ELK
Asia Pacific Journals

www.elkjournals.com

**MARKET POTENTIAL AND GROWTH OPPORTUNITIES FOR BAKERY PRODUCTS:
AN EMPIRICAL ANALYSIS WITH SPECIAL REFERENCE TO PAI BREAD, BELGAUM**

<p>MR. AJAY JAMNANI Assistant Professor Bharatesh Education Trust's Global Business School, Belgaum Email: jamnani.ajay@gmail.com</p>	<p>MR. PRASAD DADDIKAR Assistant Professor Bharatesh Education Trust's Global Business School, Belgaum Email: prasadpq@gmail.com</p>
--	---

ABSTRACT

Bakery products are perishable in nature as it cannot be inventoried for a long period. Though technological advancements are evident everywhere, people still prefer fresh bread and other products from the bakery. However the biggest challenge for any bakery firm is to push the product into the market before its expiry date. This paper analyses the growth opportunities for Pai Foods with special reference to Pai bread. It also makes an effort to find the potential market available for Pai Foods to approach. An empirical exploratory research design was used and a survey technique was employed in selected places viz., Belgaum City, Sankeshwar, Nippani, Chikkodi and Bailhongal for data collection through a structured questionnaire. In all samples of 360 retailers were identified and accordingly primary data was collected through a structured questionnaire having closed ended questions & measurement scales. Data analysis was carried out using MS-Excel & SPSS package and the hypothesis testing has been done using the one sample t-test. The results reveal that customers have favored the Pai bread and are also willing to prefer it over its competitors. Further, Pai foods have been committed to quality products and providing better services to customers.

Keywords: Bakery, Potential, Customers, Hypothesis, Statistics

JEL Classification: M0, M1, M3, Y1

Introduction

Bakery is a traditional activity and occupies an important place in food processing industry. Despite the advent of fully automatic and semi-automatic bread as well as biscuit making plants, a sizeable

number of people still prefer fresh bread and other products from bakery. With growing population and preference for fresh and ready-to-eat convenient food items, demand for bakery products is steadily increasing. There are many bakery

products like bread and its different variants, biscuits, cakes & pastries, cookies, puffs etc. having ready market round the year. Each product enjoys a very wide range in terms of size or weight, flavours, end-use and so on.

The studies conducted so far in food processing industry have been primarily focused on the perceptions of consumers towards bakery products, buying behavior, competitiveness, advertising impact etc. No study has been undertaken to understand and analyze the views of retailers in bakery supply chain for better reach of products to customers. Therefore, the present study attempts to analyze the retailer's perception towards product selection & its retail selling. The paper has been segregated in different sections like review of literature, research methodology, data analysis, hypothesis testing and suitable conclusion.

Review of Literature

Peterson & Robert A. (1977) in their research paper conducted an experiment to assess the effect of color, price, and nutritional information on consumers' perceptions of bread. Dependent variables were perceived nutritional value of bread

and percentage of whole wheat contained in bread. The major finding was that color of bread was relatively more important in determining consumer perceptions than were price and nutritional information combined

Natasa Renko, Ivona Sustic & Ruzica Butigan (2011) have used five competitive forces model by Michael E. Porter, in this paper aiming at designing marketing strategies and the development of sustainable competitive advantage for one Croatian small bakery concerning the influence of five forces on the whole industry. The findings enabled to determine the attraction of bakery industry, to measure perceptions of the strength of competitive forces, to identify the existing competitive advantages and key success factors in the further development. Although Porter's model is a simplified picture of the forces that affect the profitability of certain industries, results of this paper have undoubtedly shown that Porter's model is valuable even in the small business sector.

Ghai and Sneha (2012) have analyzed the consumer shopping behavior while purchasing Biscuits and their choice and preference for type and variety of biscuit.

Many factors are taken into considerations for knowing consumer behavior like availability, price, flavor, packaging etc. This study made an attempt to analyze the existing buying behavior for Biscuits by individual households and to predict the demand for Biscuits. The study also explains about the consumer buying behavior of biscuits where different brands of biscuits are taken into consideration and assessing the impact of demographic dynamics on their choice. The practical implications of this study could be change in its price, sales force size, distribution, packaging & advertising expenditures in the short run to further improvise its marketing strategies

Jayaraman, K. & S. Kiumarsi (2014) in their study deals with the issues faced by SMEs and provided some valid recommendations to resolve the existing problems in the bakery business. The case analysis and its findings reveal that SMEs have unstructured marketing strategies and needs enhancements in the areas of packaging, value add to the bakery products, focus on promotion and appropriate advertising strategies. Further, the analysis reveals that more coverage of selling points for bakery products, the increased number of distribution centers

and proper incentives to the agents may definitely improve the marketing of bakery products

Tatiana Litvinova, Irina Morozova & Stanislav Yatsechko (2015) in their article studied the Russian market of bread and bakery products. On the basis of the developed method we carried out an organoleptic evaluation of well-known types of Russian bread: Barskiy, Trapeznyy, Appetitnyy, Grozd and Izyskannyy by a 5-point scale, and on this basis the radar chart was built. In order to provide an objective assessment of the quality of a product it is necessary to formalize the criteria of quality that is to present them in a form of an array of digital data. Then the authors performed a calculation of the integral index of competitiveness of bread and bread products. During the process of research the authors conclude that the high quality of product is not enough for it to be in demand by consumers.

Research Methodology

Exploratory research design was used for conducting this study. Primary data on perceptions of the bakery product retailers was collected through a structured questionnaire. It was administered to the

targeted respondents in selected places in Karnataka. To investigate the significant perceptions of bakery product retailers, respondents have been selected on random sampling technique. The variables are measured using 5 point Likert scale with responses ranging from “Strongly Disagree”=1, “Disagree” = 2, “Cannot Say” = 3, “Agree” =4 and “Strongly Agree” =5. For data analysis, mean and standard deviation are used for descriptive statistics. The hypothesis was tested using One Sample t-test, and the data collected from respondents was analyzed with the help of MS Excel & SPSS.

Objectives of the study

- To find out the market potentiality for Pai Breads
- To identify expansion opportunities for Pai Food products
- To know awareness level of Pai brand
- To know what customers expectations about Pai Bread

Sampling method

Sample Method Description

(Refer Table 1 Here)

Profile of the Respondent

(Refer Table 2 Here)

Data Analysis

This part of the study attempts to understand the opinion of customers with respect to bakery products, distribution channels, pricing influence on consumer behavior and supplier rating for overall business effectiveness through various statistical analyses. The descriptive statistical analysis was carried out in order to do preliminary data analysis using mean and standard deviation. For hypothesis testing inferential statistical analysis was performed using the one sample t-test at 95% confidence interval with an assumed mean value of 3.

Testing of Hypothesis

To test the formulated hypothesis, one sample t-test was used with assumed mean value of 3. The data was collected using a structured questionnaire having a set of statements related to the agreement & disagreement of respondents towards the formulated hypothesis.

With respect to respondent's transaction nature with Pai Bakery products in Belgaum, the following null and alternative hypotheses were postulated as below:

H₀₁: Majority of the respondents do not deal with Pai Bakery products on the basis of Hygiene factor in Belgaum

H_{a1}: Majority of the respondents deal with Pai Bakery products on the basis of Hygiene factor in Belgaum

For testing of the above hypothesis, t test is used with assumed mean value of 3. The total score on the five point scale in the Likert Scale is 15 and the average is 3. The calculated mean value of “**Respondents deal with Pai Bakery products in Belgaum on the basis of Hygiene factor**” is less than the assumed mean 3 i.e., 2.38 and the observed *P value* 0.001 is less than 0.05 as indicated in table no. 3 and table no. 4. This result indicates that the null hypothesis ‘**Majority of the respondents do not deal with Pai Bakery products in Belgaum on the basis of Hygiene factor**’ is rejected and the alternative hypothesis that ‘**Majority of the respondents deal with Pai Bakery products in Belgaum on the basis of Hygiene factor**’ is accepted. The respondents, given an option always would buy products from Pai Bakery on the basis of select factors, a bakery that has been a pulse of the local buyers since its inception.

Descriptive statistics

(Refer Table 3 Here)

One-Sample t test result

(Refer Table 4 Here)

Testing of 2nd Hypothesis

With respect to respondent’s business transactions with Pai Bakery products in Belgaum, the following null and alternative hypotheses were postulated as below:

H₀₂: Majority of the respondents do not deal with Pai Bakery products on the basis of price factor in Belgaum

H_{a2}: Majority of the respondents deal with Pai Bakery products on the basis of Price factor in Belgaum

For testing of the above hypothesis, T test is used with assumed mean 3. The total score on the five point scale in the Likert Scale is 15 and the average is 3. The calculated mean value of “**Respondents deal with Pai Bakery products in Belgaum on the basis of Price factor**” is less than the assumed mean 3 i.e., 2.52 and the observed *P value* 0.001 is less than 0.05 as indicated in table no. 3 and table no. 4. This result indicates that the null hypothesis ‘**Majority of the respondents**

do not deal with Pai Bakery products on the basis of Price factor in Belgaum' is **rejected** and the alternative hypothesis that **'Majority of the respondents deal with Pai Bakery products on the basis of Price factor in Belgaum'** is accepted. The respondents are price sensitive and given an option always would buy products from Pai Bakery if the price of a bakery product is economical as the entire value chain has been very responsive to price factor.

Testing of 3rd Hypothesis

With respect to respondents dealing with Pai Bakery products in Belgaum, the following null and alternative hypotheses were proposed as below:

H₀₃: Majority of the respondents do not deal with Pai Bakery products on the basis of profit margin factor in Belgaum

H_{a3}: Majority of the respondents deal with Pai Bakery products on the basis of profit margin factor in Belgaum

For testing of the above hypothesis, T test is used with assumed mean 3. The total score in the five point scale in the Likert Scale is 15 and the average is 3. The calculated mean value of "Respondents deal with Pai Bakery products in Belgaum

on the basis of profit margin factor" is less than the assumed mean 3 i.e., 2.47 and the observed P value 0.001 is less than 0.05 as showed by table no. 3 and table no. 4. This result indicates that the null hypothesis **'Majority of the respondents do not deal with Pai Bakery products on the basis of profit margin factor in Belgaum'** is **rejected** and the alternative hypothesis that **'Majority of the respondents deal with Pai Bakery products on the basis of profit margin factor in Belgaum'** is accepted. The respondents have given shelf space in keeping Pai products as it provides them more profit margin.

Testing of 4th Hypothesis

With respect to respondents deal with Pai Bakery products in Belgaum, the following null and alternative hypotheses are postulated as below:

H₀: Majority of the respondents do not deal with Pai Bakery products on the basis of distribution system factor in Belgaum

H₁: Majority of the respondents deal with Pai Bakery products on the basis of distribution system factor in Belgaum

For testing of the above hypothesis, T test is used with assumed mean 3. The total

score in the five point scale in the Likert Scale is 15 and the average is 3. The calculated mean value of “Respondents deal with Pai Bakery products in Belgaum on the basis of ROI factor” is less than the assumed mean 3 i.e., 2.27 and the observed P value 0.001 is less than 0.05. This result indicates that the null hypothesis ‘**Majority of the respondents do not deal with Pai Bakery products on the basis of distribution system factor in Belgaum**’ is rejected and the alternative hypothesis that ‘**Majority of the respondents deal with Pai Bakery products on the basis of distribution system factor in Belgaum**’ is accepted. Respondents are happy with the distribution system of Pai Bakery products as they are readily available and fresh products are delivered to their store.

Market Potential Analysis for Pai Breads

The supplier’s performance analysis is carried out using rating scale methodology. The field survey data is collected from potential sample respondents who were dealing with bakery & other fast food products. The researchers have identified most important factors that would be considered for performance analysis propose. Statistical

tests like; descriptive statistics tests, one sample t-test were carried out to determine the order of significance of select factors.

Descriptive statistics

(Refer Table 5 Here)

One-Sample t test result

(Refer Table 6 Here)

From Table No. 6 it is clearly observed that respondents have given the highest rating to **on time delivery** as the most important factor. It has recorded the highest mean value of 4.43 & lowest standard error mean value of 0.062. Further the T test is performed to check the statistical significance of the select factor with assumed mean value of 3. The total score in the five point rating is 15 with 1 being the least rating and 5 being the highest rating to the select factor. The observed P value 0.001 which is less than 0.05 and calculated t value is greater than the table t value with $df = 298$ and $\alpha = 0.05$.

Thus the statistical analysis reveals that the on time delivery factor plays an important role with respect to supplier’s performance analysis and respondents have rated it as the number 1.

From Table No. 6 it is clearly observed that respondents have given the second highest rating to **expired product replacement** as an important factor. It has recorded the second highest mean value of 4.12 & least standard error mean value of 0.069. Further the T test is performed to check the statistical significance of the select factor with assumed mean value of 3. The total score in the five point rating is 15 with 1 being the least rating and 5 being the highest rating to the select factor. The observed P value 0.001 which is less than 0.05 and calculated t value is greater than the table t value with $df = 299$ and $\alpha = 0.05$.

Thus the statistical analysis reveals that the **expired product replacement** factor plays an important role with respect to supplier's performance analysis and respondents have given it 2 rating.

From Table No. 6 it is clearly observed that respondents have given the third rating to **margin** factor. It has recorded the mean value of 3.84 & least standard error mean value of 0.062. Further the T test is performed to check the statistical significance of the select factor with assumed mean value of 3. The total score in the five point rating is 15 with 1 being the least rating and 5 being the highest

rating to the select factor. The observed P value 0.001 which is less than 0.05 and calculated t value is greater than the table t value with $df = 297$ and $\alpha = 0.05$.

Thus the statistical analysis reveals that the **margin** factor plays an important role with respect to supplier's performance analysis and respondents have given it 3rd rating.

Findings

- Majority of respondents belong to Kirana shop category followed by sweet marts with market presence of over 10 years. 2/3rd of the respondents are single owned businesses with only formal education upto matriculation and twelfth standard.
- It was found that respondents influencing factors for purchasing Pai bakery products were hygiene, price, profit margin and distribution system. Highly sold product among the sample respondents is Bread with a frequency count of 284 followed by Bun with a frequency value of 47. Thus Consumers prefer Bread as their morning staple food for breakfast purpose

- Respondents have highlighted the following factors to rate suppliers in order to have effective and uninterrupted business operations.
 - Rank 1 - On Time Delivery
 - Rank 2 - Expired product replacement
 - Rank 3 - Margin
 - Rank 4 - Complaint Handling
 - Rank 5 - Help him in getting more turnover
- Though the level of awareness is limited but Pai Brand does have highest order of customer loyalty among the know respondents. Thus it shows that Pai Bakers has been committed to quality products & better services to customers

Customers Expectations from Open Ended Questions during the survey

1. Packing should improve
2. Life of Product with Good Packing
3. Need fresh Supply, good quality, reasonable price, fresh and less perishable

Suggestions given from Open Ended Questions during the survey

1. No replacement & Distribution problem
2. Must give better margin
3. Need Credit facility

4. Should be fresh and bigger bread size at least price
5. We are needed a good supplier of bakery product so we are agree to do business with you

Conclusion

Pai Foods has established a good brand over the years. Respondents have favored its presence in the market and are also willing to prefer it over its competitors. It was observed that though the level of awareness about Pai Brand was limited however it does have highest order of customer loyalty among the know respondents. This shows that Pai foods has been committed to quality products and providing better services to customers. Pai foods does have great opportunity to tap and approach the retailers and plan for its marketing strategies to expand its businesses in new horizons.

References

Books:

Naresh Malhotra and Satya Bhushan Das(2008), Marketing Research: An applied Orientation, Pearson Education

C.R. Kothari (2004), Research Methodology Methods & Techniques, New Age International, New Age International (P) Ltd., Publishers

S.C. Gupta, Fundamentals of Statistics, Testing of Hypothesis, 6th Edition, Himalaya Publishing House

Journals:

Peterson, Robert, A., (1977) Consumer Perceptions as a Function of Product Color, Price and Nutrition Labeling, *Advances in Consumer Research*, 4(1), 61-63

Natasa, R., Ivona, S., Ruzica, B., (2011). Designing marketing strategy using the five competitive forces model by michael e. Porter – case of small bakery in Croatia,

International Journal of Management Cases, 13(3), 376-385

Ghai., Sneha.,(2012). An empirical analysis on consumer's buying behavior towards biscuits with reference to NCR, *Asia Pacific Journal of Research in Business Management*, 3(11), 1-2

Jayaraman, K. & 1 S. Kiumarsi (2014), Marketing strategies to improve the sales of bakery products of small-medium enterprise (SMEs) in Malaysia, *International Food Research Journal* 21(6): pp 2101-2107

Tatiana Litvinova, Irina Morozova & Stanislav Yatsechko, (2015), Experiential Marketing as a Tool of Improvement of Competitiveness of Enterprises in the Market of Bread and Bakery Products, *Mediterranean Journal of Social Sciences*, Vol. 6 No 3 S6, ISSN 2039-9340

List of Tables:

Table 1: Sample Method Description

Sample size	360
-------------	-----

Sampling Method	Random Sampling
Sample Unit	All the retailers who deal in bakery products
Measuring Tool	Questionnaire

Table 2: Profile of the Respondent

Particulars	Categories	Frequency	%
Nature of Business	Kirana Shop	138	38.4
	Sweet Mart	101	28.1
	Restaurant	16	4.5
	Any Other	101	28.1
Years of Service in the field	Less than a year	47	13.1
	1 to 5 years	114	31.8
	5 to 10 years	52	14.5
	10 years & above	143	39.8
Average turnover per month	Less than 1 lakh	302	84.1
	1 to 5 lakhs	40	11.1
	5 to 10 lakhs	8	2.2
	More than 10 lakhs	4	1.1
Type of Business	Single Owned Business	265	73.8
	Family Owned Business	77	21.4
	Partnership Business	13	3.6
	Any Other	1	.3
Educational Background	Primary Education	158	44.0
	Secondary Education	115	32.0
	Graduation	75	20.9
	Post Graduation	8	2.2
Multiple retail outlets in and around city	Yes	53	15
	No	298	85
Highly sold products in your area	Bread	284	75.33
	Bun	47	12.46
	Cakes	23	6.1
	Cookies	23	6.1

Source: Field survey

Table No. 3: Descriptive statistics

Particulars	N	Mean	Std. Deviation	Std. Error Mean
If dealt with Pai Company products - Hygiene	76	2.38	1.395	.160
If dealt with Pai Company products - Price	83	2.52	1.243	.136
If dealt with Pai Company products - Margin of Profit	78	2.47	1.276	.145
If dealt with Pai Company products - Distributors	81	2.27	1.533	.170

Source: Field Survey

Table No. 4: One-Sample t test result

Particulars	Test Value = 3					
	T	Df	Sig. (2-tailed)	Mean Diff	95% Confidence Interval of the Diff	
					Lower	Upper
If dealt with Pai Company products – Hygiene	-3.865	75	.001	-.618	-.94	-.30
If dealt with Pai Company products – Price	-3.532	82	.001	-.482	-.75	-.21
If dealt with Pai Company products - Margin of Profit	-3.637	77	.001	-.526	-.81	-.24
If dealt with Pai Company products – Distributors	-4.276	80	.001	-.728	-1.07	-.39

Source: Field Survey

Table No. 5: Descriptive statistics

	N	Mean	Std. Deviation	Std. Error Mean
Factors to rate suppliers - Complaint Handling	299	3.74	1.430	.083
Factors to rate suppliers - On Time Delivery	300	4.43	1.078	.062
Factors to rate suppliers - Credit Facility	299	3.65	1.388	.080
Factors to rate suppliers - Expired product replacement	300	4.12	1.189	.069
Factors to rate suppliers – Margin	297	3.84	1.065	.062
Factors to rate suppliers - Help him in getting more turnover	249	3.20	1.465	.093

Table No. 6: One-Sample t test result

	Test Value = 3					
	T	Df	Sig. (2-tailed)	Mean Diff	95% Confidence Interval of the Diff	
					Lower	Upper
Factors to rate suppliers - Complaint Handling	8.936	298	.001	.739	.58	.90
Factors to rate suppliers - On Time Delivery	23.023	299	.001	1.433	1.31	1.56
Factors to rate suppliers - Credit Facility	8.039	298	.001	.645	.49	.80

Factors to rate suppliers - Expired product replacement	16.263	299	.001	1.117	.98	1.25
Factors to rate suppliers – Margin	13.625	296	.001	.842	.72	.96
Factors to rate suppliers - Help him in getting more turnover	2.206	248	.028	.205	.02	.39

Source: Field Survey