Consumer Perception Towards Ready To Eat Products of Cooperatives - A Case Study of Markfed

Parneet Kaur* and Manish Kumar**

* School of Management Studies, Punjabi University, Patiala

** School of Management Studies, Punjabi University, Patiala

Abstract

Changing lifestyles have influenced majority of people to consume products comes under ready to eat (RTE) category. There is a rising demand for ready to eat (RTE) products due to busy lifestyles and rise in incomes as more and more people are migrating from Tier 1 and Tier 2 cities to metropolitan cities like, bachelors studying and doing jobs there and due to rise in number of working women. Markfed's ready to eat products are sustainable from a very long period in the markets of Punjab but market penetration of their RTE products is quite less in comparison to major market players like ITC, MTR etc. which are producing various products in RTE segment. Need arises to collect feedback regarding consumer perception towards RTE products of Markfed. Principal Component Analysis is applied to analyze consumer perception. Findings of the study revealed that consumers perceive 'Usage Benefits' as most important factor while consuming RTE products of Markfed. Effective advertising and promotional strategies with respect to demographic variables of customer base of RTE products must be designed in order to make increase in consumption pattern towards RTE products of Markfed for the newer markets of Punjab as well as all over India.

Key Words

Cooperative, Markfed, RTE (Ready To Eat), Consumer Perception

INTRODUCTION

Markfed, Punjab State Co-op Supply & Marketing Federation Ltd., got registered in 1954. It has emerged as a very solid and stable organization committed

to the service of the farmer community of the State of Punjab. It is also awarded with National Productivity Awards in various fields like co-operative marketing activities, food processing, cattle feed production etc., to name a few. As that sole purpose of its establishment is to take care of needs of cooperative societies and their members. In the beginning, its main business was procurement of farmers' produce e.g. wheat, rice etc. & disbursement of fertilizer at subsidized rates to them. Over a period of time, Markfed has shifted towards entrepreneurship and established various industrial units. Among them, Markfed's Canneries is undertaken for this study. It was established in year 1972 in the Doaba region of Punjab State of northern India in Jalandhar. Currently, this industrial unit of Markfed is producing various ready to eat canned food products like canned Rajmah, Alu Methi, Alu Palak, Sarson Ka Saag, Daal Makhni etc.

Ready to eat food segment consists of products which signifies that only heat (and maybe water) is required to bring it to a state where one can eat it. (https://www.quora.com/What-is-the-difference-between-ready-to-eat-and-ready-to-cook-foods). There is a rising demand for ready to eat (RTE) products due busier lifestyles and rise in income as more and more are migrating from Tier 1 and Tier 2 cities to metropolitan cities like bachelors studying and doing jobs there and due to rise in number of working women. All these factors are contributing towards increase in awareness regarding RTE products which are ultimately contributing towards prosperous growth for this segment in the coming years in retail markets of India (http://www.researchandmarkets.com/reports/2909502/india-ready-to-eat-food-market-forecast-and#rela0).

Perception is the process of recognizing and interpreting sensory stimuli. Perception regarding any product or especially any type of product can be judged on the basis of both extrinsic and intrinsic cues because it is mentioned that attributes which signal quality have been categorized into two cues : intrinsic and extrinsic cues **(Olson, 1977; Olson and Jacoby, 1972).** Intrinsic cues involve the physical composition of the product and it got noticeable only when someone consumes the product **(Olson, 1977; Olson and Jacoby, 1972).** For example, in case of orange juices intrinsic cues to evaluate quality would be pulpiness, degree of sweetness, flavour, colour etc.

REVIEW OF LITERATURE

Badrie N. *et al.* (2005) examined consumer awareness and perception to food safety hazards, food handling and safety practices at homes in Trinidad, West Indies. Respondents were interviewed face to face with structured

questionnaire. Results revealed that Escherichia coli and Salmonella were most known of microbial types and they differ in their perception towards most feared food hazard. Outdoor eating places like restaurants were considered as most likely place for occurrence of food poisoning. H. Sebastein *et al.* (2005) explored the importance of own checking through HACCP system is discussed with reference to finish food industry. This survey analyzed attitude of quality managers of four categories of firms: (meat, dairy, fish and bakery) towards food hygiene management strategies in their companies. Results revealed that positive attitude and also reflect they felt most difficult part while implementing these strategies like HACCP or own checking plan (OCP) were choosing the critical control points, committing the firm's entire workforce and organizing the documentation of monitoring results. M. Jevsnik *et al.* (2007) examined Slovenian consumer awareness towards food safety from point of purchase to home or actual place of consumption. A cross- sectional survey is conducted in different parts of Slovenia. Results revealed gaps in food safety knowledge and practices during purchase, transportation and storage of food and handling practices at home. Jin Shaosheng *et al.* (2008) attempted to compare firms adopting HACCP certification with firms without HACCP certification in the Chinese food industry. A survey is conducted on managers of these firms and compares them on the basis of different themes like manager's knowledge. Results revealed that firms those don't adopt HACCP system are recognized as small and medium-sized (SMES), suppliers of domestic market which have not implemented other quality management systems and manager having low education level and limited perception towards HACCP system. Kazmi S. Q. (2012) in this study recognized those factors which effect consumer perception about pasta products and also determined factors which stimulate buying decision of consumers towards pasta. Awareness and availability were chosen as main variables which effect consumer buying pattern. Quota sampling technique was used to collect data from a sample of 30 housewives living in Karachi city of Pakistan. Results of the study explored that product awareness was the factor which has a great impact on popularity and usage of any product especially the food item and also awareness about cooking method of particular product may affect the popularity of food product. Lavanya M. S. *et al.* (2012) explored consumer's awareness and perception towards quality-certified products. Primary data was collected from 120 respondents through pre-tested interview schedule. In this study, consumers' awareness, preference of certified products and their perception on pricing was analyzed with reference to

three products: Ghee, Vegetable Oils and Spices. Results concluded that 85% people were aware about Agmark certification and most of the high income group people were about Agmark products and they were also satisfied with the products especially ghee. M. Vijayabaskar and Sundaram N. (2012) explored purchasing attitude towards ready to eat/cook products by health-conscious consumers in southern India. Health-conscious consumers are all literate and accessing various sources before taking any decision. Results reveal that consumers' deciding factors for purchasing ready to eat/cook food were based on ingredients, brand awareness, packaging etc. This study concluded that consumers were taking decisions on the various technological sources and were all highly aware of the food and its impact on health. Nirmalraj R. J. T. (2012) revealed the factors that affected consumer, buying behavior of "Ready to Eat Foods in India" A descriptive study was conducted to attain an insight into customers' perception about the ready to eat foods. Findings of this study suggest that Indian companies must focus on creating awareness towards ready to eat food products so that future growth chances can be maximized for ready to eat manufacturers.

SIGNIFICANCE OF THE STUDY

Markfed, being cooperative in nature, has limited resources to spend on various marketing & promotional activities like advertisement of products through different modes, setting up of more sale-centres etc. Due to this Markfed is forced to minimize their expenditure on advertisements as well as various other promotional activities for their products. (as per verbal information available from top management of Markfed). Perception of existing customers of Markfed's ready to eat products (RTE) may be helpful in analyzing these products' extrinsic as well as intrinsic attributes which could be helpful in designing effective marketing and production strategies for the RTE products of Markfed. And implementation of these strategies may prove in increasing sales as well as market penetration of these products.

OBJECTIVES

Following objectives have been framed to analyze perception of consumers towards RTE products of Markfed:
1. To analyze difference in perception across different areas.
2. To analyze difference in perception across different age groups.
3. To analyze difference in perception across different income groups.

HYPOTHESES

In order to achieve above following hypothesis are framed :

H_0 : There is no significant difference in perception towards ready to eat products across different areas of respondents.

H_{02} : There is no significant difference in perception towards ready to eat products across different age groups of respondents.

H_{03} : There is no significant difference in perception towards ready to eat products across different income groups of respondents.

RESEARCH METHODOLOGY

Perception analysis of consumers of RTE products of Markfed depends on the analysis of views obtained from the consumers through designed questionnaire. The study is based on primary data generated by using a well-structured, non-disguised and pre-tested questionnaire. The questionnaire is based on 5-point Likert Scale. The scale comprises seventeen statements that is designed by consulting relevant literature. The respondents are asked to rate all these objectives from 1 to 5 scales. The mean levels of significance given by respondents to different constructs are assessed after assigning following weights : Strongly Agree = 5, Agree = 4, Neutral = 3, Disagree = 2, Strongly Disagree = 1. Primary data based this study is conducted in the five districts of Punjab state of northern India. Respondents for data collection through questionnaire are covered from Sangrur, Patiala, Ludhiana, Jalandhar and Amritsar districts.

Sale-centers located at district offices of Markfed were chosen as a place to collect data. Sample-size of 300 respondents is selected through proportionate stratified random technique which has segregated respondents into five strata having 60 respondents in each district. Principal Factor Analysis is implied on collected data in order to analyze it. There were five Strata in this study which were represented by five districts of Punjab State. In each district, there is one DM (District Manager) Office occupied by one sale-centre which possessed and sells ready to eat products of Markfed. Customers visited at the sale centre of each DM office (total five) were considered as respondents for the study.

Data is analyzed through Multivariate Statistical Techniques like ANOVA and Factor Analysis. Exploratory factor analysis is used to identify the underlying constructs and investigate relationships among the variables. The reliability of scale is tested by using Cronbach Alpha Test. Value for cronbach alpha comes out to be 0.840 for the analysis of consumer perception towards RTE products of

Markfed. The measure of reliability ranges from 0 to 1 and values lying in between 0.70 to 0.95 are considered as highly desirable values. So, value obtained for this scale is above 0.70 could be considered as reliable scale for further analysis.

RESULTS OF FACTOR ANALYSIS

Factor analysis is used to identify the latent or underlying factors from an array of seemingly important variables. In order to analyse the consumer perception towards RTE products, factor analysis test is conducted on response of the respondents, the Table below shows two tests which indicate the suitability of our data for factor analysis. The Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy is a statistic which indicates the proportion of variance in our variables which is common variance, i.e. which might be caused by underlying factors. High values (close to 1.0) generally indicate that a factor analysis may be useful with the given data. If the value is less than .50, the results of the factor analysis probably won't be very useful. In our case, the KMO measure is .764 thus confirming the appropriateness Factor Analysis (Table 1).

Bartlett's Test of Sphericity indicates whether a given correlation matrix is an identity matrix, which would indicate that your variables are unrelated. The significance level gives the result of the test. Very small values (less than .05) indicate that there are probably significant relationships among given variables. A value higher than about .10 or so may indicate that your data are not suitable for factor analysis. In our case, the significance level has a very small value i.e. .000 which is less than .05 thus suggesting that the variables are highly correlated.

Table 1

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.764
Bartlett's Test of Sphericity	2.231E3
Sig. Value	.000

Source : Compiled from SPSS Software

Analysis : Table 2

Table 2 also gives Eigen values, variance explained, and cumulative variance explained for our factor solution. The "% of Variance" gives the percent of variance accounted for by each specific factor or component, relative to the total variance in all the variables. The "Cumulative %" gives the percent of variance accounted for by all factors or components up to and including the current one.

Table 2

Factor Analysis of Consumer Perception : Principal Component Approach

	Rotated Component Matrix				
	Component				Commu-nalities
	1	2	3	4	
Easily available at my shopping place			0.593		0.660
Available in various packagings			0.716		0.590
RTE Products' quantity is good enough to serve			0.823		0.719
Quality better than RTE products of other brands			0.724		0.606
Possessed food quality certifications like HACCP		0.807			0.724
Lesser price than other brands' RTE products		0.686			0.674
Quantity of product generates value with price		0.788			0.728
Products have safe packaging		0.727			0.710
Information regarding ingredients is present on products' packaging		0.563			0.672
Products have information on expiry date, weight/volume on packaging	0.770				0.685
Usage instructions are given on products' packaging	0.615				0.478
RTE products are helpful in saving cooking time	0.785				0.676
RTE food is tasty to consume	0.739				0.622
Products are liked by family members	0.542				0.481
Purchase due to friends' and relatives' feedback				0.637	0.575
Purchase due to low price of product				0.742	0.638
RTE products are hygienic to use	0.541				0.512
Eigen Value	5.112	2.598	1.647	1.394	
% of Variance	30.070	15.279	9.688	8.202	
Cumulative Variance	30.070	45.349	55.038	63.240	

Source : Compiled with SPSS Software

Table 3
Category of Factors

Factor Number	Category	Statements	Coefficient
F1	Quality	Products have information on expiry date, weight/volume on packaging	0.770
		Usage instructions are given on products' packaging	0.615
		RTE products are helpful in saving cooking time	0.785
		RTE food is tasty to consume	0.739
		Products are liked by family members	0.542
		RTE products are hygienic to use	0.541
F2	Competitive Advantage	Possessed food quality certifications like HACCP	0.807
		Lesser price than other brands' RTE products	0.686
		Quantity of product generates value with price	0.788
		Products have safe packaging	0.727
		Information regarding ingredients is present on products' packaging	0.563
F3	Available Services	Easily available at my shopping place	0.593
		Available in various packagings	0.716
		RTE Products' quantity is good enough to serve	0.823
		Quality better than RTE products of other brands	0.724
F4	Purchase Influence	Purchase due to friends' and relatives' feedback	0.637
		Purchase due to low price of product	0.742

Source : Compiled with SPSS Software

In a good factor analysis, there are a few factors that explain a lot of the variance and the rest of the factors explain relatively small amounts of variance. Therefore, we can leave all those remaining factors which account for a very small amount of cumulative variance. In our case, we have taken four components or factors as Eigen value for them is more than one (1) and account for a cumulative variance of 63.20%. This Table displays rotated component matrix and reports the factor loadings for each variable on the components or factors after rotation and loading criteria more than 0.40. Each number represents the partial correlation between the

item and the rotated factor. These correlations can help us to formulate an interpretation of the factors or components.

Analysis : Table 3

Table 3 exhibits the variables with the highest factor loadings in identified names. Thus, the above results indicate that there are four underlying factors which reflect the perceptions of consumers towards ready to eat (RTE) products of Markfed under brand Sohna. Consumer perceived that *Usage Benefits* received upon consumption of RTE products is the most important factor for purchasing the RTE products of Marked. *Competitive Advantage* is also judged important factor followed by *Available Services* and *Purchase Influence*.

CONSUMER PERCEPTION ANALYSIS

Consumer perception is analyzed by regressing factor scores against demographic variables of respondents such as gender, age and income. Factor scores are saved for four factors representing perception of respondents towards ready to eat products are: Usage benefits; competitive advantage; available services and purchase influence.

CONSUMER PERCEPTION ANALYSIS ACROSS RESPONDENTS BELONGS TO DIFFERENT AREAS

H_{01} : There is no significant difference in perception towards ready to eat products across respondents belongs to different areas.

District-wise Analysis of Perception

Results obtained from Table 4 reflected that perception towards all four factors constructed for RTE products like usage benefits, competitive advantage, available services and purchase influence differs significantly among consumers residing in districts of Sangrur, Patiala, Ludhiana, Amritsar and Jalandhar. Hence null hypothesis (H_0) is rejected because of values of (f-ratios = 8.892, 6.162, 2.628 & 9.268 respectively) are significant at 5% level (i.e. p value is less than 0.05).

Table 4

Consumer Perception Analysis Across Different Areas of Respondents

Factors		Sum of Squares	df	Mean Square	F	Sig.
Usage Benefits	Between Groups	32.170	4	8.042	8.892	.000*
	Within Groups	266.830	295	.905		
	Total	299.000	299			
Competitive Advantage	Between Groups	23.056	4	5.764	6.162	.000*
	Within Groups	275.944	295	.935		
	Total	299.000	299			
Available Services	Between Groups	10.287	4	2.572	2.628	.035*
	Within Groups	288.713	295	.979		
	Total	299.000	299			
Purchase Influence	Between Groups	33.378	4	8.345	9.268	.000*
	Within Groups	265.622	295	.900		
	Total	299.000	299			

Source : Compiled from SPSS Software; *Significant at 5% Level

CONSUMER PERCEPTION ANALYSIS ACROSS DIFFERENT AGE GROUPS OF RESPONDENTS

H_{03} :   There is no significant difference in perception towards ready to eat products across different age groups of respondents.

Age-wise Analysis of Perception

Table 5 explored that perception towards only one factor i.e. available services differs significantly among different age groups of respondents. On the other hand, there are no significant differences in perception of consumers of different age groups towards factors of usage benefits, competitive advantage and purchase influence of RTE products of Markfed. Hence null hypothesis is rejected for only factor of available services at (f-ratio = 5.581) and is accepted for other factors.

Table 5

Consumer Perception Analysis Across Different Age Groups of Respondents

Factors		Sum of Squares	df	Mean Square	F	Sig.
Usage Benefits	Between Groups	4.715	4	1.179	1.182	.319
	Within Groups	294.285	295	.998		
	Total	299.000	299			
Competitive Advantage	Between Groups	3.350	4	.837	.836	.503
	Within Groups	295.650	295	1.002		
	Total	299.000	299			
Available Services	Between Groups	21.035	4	5.259	5.581	.000*
	Within Groups	277.965	295	.942		
	Total	299.000	299			
Purchase Influence	Between Groups	4.947	4	1.237	1.241	.294
	Within Groups	294.053	295	.997		
	Total	299.000	299			

Source : Compiled from SPSS Software; *Significant at 5% Level

CONSUMER PERCEPTION ANALYSIS ACROSS DIFFERENT INCOME GROUPS OF RESPONDENTS

H_{06} : There is no significant difference in perception towards ready to eat products across different income groups of respondents.

Income-wise Analysis of Perception

Table 9 revealed that perception towards all factors of RTE products like usage benefits, competitive advantage, available services and purchase influence differs significantly among consumers of different income groups like > 10000, 10000-20000, 20000-30000 and 30000-40000. Hence null hypothesis (H_0) is rejected because of values of (f- ratios = 3.088, 5.184, 6.288 & 5.028 respectively) are significant at 5% level (i.e. p value is less than 0.05).

Table 6

Consumer Perception Across Different Income Groups of Respondents

Factors		Sum of Squares	df	Mean Square	F	Sig.
Usage Benefits	Between Groups	12.016	4	3.004	3.088	.016*
	Within Groups	286.984	295	.973		
	Total	299.000	299			
Competitive Advantage	Between Groups	19.637	4	4.909	5.184	.000*
	Within Groups	279.363	295	.947		
	Total	299.000	299			
Available Services	Between Groups	23.489	4	5.872	6.288	.000*
	Within Groups	275.511	295	.934		
	Total	299.000	299			
Purchase Influence	Between Groups	19.082	4	4.771	5.028	.001*
	Within Groups	279.918	295	.949		
	Total	299.000	299			

Source : Compiled from SPSS Software; *Significant at 5% Level

FINDINGS

Following findings have been revealed during the analysis of the study :

- Factor analysis using *Principal Component Method is applied* and four dimensions/factors (*Usage Benefits, Competitive Advantage, Available Services and Purchase Influence*) are extracted with the percentage of cumulative variance i.e. 63.20% and different factor loadings which shows correlation among these four factors.

- The factor analysis has revealed that consumers perceive *Usage Benefits* (30.07%) the most important factor reflecting consumption importance of RTE products of Markfed under brand 'Sohna' followed by *Competitive Advantage (15.28%), Available Services* (9.69%) *and Purchase Intentions* (8.20%).

- Results of the study revealed that perception of consumers of RTE products towards four factors (i.e. Usage Benefits, Competitive Advantage, Available Service and Purchase Influence) which are

reflecting consumption importance of these products vary significantly across the districts of respondents, so, promotional strategies for the RTE products of Markfed must be designed by keeping in view the lifestyle, eating patterns, disposable income etc. of the consumers living in districts of Jalandhar, Sangrur, Ludhiana, Patiala and Amritsar.

- Consumer perception towards all factors except available services of RTE products of Markfed is same among consumers of different age groups.
- Various perception factors of RTE products of Markfed have shown significant variation along different income categories of respondents.

LIMITATION

The major limitation of the study is that sample size of population is restricted to population of only five districts which may violate the results of the study. Respondents are consumers of the RTE products of Markfed only and it is not so easy to trace the respondents because of very limited availability of these products i.e. only at sales counters located at DM offices of each district.

SUGGESTIONS

- RTE products of Markfed under brand 'Sohna' are good enough to satisfy the eating needs of consumers falling across different age groups. Hence people of all age groups can be targeted with similar type of promotional strategy which reflects major aspects of product's benefits.
- Male and female consumers vary in their perception. Females, being known as house makers are more concerned about product quality and advantages. So, females must be educated more about competitive advantages of RTE products of Markfed like safe packaging, value generation with respect to price, quality certifications possessed by product. It will increase awareness of females towards these products and may influence them to purchase more and more RTE products of brand Sohna of Markfed.
- Income of consumers also influences significantly perception of consumers across all four factors. Hence income-wise classification of customers may prove helpful for Markfed to increase the sales of their RTE products.

References

Badrie, N.; Gobin, A.; Dookeran, S.; and Duncan, R. (2006), Consumer Awareness and Perception to Food Safety Hazards in Trinidad, West Indies, *Food Control*, Vol. 17 (5), 370-377.

H. Sebastian *et al.* (2005), "Attitude Towards Own-checking and HACCP Plans Among Finish Food Industry Employees", *Food Control,* Vol. 17, pp. 402-407, Science Direct.

International Cooperative Alliance, "Definition of Cooperatives", http://ica.coop/en/what-co-op/co-operative-identity-values-principles accessed on 06/03/15.

Jevšnik, M.; Hlebec, V.; and Raspor, P. (2008), Consumers' Awareness of Food Safety from Shopping to Eating, *Food Control*, Vol. 19 (8), 737-745.

Kazmi, S. Q. (2012), "Consumer Perception and Buying Decisions (The Pasta Study)"**,** *International Journal of Advancements in Research & Technology,* Vol. 1 (6).

Lavanya, M. S. *et al.* (2012), **"**Consumer Awareness and Preference towards Quality Certified Products", *International Journal of Research in IT & Management,* Vol. 2 (5).

M., Vijayabaskar; and Sundaram, N. (2012), "A Study on Purchasing Attitude Towards Ready-to-eat/cook Products by Health Conscious Consumers in Southern India with respect to Tier-I cities, *IJPSS,* Vol. 2 (4).

Nirmalraj, R. J. T. (2012), A Study on "Ready to Eat", *Food Industry International Journal in Multidisciplinary and Academic Research (SSIJMAR),* Vol. 3 (3).

Official website of Markfed Punjab, "http://www.markfedpunjab.com/markfedpunjab/" accessed on 22/1/16.

Olson, J. C.; and Jacoby, J. (1972), Cue Utilization in the Quality Perception Process, In *SV-proceedings of the Third Annual Conference of the Association for Consumer Research.*

Olson, J. C. (1978), Inferential Belief Formation in the Cue Utilization Process, *NA - Advances in Consumer Research,* Volume 05.

Shaosheng, Jin; Jiehong Zhou; and Juntao Ye (2008), "Adoption of HACCP System in the Chinese Food Industry : A Comparative Analysis", *Science Direct, Food Control,* Vol.19, 823, 828, Elsevier.

Websites

www.markfedpunjab.com/markfedpunjab/index.php accessed on 04/03/15.

www.pblabour.gov.in accessed on 06/07/15.

www.referenceforbusiness.com accessed on 08/11/15.

Books

Field, A. (2014), "Discovering Statistics using IBM SPSS Statistics", 4th edition, Sage Publications, New Delhi.

Gaur, A. S.; and Gaur, S. S. (2006), "Statistical Methods for Practice and Research – A Guide to Data Analysis Using SPSS", Response Book Sage Publications, New Delhi.

C. R., Fay (1908), "Cooperation at Home and Abroad", pp. 5, P.S. King and Sons London.

H., Calvert (1933), "The Law and Principles of Cooperation", pp. 14, Tahcker, Spick and Co., Calcutta.

Madan, G. R. (2007), "Co-operative Movement in India – A Critical Appraisal", 2nd Edition, Ch – 1, pp 3, Para 1st, Mittal Publication New Delhi.