supermarkets and factors determining the supply chain management practices was analyzed and the results are presented in Table-9.

**Table-9. Employment Generation and Factors Determining the Supply Chain Management Practices**

Sl. No.	Employment	Level of Factors Determining the Supply Chain Management Practices			Total	F-Value	Sig.
		Low	Moderate	High			
1.	Less than 5	8(3.38)	180(75.95)	49(20.67)	<b>237(34.96)</b>	228.039	.000
2.	6 – 10	19(7.85)	98(40.50)	125(51.65)	<b>242(35.69)</b>		
3.	11 – 15	72(59.50)	45(37.19)	4(3.31)	<b>121(17.85)</b>		
4.	More than 15	26(33.33)	34(43.59)	18(23.08)	<b>78(11.50)</b>		
	<b>Total</b>	<b>125(18.44)</b>	<b>357(52.65)</b>	<b>196(28.91)</b>	<b>678(100.00)</b>	-	-

(The Figures in the parentheses are per cent to total)

Out of 237 supermarkets provide the employment for less than five employees, 75.95 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 20.67 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level and 3.38 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 242 supermarkets provide the employment for 6 – 10 employees, 51.65 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level, 40.50 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level and 7.85 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level.

Out of 121 supermarkets provide the employment for 11 – 15 employees, 59.50 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level, 37.19 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level and 3.31 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level.





Out of 78 supermarkets provide the employment for more than 15 employees, 43.59 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level, 33.33 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at low level and 23.08 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at high level.

The F-value of 228.039 is significant at one per cent level indicating that there is a significant difference between employment generation of supermarkets and factors determining the supply chain management practices. Therefore, the null hypothesis of there is no significant difference between employment generation of supermarkets and factors determining the supply chain management practices are rejected.

### Conclusion

The uncertainty, business environment, value added process and business management are the factors determining the supply chain management practices in supermarkets. The results indicate that 52.65 per cent of supermarkets perceived that the level of factors determining the supply chain management practices at moderate level followed by high level (28.91 per cent) and low level (18.44 per cent). There is significant difference between profile of supermarkets and factors determining the supply chain management practices. Therefore, these factors should be considered while implementing supply chain management practices by supermarkets.

The supermarkets should segment their products and customers and developing tailored supply chain management practices for each segment. The supermarkets should develop collaboration between supplier and customer and these collaborations should be built on a foundation of common metrics, shared benefits and trust.

The enhanced competitive advantage and increased performance of supermarkets could have improved the levels of SCM practices. The increased competitiveness of supermarkets may enable them to implement higher level of SCM practice due to the need to outperform its competitors.

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