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An Analytical study on the effectiveness of prominent E commerce food brands of Kerala

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1.1 Introduction

Many e commerce brands across the globe have established their roots in their areas of domain and expertise by now. E commerce has also become an integral part of the digital revolution in India. In Kerala, it has been deep-rooted like any other cities across the country and it remains so, without any shatter even at these withering times of Covid 2019. In fact, post covid seemingly has increased the sales of food brands and groceries in the e commerce platform. This study is an attempt to find out the effectiveness of food brands like FreshToHome, DailyFish etc which are India's first e-commerce ventures for fresh, chemical-free seafood and meat. It is an Internet based market place that will organize and connect fish and meat farmers to consumers directly. Perishable food has been one of the greatest products of demand in the Indian market. Studies shows that there has been a tremendous growth in Indian consuming non vegetarian goods.

Fig.1 E commerce Industry in India

Source: India Brand Equity Foundation report, June 2020



The figure 1 showing E commerce industry in India keeps reminding that several applications like FreshToHome, Daily fish etc and other e platforms which particularly belong to the food delivery chain like Swiggy and Zomato has shown a tremendous impact in the global economy post covid and in India as well.

1.2 Research Methodology

The research aims to analyse what makes an ecommerce non perishable food brand application selling non vegetarian products really effective in a market which mainly belongs to middle income group as in Kerala , The study has been done during the covid times and hence it is believed that the usage of such applications has been on an obvious increase. The following table shows the research design used for this study.

Table 1.1 Research Design

Sl. No.	Parameter	Description
1	Type of Research	Analytical Research
2	Nature of Research	Qualitative and Quantitative
3	Research Instrument	Structured Questionnaire
4	Sample Size	100
5	Sampling Method	Non-Probability Convenience Sampling
6	Sources of Data Collection	Primary and Secondary Sources
7	Primary Sources	Structured well drafted Questionnaire
8	Secondary Sources	Online Journals and Articles

As evident from Table 1.1, a well structured questionnaire has been used for the purpose of collecting data. The respondents are the middle income class of people in the state of Kerala. This set of people has been selected as respondents based on a simple convenience sampling method. The effectiveness of these non perishable food apps has been analysed in terms of various factors like affinity towards online shopping, genuineness of the product, health information on products, quality of the product, price, delivery aspects, offers and schemes available, advertising and technical knowledge for performing on the e commerce platform.

2.0 Analysis & Interpretation

2.1 The demographic profile of respondents is shown by means of a percentage analysis.

Table 1.2 Demographic Profile of Respondents

Particulars	Classifications	Frequency	Percentage
Gender	Male	44	44
	Female	56	56
Education	Graduate	55	55
	Post Graduate	16	16
	Under Graduate	29	29
Age Group	Below 25	19	19
	26-35	56	56
	36-50	25	25
	Total	100	100

The table 1.2 clearly shows that most of the respondents that were surveyed for the effectiveness of food delivery apps were females, most of them were under graduates and they belong to the age group of 26-35.

2.2 Factor analysis

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.446
Bartlett's Test of Sphericity	Approx. Chi-Square	50.911
	df	36
	Sig.	0.051

Table 1.3 shows Kaiser-Meyer-Olkin (KMO) Test which is a measure of how suited your data is for Factor Analysis. The test measures sampling adequacy for each variable in the model and for the complete model. The statistic is a measure of the proportion of variance among variables that might be common variance. The lower the proportion, the more suited your data is to Factor Analysis. KMO returns values between 0 and 1. A rule of thumb for interpreting the statistic: KMO values between 0.8 and 1 indicate the sampling is adequate and KMO values less than 0.6 indicate the sampling is not adequate. In our research, it is 0.446 which means it is not adequate.

Bartlett's Test of Sphericity compares an observed correlation matrix to the identity matrix. Essentially it checks to see if there is a certain redundancy between the variables that we can summarize with a few numbers of factors. The null hypothesis of the test is that the variables are orthogonal, i.e. not correlated.

	Initial	Extraction
Onlineshopping	1.000	0.689
Genuineness	1.000	0.545
Healthyproducts	1.000	0.550
Quality	1.000	0.853
Price	1.000	0.504
Delivery	1.000	0.583
Offers	1.000	0.747
Advertising	1.000	0.521
Technicalknowledge	1.000	0.710

Table 1.4 indicates the common variance shared by factors with given variables. Higher communality indicated that larger amount of the variance in the variable has been extracted by the factor solution. For better measurement of factor analysis communalities should be 0.4 or greater.

- Initial – With principal factor axis factoring, the initial values on the diagonal of the correlation matrix are determined by the squared multiple correlation of the variable with the other variables.
- Extraction – The values in this column indicate the proportion of each variable's variance that can be explained by the retained factors. Variables with high values are well represented in the common factor space, while variables with low values are not well represented.

Table 1.5 Total Variance Explained

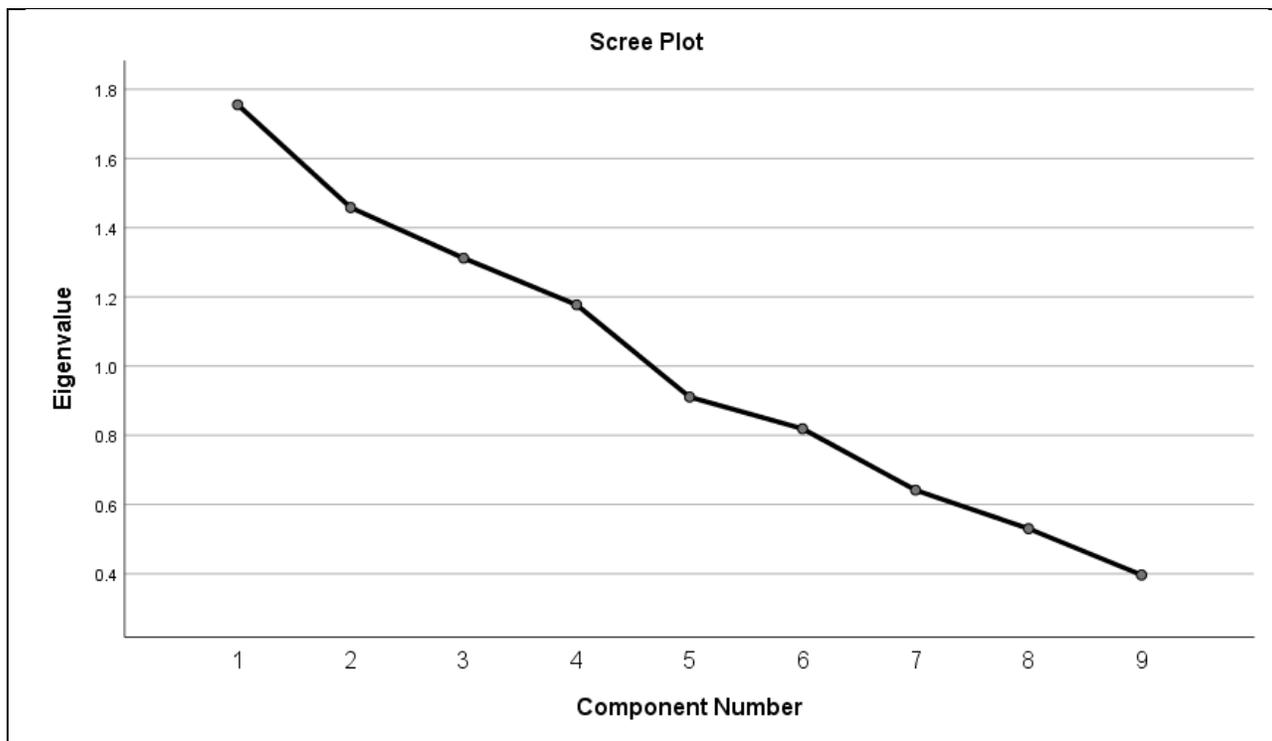
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	1.755	19.501	19.501	1.755	19.501	19.501	1.638	18.203	18.203
2	1.458	16.202	35.703	1.458	16.202	35.703	1.458	16.195	34.398
3	1.312	14.577	50.280	1.312	14.577	50.280	1.362	15.131	49.529
4	1.177	13.079	63.359	1.177	13.079	63.359	1.245	13.830	63.359
5	0.911	10.118	73.477						
6	0.819	9.100	82.577						
7	0.641	7.128	89.704						
8	0.530	5.891	95.596						
9	0.396	4.404	100.000						

In the components column in Table 1.5, there are 9 factors which we considered as the variables for the factor analysis. Only 4 factors can be retained because it has Eigen values of more than 1.

The column of percentage of variance contains the % of total variance accounted by each factor, in this research we have the values as 19.5, 16.2, 14.57 and 13.07

The column of cumulative percentage contains the cumulative percentage of variance accounted for by the current and all preceding factors. In this research, the fourth row shows a value of 63.359. This means that the first 4 factors together account for 63.359% of the total variance.

Figure 1.2 Scree Plot



- The Figure 2 - scree plot show the Eigen value against the corresponding factor number.
- It orders the Eigen values from largest to smallest. The ideal pattern is a steep curve, followed by a bend, and then a straight line.
- Since the 1st 4 factors have Eigen value more than 1, the plot line is bit steep which means that they account for maximum variables.
- Rest of the factors have quite less steep which means that the factor is accounting for smaller and smaller amounts of the total variance.

Table 1.6 Component Matrix

	Component			
	1	2	3	4
Advertising	0.694			
Technicalknowledge	0.669			-0.418
Genuineness	-0.625			
Healthyproducts		0.721		
Price	0.304	0.630		
Delivery		0.351	0.629	
Onlineshopping	0.489		-0.553	0.317
Offers	0.307	-0.527	0.548	
Quality			0.371	0.841

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- The table 1.6 contains the factor loadings, which represent both how the variables are weighted for each factor but also the correlation between the variables and the factor. Because these are correlations, possible values range from -1 to +1. On the format subcommand, we used the option blank 0.3, which tells SPSS not to print any of the correlations that are .3 or less.
- From the component 1, we can understand that, they are the set or group of people with common factors such as, advertising, technical knowledge and genuineness of the product. These are the people who have technical knowledge of using the FreshtoHome, but are not willing to purchase because of the advertisement of the brand or they doubt the genuinity of the product that will be delivered to them.
- From the component 2, we can understand that, they are a set of people which prefer healthy food. These people might have proper diet and eating habits, so they would like to have healthy food with no preservative-hormone (chemical) free food items. These people would like to have healthy food from FreshtoHome.
- From the component 3, we can understand that, they are a set of people which have concern over the delivery of the food products. This group of people needs the products when they require on their daily basis, they will never store it for the future. Therefore, E commerce food appshas to see that there is no delay in the delivery, if there is any delay in the delivery, the customers will not be satisfied. E commerce food appsmust also see that they won't charge high delivery charges, otherwise the customers will feel to buy from direct market than from the online market.
- From the component 4, we can understand that, they are a set of people which require quality products. These people are willing to pay more to get the best quality products. E commerce food appsneeds to see that they deliver the best products to these customers, any rotten or decayed products won't be accepted by this customers. E commerce food appsneeds to make sure that they deliver the best to their customers.

Table 1.7 Rotated Component Matrix

	Component			
	1	2	3	4
Technicalknowledge	0.809			
Advertising	0.701			
Healthyproducts		0.735		
Price		0.682		
Onlineshopping		0.352	-0.737	
Delivery			0.681	
Genuineness	-0.486		0.538	
Quality				0.876
Offers	0.356	-0.387		0.673

Table 1.7 contains the rotated component factor loadings, which represent both how the variables are weighted for each factor but also the correlation between the variables and the factor. Because these are correlations, possible values range from -1 to +1. On the format subcommand, we used the option blank 0.3, which tells SPSS not to print any of the correlations that are .3 or less.

Table 1.8 Component Transformation Matrix

Component	1	2	3	4
1	0.882	0.190	-0.393	0.176
2	-0.097	0.961	0.153	-0.209
3	0.254	0.011	0.811	0.527
4	-0.384	0.201	-0.405	0.805

The Rotated Component Matrix displays the loadings for each item on each rotated component, again clearly showing which items make up each component. And again, the Component Transformation Matrix displays the correlations among the components prior to and after rotation.

2.3 Other Findings

The other interesting findings based on percentage analysis of responses are:

- A big chunk of customers agree that they have a doubt regarding the genuinity/freshness of the product delivered to the customers.
- Whether the products are hormone-preservative (chemical) free compared to the products of direct market; is a matter that customers do not actually want to discuss and hence they remain neutral on this.
- 46.2% of the responses disagree to the price over the quality of the product.
- Most of the respondents feel late delivery is a concern to them since it is going to be the meal of the day
- 46.2% of the responses agree that offers and schemes can attract a lot of new customers.
- Most respondents say they agree to buy from online after seeing various online/offline advertisements.
- They also agree that technical knowledge and a user friendly platform is required to buy food products from online.

5.0 Conclusion

As most of the respondents disagree to buy food products from online, E commerce food apps needs to attract more and more customers into this sector. They need to improve their services so that they can retain their old customers and also attract the new customers. Since e-commerce companies are raising day by day, E commerce food apps needs to find solutions to attract the new customers by advertising, offers, quality of the product, etc. Secondly, the customers generally don't get to see their product from online, only when it is delivered, they can see their product. In such a situation people may have a doubt regarding the genuinity of the product. Compared to the direct market, the customers can view the product before buying and will only purchase if it is fresh. E commerce food apps needs to prove their geniuses to the customers before they make the purchase, so in future these customers will recommend to other people about E commerce food brands.

Thirdly, the present generation is very curious about their health and also their eating habits. In such a situation, E commerce food brands needs to make sure that their products delivered to the customers are hormone-preservative (chemical) free and these products which are delivered to the customers must be taken directly taken from the farmers. Also, online food companies have good and healthy products, E commerce food brands needs to make sure that the products available with them and delivered to the customers are fresh and not rotten or decayed, this will help them to get new customers in the near future. Most of the customers require quality products when they are purchasing from online or direct markets. E commerce food apps must see that they maintain their quality standards along with the price when they deliver the products to their customers.

Fourth and most importantly, all e-commerce companies have delivery charges in delivering the goods or products to the customers. From our research we understood that, in spite of delivery charges, late delivery is also a concern to the customers. Customers can get their product easily as well as when required from the direct

market, but not in the case of online market. E commerce food apps must see that they deliver their goods as soon as possible to the customers. Most customers are also interested in buying the products when there are offers, coupons and vouchers. It is important that E commerce food apps provide offers to the new customers and also during the seasonal times, so that they can increase their sales. When the sales increase it can boost up the brand value. Advertising plays a huge role for the online companies. Since most of the respondents are willing to buy the products after seeing their advertisements, E commerce food apps has to focus more on advertising to increase their sales. They need to think and plan well the targeting of the customers. They need to make sure that there advertising that is online and offline reaches to the customers of all age categories.

E commerce food apps also has to make sure that there application is simple and easy to use; it must have an easy access. All the payment methods and data's must be secure. Customers must not have any doubt or insecurity while using the applications. All the pictures and images must be perfect and satisfactory to the customer

Therefore it is concluded that customers do consider the quality, price, genuineness, delivery, etc. buying from online market rather from the direct market. E commerce food apps needs to work more or focus on such factors to increase their sales and have a good brand value among the customers. To get the new customers, E commerce food apps has to make sure that they get offers and schemes. Their existing customers should have good opinion about the service from them and they should feel to recommend to others about E Commerce food brands. Even if there are any complaints from the customers, they need to sort it out as soon as possible, so that it does not affect the brand value.

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