

Framework for Categorizing the Employees of Organized Fashion Retail Outlets of Textile and Clothing: An Exploratory Factor Analysis (EFA) Method

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Abstract—

This study categorizes the employees based on the skills and capabilities of the employees in the organized fashion retail outlets. 560 questionnaires were distributed to the employees working in 28 various fashion retail outlets viz. Multi brand and Exclusive brand outlets in and around Chennai. A total of 407 have responded and the response rate is 72.68%. The categories of employees had been ascertained based on the responses on 16 variables of primary skills and strategies. The reliability test has also been administered to 16 variables and the Cronbach alpha value works out to 0.8744 which indicates that the variables taken up for the study holds good. Rotated component matrix of Factor analysis had been employed in grouping the categories of employees. Four components thus extracted were named as “Proactive”, “Inquisitive”, “Cordial” and “Habitual”. Based on the category a framework has been designed.

Keywords— Retail industry; Fashion retail outlet; Future skills requirement; Textile and clothing industry; Retail outlet employees; MBO; EBO

I. INTRODUCTION

The retail sector development in India where mainly due to liberalization of the economy, upward mobility of middle class, shifting consumer demands, and expansion of ICTs [1]. Liberalization of the economy since the 1990s is definitely the single-most important factor leading to a shift towards a new organized form of retailing. Organized retailing is expected to bring about positive employment impact in terms of quantity (more jobs will be created) and quality (security of job, benefits etc. will be better). The emergence of organized retailing nature of employment has completely changed in retail. Managed by corporate retail chains, the employment status also matches other corporate sector employment. Hence, the skill expectations and performance levels are also much higher. This sector looks for skilled labour. The demands from the prospective employee are much higher.

In the organized sector retail, the overall expectation for skill is quite high as compared to its unorganized counterpart. The prospective employee is expected to be a ‘skilled labour’. Skills includes: ability to interact nicely with customers: Understand customer needs and tastes and help him/her select an appropriate product and product knowledge. The employers look for these skills (at least some of these) in the prospective employee. The labour is expected to learn their duties informally while on job after recruitment. In the organized sector retailing high importance is attached to adhering of certain levels of behavioural norms/etiquettes while dealing with the customers. Therefore a few primary basic skills were required for the employees of the organized fashion retail outlet of textile and clothing. These basic primary skills will enable to categories the employees.

II. REVIEW OF RELATED LITERATURE

Numerous variables are used to characterize objects [2]. Studies in which questionnaires are used that consist of a lot of questions (variables), and studies in which ability is tested via several subtests, like verbal skills tests, logical reasoning ability tests, etcetera [3]. Factor analysis is to reduce “the dimensionality of the original space and to give an interpretation to the new space, spanned by a reduced number of new dimensions which are supposed to underlie the old ones” [1], or to explain the variance in the observed variables in terms of underlying latent factors” [4]. Thus, factor analysis offers not only the possibility of gaining a clear view of the data, but also the possibility of using the output in subsequent analyses ([5], [1]).

Reviews investigating statistical practices in psychological, educational, marketing, and organizational research journals have shown that 12 to 34% of the exploratory data analyses use Common Factor Analysis and 40 to 67% use Principle Component Analysis ([6], [7], [8], [9], [10], [11], [12], [13]).

III. OBJECTIVES

The objectives of the study are:

- To identify the basic skills and strategies required for the employees of fashion retail outlet
- To classify the employees based on the Fashion Retail skills and strategies.
- To identify their demographic details.

IV. DATA ANALYSIS

A. Sample

A total of 560 questionnaires were distributed to the employees working in 28 various fashion retail outlets viz. Multi brand and Exclusive brand outlets in and around Chennai. A total of 407 have responded and the response rate is 72.68%. Out of 407, 271 (66.6%) belongs to MBO and 136 (33.4%) are EBO. Most of the respondents are in the age group of 21 – 30 years (67.6%) followed by 31-40 years (25.3%). 229 (56.3%) of the employees were having less than 5 years of experience and 101 (24.8%) having 6 – 10 years of experience.

B. Reliability Test

To ensure that the research produces reliable findings and results, a reliable tool would need to be employed. Moreover, the exploratory nature of this study necessitated the need to conduct some form of test to check whether items used in the measures are tapping into the same construct (variables) or not. Such test was accomplished through the use of factor analysis. Factor analysis is a data reduction technique used to reduce a large number of variables to a smaller set of underlying factors that summarize the essential information contained in the variables [14]. Two widely used methods in factor analysis are Principal Components and Principal Axis Factoring. However, this study adopted the former and applied it to all variables that employed multi-items measures.

Reliability is concerned with consistency of a variable. There are two identifiable aspects of this issue: external and internal reliability. Nowadays, the most common method of estimating internal reliability is Cronbachs alpha (α). The formula used is

$$\alpha = \frac{K}{K - 1} \left(1 - \frac{\sum_{i=1}^K \sigma_{Y_i}^2}{\sigma_x^2} \right)$$

A commonly accepted rules for describing internal consistency using Cronbachs alpha [15] $\alpha \geq 0.9$ (Excellent), $0.9 > \alpha \geq 0.8$ (Good), $0.8 > \alpha \geq 0.7$ (Acceptable), $0.7 > \alpha \geq 0.6$ (Questionable), $0.6 > \alpha \geq 0.5$ (Poor) and $0.5 > \alpha$ (Unacceptable). The concepts taken up for the study, variables and the Cronbach alpha value are shown in table 1.

Table I Reliability test

S. NO	DESCRIPTION	NO. OF VARIABLES	ALPHA VALUE
1	Strategies and skills required	16	0.8744

The reliability test using Cronbachs alpha (α) indicates that all the 16 variables thus taken up for the study were good since the Alpha value works out to 0.8744.

C. Strategies and Fashion Retail Skills

The strategies and skills required for the respondents have been analyzed based on the variables such as: Objective oriented approach; Motivated colleagues; Inspired subordinates; Rigid and strictness; Intellectual ability; Participative; Informal; Humorous; Composure; Empathy; Energy; Confidence; Creative; Action focused; Flexible; Humility. The opinion of the respondents were obtained in a five point scale such as ‘Strongly disagree’; ‘Disagree’; ‘No Opinion’; ‘Agree’; ‘Strongly agree’. The mean and standard deviation were calculated. The ranks were assigned based on mean and standard deviation. The variables, respondents’ opinion, mean, standard deviation and rank were provided in table 2.

Table II Strategies and skills

S.NO	VARIABLES	STRONGLY DISAGREE	DISAGREE	NO OPINION	AGREE	STRONGLY AGREE	MEAN	STD.	RANK
1	Objective oriented approach	8 2.00%	8 2.00%	66 16.20%	129 31.70%	196 48.20%	4.22	0.923	7
2	Motivated colleagues	2 0.50%	13 3.20%	62 15.20%	150 36.90%	180 44.20%	4.21	0.851	8
3	Inspired subordinates	12 2.90%	10 2.50%	81 19.90%	124 30.50%	180 44.20%	4.11	0.998	11
4	Rigid and strictness	40 9.80%	63 15.50%	90 22.10%	155 38.10%	59 14.50%	3.32	1.187	16
5	Intellectual ability	0 0.00%	15 3.70%	74 18.20%	164 40.30%	154 37.80%	4.12	0.833	10
6	Participative	14 3.40%	6 1.50%	57 14.00%	140 34.40%	190 46.70%	4.19	0.97	9
7	Informal	17 4.20%	19 4.70%	81 19.90%	146 35.90%	144 35.40%	3.94	1.056	14

8	Humorous	8 2.00%	10 2.50%	72 17.70%	172 42.30%	145 35.60%	4.07	0.897	13
9	Composure	6 1.50%	31 7.60%	105 25.80%	161 39.60%	104 25.60%	3.8	0.956	15
10	Empathy	6 1.50%	7 1.70%	76 18.70%	174 42.80%	144 35.40%	4.09	0.858	12
11	Energy	0 0.00%	11 2.70%	43 10.60%	169 41.50%	184 45.20%	4.29	0.763	4
12	Confidence	8 2.00%	2 0.50%	30 7.40%	93 22.90%	274 67.30%	4.50	0.815	1
13	Creative	6 1.50%	7 1.70%	44 10.80%	137 33.70%	213 52.30%	4.34	0.849	2
14	Action focused	4 1.00%	10 2.50%	44 10.80%	138 33.90%	211 51.80%	4.33	0.84	3
15	Flexible	9 2.20%	10 2.50%	40 9.80%	156 38.30%	192 47.20%	4.26	0.896	6
16	Humility	0 0.00%	9 2.20%	61 15.00%	153 37.60%	184 45.20%	4.26	0.791	5

It is seen from table 2 that more than 60% of the respondents opinion were between 'agree' and 'strongly agree'. The first preference indicated as 'confidence' by the respondents in strategies skills. It is followed by 'creative' and 'action focused'. Among the 16 variables, the variable 'rigid and strictness' was given least preference followed with 'composure' and 'informal'. The mean value for the above factors ranges between 3.81 and 4.50 which indicate that the value lies between 'Agree' and 'Strongly Agree'. The standard deviation value ranges between 0.791 and 1.056 which indicates that there is no significant deviation among the respondents on their opinion.

D. Exploratory Factor Analysis (EFA)

The responses thus received based on Strategies and skill has been analyzed through statistical procedures to determine the major skills required for employees. There are many factors that contribute for primary skills and strategies skill towards organized fashion retail outlets of textile and clothing. Few of the skills were technology know-how, the attitude, quality of technology, quality of system, trainings arranged by the institutes, awareness and ability to understand the customer, the role of business proficiency, role of tutor, positive response, support from organisations, participative nature, training, creativity and action focused.

To explore the relative factor a statistical procedure to determine the factors has been employed. This procedure is generally known as Exploratory Factor Analysis (EFA). Further multidimensional are treated with EFA to analyze their dimensions and variation extraction through each dimension. Exploratory factor analysis is a statistical method to investigate linearity of number of variables of interest to a smaller number of unobservable factors; parameters of linear functions are called factor loadings. Exploratory factor analysis consists of two stages. First one loading set is calculated that shows theoretical variances and covariance which fit the observed ones as closely as possible. A method generally used to determine a first set of loadings is called the principal component method. These loadings might not agree with the prior expectations, or might not have reasonable interpretation. so second stage consist of factor rotation to find the point of loadings that fit equally well the observed variances and covariance's and interpreted more easily. There are a number of methods in order to obtain first and rotated factor solutions, and each solution might give rise to a different interpretation. Study used Varimax rotation method that encourages the detection of factors each of which is related to few variables and on the other hand it discourages the detection of factors that are influencing all variables. There is substantial subjectivity in the interpretation of factors and determining the number of factors. Acceptable value for the factor loading is 0.50 (heir et al 1997). Table indicated maximum values of factors loadings are above 0.50.

Table III Rotated component matrix on strategies and skills

VARIABLE CODE	VARIABLES	Proactive	Inquisitive	Cordial	Habitual
13	Creative	.779			
11	Energy	.739			
12	Confidence	.721			
15	Flexible	.638			
14	Action focused	.594			
16	Humility	.566			
1	Objective oriented approach	.553			
5	Intellectual ability	.530			

3	Inspired subordinates		.827		
2	Motivated colleagues		.703		
6	Participative		.615		
7	Informal			.810	
10	Empathy			.638	
8	Humorous			.554	
4	Rigid and strictness				.886
9	Composure				.565
	Eigenvalues	3.772	2.431	2.346	1.244
	Cumulative % of Variance	23.576	38.769	53.428	61.206

*Extraction Method: Principal Component Analysis.

**Rotation Method: Varimax with Kaiser Normalization

a. Rotation converged in 6 iterations

As it can be seen from the table 3, Eigen values were calculated for 16 variables. The four factors have Eigen values greater than 1. “1” was the criterion for retention of a factor, which indicates that only the four factors are to be extracted. It can be seen that the variances were evenly distributed in the rotated sum of the squared loading (23.576%, 38.769%, 53.428% and 61.206% respectively), which shows that the sixteen factors are interpretable.

E. Using Varimax Rotation

Exploratory Factor Analysis converted the 16 items (questions) into 4 factors which further suggested names according to the nature of items included in the factors. Factor one has been named as proactive which has 8 items, second factor is inquisitive having 3 items ranging factor loading from 0.615 to 0.827, 3 items of factor 3 related to Cordial having loading range between 0.554 and 0.810, and factor four related to Habitual having 2 items and ranging from 0.565 to 0.886.

Further to test the reliability of instrument Cronbach Alpha has been calculated which prescribed acceptable value is 0.70 (Heir, 1997). Moreover relative index and rank of each factors has been calculated to find the most important factors that can affect the effectiveness of the Employees skill. Table 4 shows the rank of each factor along with Cronbach Alpha and mean.

Table IV Reliability for each factor

S.NO	FACTORS	NO. OF ITEMS	RELIABILITY	MEAN	RANK
1	Proactive	8	0.8683	4.2939	1
2	Inquisitive	3	0.7277	4.1704	2
3	Cordial	3	0.7457	4.0319	3
4	Habitual	2	0.7051	3.5601	4

Based on the Cronbach Alpha and mean value, table 4 reveals that the factor “proactive” placed in the top position followed with “inquisitive”, “cordial” and “habitual”. The mean value for the factor “proactive” is 4.2939.

Table V Nature of the respondents

S.NO	FACTORS	NO. OF RESPONDENTS	PERCENTAGE
1	Proactive	72	17.7
2	Inquisitive	99	24.3
3	Cordial	111	27.3
4	Habitual	125	30.7
Total		407	100.0

No. of respondents under each category has been identified and the same is shown in table 5. It can be seen from table 5 that 30.7% of the respondents belong to habitual in nature, 27.3% belongs to cordial and 24.3% were inquisitive in nature. Further analysis had been carried out based on the framework factors against the demographic details such as nature of the outlet, gender, age, marital status, nativity, years of experience and the residential status. The value alongwith the percentage are shown in table 6.

Table VI Demographic details of the nature

S.NO	DESCRIPTION	PROACTIVE	INQUISITIVE	CORDIAL	HABITUAL
Nature of Outlet					
1	MBO	37	53	85	96
		9.1%	13.0%	20.9%	23.6%
2	EBO	35	46	26	29
		8.6%	11.3%	6.4%	7.1%
Gender					
1	Male	59	79	67	91
		14.5%	19.4%	16.5%	22.4%
2	Female	13	20	44	34
		3.2%	4.9%	10.8%	8.4%
Age					
1	21-30	49	68	69	89
		12.0%	16.7%	17.0%	21.9%
2	31-40	19	27	25	32
		4.7%	6.6%	6.1%	7.9%
3	41-50	3	3	14	4
		0.7%	0.7%	3.4%	1.0%
4	50 and above	1	1	3	0
		0.2%	0.2%	0.7%	0%
Material Status					
1	Single	45	47	59	85
		11.1%	11.5%	14.5%	20.9%
2	Married	27	52	52	40
		6.6%	12.8%	12.8%	9.8%
Nativity					
1	Urban	37	47	37	56
		9.1%	11.5%	9.1%	13.8%
2	Semi-urban	17	14	13	17
		4.2%	3.4%	3.2%	4.2%
3	Rural	18	38	61	52
		4.4%	9.3%	15.0%	12.8%
Years of Experience					
1	Less than 5	41	46	71	71
		10.1%	11.3%	17.4%	17.4%
2	6 - 10	17	24	19	41
		4.2%	5.9%	4.7%	10.1%
3	11 - 15	7	20	9	7
		1.7%	4.9%	2.2%	1.7%
4	16 - 20	6	2	8	5
		1.5%	.5%	2.0%	1.2%
5	20 and above	1	7	4	1
		.2%	1.7%	1.0%	.2%
Residence					
1	Owned	27	24	34	51
		6.6%	5.9%	8.4%	12.5%
2	Rented	45	75	77	74
		11.1%	18.4%	18.9%	18.2%
3	Total	72	99	111	125
		17.7%	24.3%	27.3%	30.7%

Based on the analysis, a framework for the skills thus required in organized fashion retail outlets has been designed and the same is shown in figure. (Figure.1).

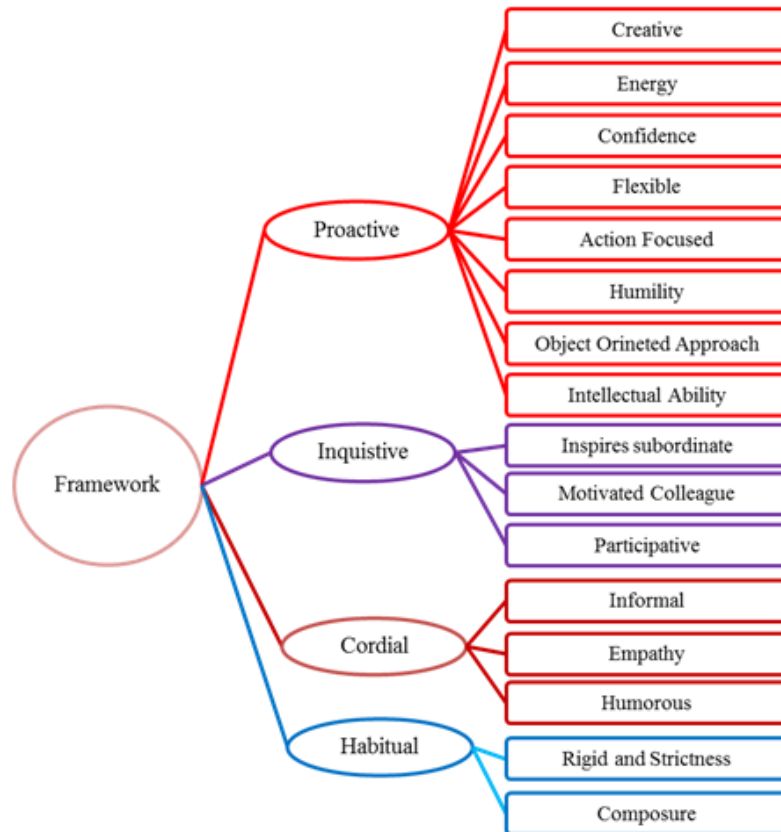


Fig 1 Structured equation model diagram for Framework

V. CONCLUSION

The consumers operations in this digital age has been revising as like that off “ship to home and return to store”; “order on line and pick up in store”; “same day deliveries and even providing any time anywhere access of the trend”. The current challenges are to provide effective services with the reduced cost in retail market especially in organized fashion retail outlets. The capabilities and performance is to a large extent built on skills refining the traditional retail skills such as customer service must build over ever growing customer demand. Instead of providing overall training in equipping their skill, in this paper the employees’ skill category has been identified and skill required for each category can be provided. Further this paper provides a frame work on nature of category of employee and the skill pertaining to the category. This will enable the organized fashion retail outlets of textile and clothing to select their employees according to their requirements.

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