

A COMPARATIVE STUDY OF CONSUMER BUYING BEHAVIOUR TOWARDS CHIPS WITH REFERENCE TO BINGO AND LAYS

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ABSTRACT

The aim of this article is to study consumer buying behavior towards chips with reference to Bingo and Lays, using factor analysis approach. In this paper, variables were identified with the help of literature Review, which set the relationship between demographics and tool factor analysis between demographics through which we can study and establish interrelationship among them. The result of Factor analysis identified that, there are Eight prominent factors, they are: Taste, Availability, Variety, Quality, Packaging, Price, Visibility, Flavors. The factor analysis has the prominent factors listed by inputs of the primary data and which could be biased and may influence and reliability of the model. The factor analysis does not provide the ranking or hierarchy of the factors in the research. This study has been made in the period of Sep 2020- Dec 2020 to explore the feasible relationship of demographics and factors of the consumer buying behaviour to understand the perception of consumers towards chips in North-Karnataka.

Keywords – Buying behaviour, Brand preference, Snacks food.

INTRODUCTION

The Indian food industry is poised for huge growth, increasing its contribution to world food trade every year. In India, the food sector has emerged as a high-growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry.

The food industry, which is currently valued at US\$ 39.71 billion! is expected to grow at a Compounded Annual Growth Rate (CAGR) of 11 per cent to US\$65.4 billion by 2018. Food and grocery account for around 31 percent of India's consumption basket.

Accounting for about 32 per cent of the country's total food market, The Government of India has been instrumental in the growth and development of the food processing industry. The government through the Ministry of Food Processing Industries is making all efforts to encourage investments in the business. It has approved proposals for joint ventures (JV), foreign collaborations, industrial licenses and 100 per cent export-oriented units.

LITERATURE REVIEW:

- **Tempting food words activate eating simulations:** Papies, 15 November 2013 - The study of Tempting food words activates eating simulations of eating the food includes lot of test and texture temperature off food, situations of eating food, etc. Here in this literature, we can find the chips especially potato chips are shown as unhealthy food because people are forgetting natural and health food for snacks.
- **Effect of ripening on eating quality of keitt mango chips:** F. Appiah, P. Kumah, I. Idun, J.R. Lawson (2009) - As per this article consuming Mango can provide vitamins A, B & C to our body but Mango is seasonal fruit so it will be stored and make use as per requirement. Chips showed increased levels of protein and crude fibre with ripening whereas the levels of carbohydrates declined. Magnesium levels in chips increased with ripening whereas the levels of phosphorus, potassium, calcium and sodium declined.
- **Fish and chips with a side order of Trans fat: The nutrition implications of eating from fast food outlets:** Sue Lloyd Martin Caraher Tim Madelyn (2010) - The article says that chips and fish are likely to be high in less healthy, saturated fat, because the oil that they are cooked in will most likely have been used a number of times. This will be cooked with remaining fried oil which is not good to human body where in this case was studied on school and college children.
- **The only Problem is, children will like their chips': education and the discursive production of ill-health:** John Evans , Bethan Evans & Emma Rich (2006) - Eating chips is an extension of the restricted dietary practices of the home into the school canteen. Although the concept of lifestyle features prominently in this discourse, it is fundamentally disconnected from the sociocultural conditions that pupils may experience. It is he or she who will determine the authenticity of the patient's/pupil's condition. Help feed and define a culture that builds pressures for perfection and competence that are impossible and even undesirable to achieve. Rather than having palate full of fruit now it is chips.
- **Taste or health: A study on consumer acceptance of corn chips:** Beverly J. Tepper Amy C. Trail (1998) - In this this case After evaluating 305 adult consumer data shows result that Data were analysed using unique factors like, perception about the corn chips, health dimension and respondents' attitude towards fat in diet and sensory attribute like colour & crunchiness of respondents.
- **Modification of Fishbein and Ajzen's theory of reasoned action to predict chip consumption:** G. Tower R. Shepherd - This article explains that 288 respondents replied for questionnaire of consumption of high fat food item I.e., chips. The important predictor reported that the theory of reasoned action is both the person's

attitude and the subjective norm also perceived control over predictor of intention of behaviour.

- **Construal levels of healthy eating. Exploring consumers' interpretation of health in the food context:** Amber Rongelap Siet J.Sijtsema Hans Davos Mariët A.de Winter (2012) - Health of person is very important for their survival here in this case the study aims explore, operationalize and test consumer's interpretation of healthy eating by using insights from construal level theory. Perception and Presentation both are different from each other where perception will think and believe in whereas Presentation is interpreting or implicating the task for example, people thinks apple is healthy food but the thing is how much they eat that apple is the matter.
- **Colour and image texture analysis in classification of commercial potato chips:** (F Mendoza, 2007) - It explains that the inclusion of independent colour and textural feature from images documentary features have potential or possibility to model consumer behaviour in the respect of visual taste preferences of potato chips as not mentioning the company chips product. Also, categories the taste and preference of set of customers.
- **Brand Awareness in Confectionery Food Products in Twin Cities of Hubli-Dharwad (Karnataka):** (SA Shaikh, 2017) - The reporter is emphasis only on brand awareness about snacks item where in Twin cities of Hubli – Dharwad. There people more aware about the chips brand lays and bingo a good product in taste wise they have got by choosing 300 samples.
- **SHOPPER'S PERCEPTION TOWARDS STORE BRANDS WITHIN RETAIL STORES:** (MACHAVOLU, Nov2013) - The purpose of studying is main focus on shopper's perception towards the store brands and their emotions associated with the purchase of store brands. It is to understand the perception and attitude about chips brands of Bingo. And the factors like radio, newspaper, magazine, shopkeepers, window display etc.
- **A Study on the Relevance of Packaging in Children's Purchase Decision of Branded Potato Chips:** (Tanmoy De, April-2011) - The study expresses that school going children have self-expression to recall their chips brand packaging which has been displayed over package maybe by identify the brand-by-brand logo, shape, package, colour, design also flavour of chips.
- **BUYING BEHAVIOR OF RURAL CONSUMER WITH REFERENCE TO PACKAGED FOOD PRODUCTS IN BIHAR:** (Jha, April 2013) - The report says that In India, fast moving consumer goods in market is one of the major factors is package of food products to recognize easily and it also focuses on how individuals make their decisions to spend their available resource like money, time etc., Especially in rural market people may not aware or literate but people perception towards the snacks like, chips takes place.
- **A study on customer satisfaction towards Lays chips, in Avadi, Chennai:** (Sundarapandi C., 2015) - In this case, Customers plays important role in the any business activity and its serious responsibility of business to get consumer satisfaction and to earn good by them. The universe of the population includes the respondents who are the consumers of Lays Chips, with respect to Avadi.
- **Eliciting a policy response for the rising epidemic of overweight-obesity in India:** (Reddy, 2005) - The report will explain the advertisements should not mislead consumers to believe that the consumption of products advertised would lead to

positive personal changes. It needs for suitable alternative products that are both acceptable to consumers and affordable. As per the case 70% of children eat chips once or more in a week. Companies brands of potato chips (Lays and Bingo) give misleading information on trans-fat content.

- **Literature Review Conclusion:** As we have conducted survey that we reached objectives that most of the people prefers more especially 21 to 30 aged group preferred more. Quality, packaging and availability are the main reason for influence the buying chips.

By studying these literature reviews that We have understood that Customer perception towards eating potato chips differs from one another. We can find chips are most likely to have it. Especially college-going students are more prefer of snacks is this Bingo and Lays branded chips. Maybe the reason is packaging affordable price and quality taste which are highlighted from retail shops and from marketing activities. We found that from one of the Literature, it shows people think eating chips may not be healthy but the thing is how much they eat is the matter.

Global Potato Chips Market:

- Potato chips are one of the most convenient food options currently available for people to keep pace with their busy lifestyle. It shortens the meal preparation time and can be served in the form of a quick snack or part of the meal.
- The raw materials that are used in the manufacturing of potato chips are potatoes, oil and salt, which are widely available in every part of the world. Hence, reliable supply of potatoes and other materials are ensured, thereby providing the potato chips market with a constant supply and efficient production planning.
- Developing countries are expected to drive the global potato chips market in the coming years. Earlier, the consumption of potato chips was largely confined to the western countries. However, with the emerging trend of westernisation of food consumption patterns in addition to growing economy, rise in middle class population and increasing urbanisation, the consumption of potato chips in developing countries is expected to grow at a significant rate.
- The growth of the organized retail sector is currently having a positive impact on the global potato chips market. Earlier, a number of global players were hesitant to sell their products in emerging regions because of lack of infrastructure, storage facilities, and appropriate knowledge about the developing markets. However, with an increase in the number of organised retail stores, many players are investing in these markets. This is anticipated to eventually result in the augmented consumption of potato chips during the next few years.
- Due to the rising health consciousness among global population, several potato chips manufacturers are launching value added products that are healthier as compared to traditional potato chips. This includes products with reduced fat and calorie content, fortified with healthy ingredients, lower cholesterol, etc. Chips that are gluten-free, non-GMO verified and made with sea salt, natural colours and flavours are gaining more

popularity than the traditional ones. Other than this, potato chips manufacturers have also expanded their spending for various R&D activities to introduce more diverse products in the market so as to strengthen their product portfolio. These are some factors which are having a direct impact on the growth of the market.

CHIPS MARKET:

The global potato chips market reached a value of US\$ 30 Billion in 2019. The market is further expected to exhibit stable growth during 2020-2025. Potato chips represent one of the most popular snack foods consumed across the globe. These are thin slices of potato which are seasoned after being fried until crisp. At the time of frying, the sugar present in potatoes combine with amino acids and turns brown which results in the yellowish-brown colour of potato chips. In addition to this, potato chips are processed and stored in such a way that they are inert towards any microbiological spoilage, chemical and enzymatic activities as well as moisture or other vapor migration. The taste, texture and colour of the chips remain unaltered for a long period of time. Apart from this, potato chips are generally packed and sold in air-tight plastic bags which significantly increases the longevity of the products.

BINGO CHIPS:

Bingo was launched by ITC Foods in March 2007 with a wide range of exciting packaged salted snacks. The range now includes multiple flavor variants of Potato Chips & Finger Snacks. The brand is associated with youth, fun and excitement. It fulfills the consumers need for variety and novelty in snacks.

Strengths in the Bingo Chips

- **Special advertisement strategy:** One of Bingo's key advantages from the beginning was that it used an attractive advertising campaign and often portrayed itself as something special. The ads have made consumers aware of its products and advertisement has a high recall value.
- **Special product:** Bingo has always been sold as a special triangle-shaped chip. Besides this, the brand also has six sub-brands: Bingo Yumoto's Original, Bingo Yumitos, Bingo Rulz, Bingo Starters, Bingo tedhe medhe, and Bingo mad angles. Bingo has tried to create a good brand image for its products in the market.
- **Variety of flavours:** Obviously, with so many sub-brands, Bingo was expected to have a range of flavours, as is the case here. Today, Bingo has 19 varieties in its kitty, each of which can be found here.
- **Strong Rural and Urban distribution Network:** ITC has several brands under its umbrella, most of which are linked to food and beverage. As a result, the distribution of Bingo is also far and wide. ITC is connected to rural areas. ITC also opened ITC Choupal Sagar and created its reach in rural areas.
- **Backing ITC:** ITC is one of India's biggest FMCG firms and has deep pockets as well. That's why ITC's funding is a really positive thing for Bingo.

Weaknesses in the Bingo Chips

Advertising Low on TV: Bingo is advertised a lot at the beginning, but the brand-building process has not proceeded, so brand recall is weak for the brand right now. High-fat content: healthy people avoid high fat and high cholesterol in potato wafers.

Opportunities in the Bingo Chips

Micro-distribution – Bingo must be aimed at micro-distribution because these potato chips are actually distribution focused games and reachability is the winning factor.

Brand building – In addition to scope, Bingo also needs to concentrate on that brand recall through better ads, something that Kurkure has done consistently and has reaped the benefits.

Variety of taste and chip – More variety in taste and variety in chip texture or shape will help Bingo in the long run. Variety is also a choice for food items.

Threats in the Bingo Chips

Health awareness – One of the major challenges to any fast-food dependent on potatoes is that people are becoming more and more nutritious and have started to disregard chips and other fried products.

Competition – has massive competition with brands such as Lays, Kurkure, and others. Regional brands such as Balaji wafers are also available. These regional brands, national brands, and international brands are all competing for the same space in the consumer's mind and stomach.

LAYS CHIPS:

In 1932 sal esman Herman W. Lay opened a snack food operation in Nashville, Tennessee and, in 1938; He purchased the Atlanta, Georgia potato chip manufacturer "Barret Food Company" renaming it "H.W. Lay & Company." Lay criss-crossed the southern United States selling the product from the trunk of his car. In 1942. Lay introduced the first continuous potato processor, resulting in the first large-scale production of the product. The business shortened its name to "The Lay's Company" in 1944 and became the first snack food manufacturer to purchase television commercials, with Bert Lahr as a celebrity spokesman. His signature lines. "so, crisp you can hear the freshness." became the chips" first slogan along with "de-Lay-sious!" As the popular commercials aired during the 1950s. Lay's went national in its marketing and was soon supplying product throughout the United States.

Strengths in the Lays

Global yet local: Lays has been a popular flavour of potato chips across the world because while they have flavours which are accepted internationally like Classic Salted or American Cheese, they also have local flavours like Spanish Tomato Tango or India's magic masala. These flavours give a local tinge to the brand. Frito Lays: Frito Lays is a veteran in snacking business and has been a consistent leader here. The company has a market share of more than 35 percent of the world market in snack chips and 60 percent in the United States. Frito Lays also has five of the world's top chips brands -Lay's, Ruffles, Doritos, Tostitos, and Cheetos each of which gives the company an annuals sale of 1 billion USD each.

Weaknesses in the Lays

Reduction in snacks consumption: There has been a reduction in snacks consumption globally due to growing health concerns. This reduction has impacted the sales of Lays negatively. Poor margins: There is very high competition in the snacks market and not much scope for differentiation except in flavouring. The scope of price differentiation is less since the customer is highly priced sensitive. Thus, these brands need to keep prices as low as possible with the result that the margins are very low.

Opportunities in the Lays

Healthy snacks: There has been a shift of customer preference of customers from snacks to healthy snacks. This has resulted in a creation of a new market for baked snacks as well as organic snacks. These areas that Lays can look into for new business. Exposure In comparison to earlier years people are more aware of global brands as well as global flavours with the result that there is increased scope for globalizing the offerings from Frito Lays.

Research Design

Research Approach	: Survey Method
Research method	: Descriptive Research
Data collection approach	: Online Questionnaire
Location of research	: North-Karnataka
Sampling Method	: Judgemental Sampling
Sample Size	: 402
Sampling unit	: Bingo and Lays consumers.
Statistical tools	: SPSS – factor analysis

Objectives

- To Know the perception of consumers towards chips in North-Karnataka.
- To understand the factors that influence consumer to select the chips Brands of lays and Bingo.
- To understand which brand is preferred more in North-Karnataka.

Data and discussions

Reliability Test

Cronbach's Alpha	N of Items
0.932	22

Source: Primary Data

From the above Reliability Statistical table, we have Cronbach's Alpha value as 0.932, which is more than 0.7 hence, the data collected is Reliable in nature.

Table2 Demographic Details

Description	Details	Frequency	%
Gender	Male	190	47.3
	Female	207	51.5
Age group	Bellow 20	72	17.9
	21-30	193	48.0
	31-40	77	19.2
	Above 40	60	14.9

Profession	Student	205	51.0
	Employee	118	29.4
	Others	79	19.7

Source: Primary Data

Among 402 respondents 47.03% are male and remaining female. As table depicts above age of 50 are less IT savvy and hence not responded to this survey. Maximum respondents are students, Employees & Others. 48% of the respondents are between the age 21-30 and 18% of the respondents are Bellow 20 and 20% respondents are Between 31-40 and 15 % of the responses are above 40.

Table 3 Time taken to select the brand and how frequently buy chips

Description	Frequency	%
0 to 2min	165	41.0
3 to 5 min	141	35.1
More than 5 min	96	23.9
How frequently do buy chips		
Daily	69	17.2
Weekly	122	30.3
Sometimes	133	33.1
Occasionally	78	19.4

Source: Primary Data

From the above table we come to know that 41% of the respondents will take 0 to 2 minutes and 35 % of the respondents will take 3 to 5 minutes and 24% of the respondents will take more than 5 minutes to select the brand. And 33% of the respondents sometimes 31% of the respondents weekly 20% of the respondents occasionally and 18% of the respondents daily used chips.

Table 4 Which products you usually buy

Frequency		Bingo	Lays	Ruffles	Pringles	Others	Total	%
Age	Bellow 20	34	23	6	3	6	72	48.0
	21-30	89	59	22	18	5	193	26.6
	31-40	39	13	20	5	0	77	14.4
	Above 40	31	12	10	7	0	60	8.2
Total		193	107	58	33	11	402	2.7

Source: Primary Data

From the above graph we come to know that 48% of the respondents are buying Bingo chips, 26% of the respondents Lays and 14% of the respondents Ruffles and 8% of the respondents pringles and 3% of the respondent's others usually buy product.

Table 5 Age * Which Bingo flavour would you choose

Description	Which Bingo flavour would you choose	Total
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		Tomato flavour chips	Cream and onion	Salted potato chips	others	5	
Age	Bellow 20	19	24	25	4	0	72
	21-30	75	61	44	11	2	193
	31-40	4	22	37	13	1	77
	Above 40	4	13	31	11	1	60
Total		102	120	137	39	4	402

Source: Primary Data

As per the survey 75 of people of aged between 21-30 buys Tomato flavoured flavour Whereas 61 of people aged between 21-30 buys cream and onion.

Table 6 Age * Which LAYS flavour you choose

Description		Which LAYS flavour you choose					Total
		magic masala.	Cream and onion.	tomato tango.	Classic salted.	other	
Age	Bellow 20	19	20	21	11	1	72
	21-30	27	58	66	38	4	193
	31-40	8	17	30	14	8	77
	Above 40	5	13	16	16	10	60
Total		59	108	133	79	23	402

Source: Primary Data

As per the survey 66 of people age between 21-30 buys Tomato flavoured Whereas 58 of people aged between 21-30 buys cream and onion.

Table 7 Age * Time taken to select brand Crosstabulation

Description		Time taken to select brand			Total
		0 to 2min	3 to 5 min	More than 5 min	
Age	Bellow 20	49	21	2	72
	21-30	102	69	22	193
	31-40	9	38	30	77
	Above 40	5	13	42	60
Total		165	141	96	402

Source: Primary Data

As per the above table we can say that 102 of people aged between 21-30 takes 0-2 minutes to select the brand of chips whereas 49 of people age bellow 20 takes 0-2 minutes to take select Brand.

Table 8 Which pack size is mostly preferred for chips and Whether shift between the products

Description	Frequency	%
Which pack size is mostly preferred for chips		

12G (Rs 5)	93	23.1
25G (Rs 10)	144	35.8
52G (Rs 20)	103	25.6
90G (Rs 35)	62	15.4
Total	402	100
Whether shift between the products		
No	175	43.5
Yes	227	56.5
Total	402	100

Source: Primary Data

From the above graph we come to know that 36% of the respondents 25G and 26% of the respondents 52G 24% of the respondents 12G and 15% of the respondents 90G preferred size of the chips. And 57% of the respondents are shift between the product and 43% of the respondents are not shift between the product.

Table 9 Factor analysis: Influencers of buying Bingo Chips

Rotated Component Matrix^a

Description	Component	
	1	2
Factor Bingo Taste	.713	.233
Factor Bingo Availability	.729	.074
Factor Bingo Variety	.824	.072
Factor Bingo Quality	.855	.104
Factor Bingo Packaging	.848	.095
Factor Bingo Price	.874	.080
Factor Bingo Visibility	.865	.041
Factor Bingo Flavours	.861	.120

Source: Primary Data

From the rotated component matrix, we interpret the following prominent factor influence to buying Bingo Chips Following are prominent factors: -

1- Price (.874) and 2- Taste (.233)

Influencers of buying Lays Chips

Rotated Component Matrix^a

Description	Component	
	1	2
LAYS Factor Taste	.772	.070
LAYS Factor _availability	.779	.129

LAYS Factor _Variety	.859	.024
LAYS Factor _Quality	.908	.014
LAYS Factor _Packaging	.908	.014
LAYS Factor _Price	.874	-.041
LAYS Factor _visibility	.883	.010
LAYS Factor _Flavour	.874	.008

Source: Primary Data

From the rotated component matrix, we interpret the following prominent factor influence to buying Lays Chips Following are prominent factors: -

1-Quality (.908) 2- Packaging (.908) and 3- Availability (.129)

CONCLUSION

The research is conducted to know the Consumer buying behaviour towards chips with reference to bingo and lays. Both Bingo and Lays brands are the two top brands in the in the Chips sector of the food industry.

Buying is one of the most important variables in consumer behaviour. In a marketing context, behaviour is predispositions towards specific brands, products or companies that cause consumer respond favourably or unfavourably towards them. Conditions of competition are changing rapidly today and companies that strategize and react to these changes promptly and quickly are the most successful. As per the survey most of the female preferred tomato flavour of both Bingo and Lays and most of the youth age between 21-30 prefer to have chips on usual basis.

This project was an opportunity to learn about the food industry and also the Buying Behaviour of the people among North-Karnataka.

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