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Consumers decision making on purchasing rice brands

Dr. Pratick Monda and Dr. Debabrata Basu

Abstract

In India rice is grown in 43.86 million ha, the production level is 104.80 million tones and the productivity is about 2390 kg/ha which feeds more than 60 per cent population of India. 100000 metric tonnes of rice has been consumed in our country 2018 which clearly shows just how much the consumption of rice is and what impact this has on the country's agricultural economics. Presently, consumers are brand conscious especially in urban and semi urban areas. They are showing more trust and belief with a packaged and branded product than any loose items in terms rice. So to keep up with the present consumer demand, the production sector should also adapt with the current changes. In this study, consumers' decision making process was studied and the factors affecting the decision making and were observed. The study was conducted in the township of Kanchrapara of North 24 Parganas district under Barrackpore subdivision in West Bengal state in India. Among the 24 wards of Kanchrapara, two wards were selected randomly within which 180 people were selected with the help of random number table. Then personal and socioeconomic attributes of the consumers were measured. They were then also asked about attribute importance and actual choices for rice brands. It was observed from the study that coefficient of correlation (r value) for all the independent variables were significant with the amount of rice consumed per day. Coefficient of Correlation (r value) of seven independent variables with loyalty of rice brands were found significant. The expectation and choice of 115 consumers on four rice brands i.e. India Gate, Dawat, Kohinoor and Lal Baba were identified. The combination of expectancy and choices depicted the nature of preference and choice made. Out of 16 possible combinations, the same preference and actual choice of brand, 325 such situations (70.65%) were obtained. X^2 test was done against the hypothesis (H_0). X^2 value was found significant at 0.01 level which supported that there was indeed a strong association between them. As rice market is ever increasing in India and the business of branded rice product is booming, this type of market information about consumers' behaviour can be really helpful to understand the behaviour and attitude of the consumers towards a particular brand. The producers, processors (rice mills), packaging industries, and marketing channels that have stakes in the whole process will be benefitted from the research.

Keywords: Rice, consumer, decision making, rice brands

Introduction

Ever since the beginning of agriculture in human history, cereals provided the ultimate benefits to mankind as a staple food. Cereals have rich carbohydrates that give ample energy and also provide fats, vitamins and some other essential nutrients. Cereals are probably the greatest source of energy for human beings. Since ancient times cereals have been a major food in the world and it does not exclude India. India is the world's 2nd largest producer of rice, wheat and other cereals. Although there are many cereals like wheat, rice, sorghum, maize etc., are produced in India, wheat and rice are the most important ones as they are produced and consumed more than the others.

In India rice is grown in 43.86 million ha, the production level is 104.80 million tones and the productivity is about 2390 kg/ha (Agricultural Statistics at a glance-2015). It is grown under diverse soil and climatic conditions the productivity level of rice is low compared to the productivity levels of many countries in the world. Also about 90% of the cultivated land belongs to Marginal, Small and Medium farmers which are another constrain in increasing the productivity of rice in the country. Rice is one of the most important food crops and feeds more than 60 per cent population of India. The area under rice crop was 30.81 million/ha in 1950-51 which has increased to 43.86 million hectares during 2014-15 which is nearly 142 per cent higher. The rice production has registered an appreciable increase from 20.58 million tonnes in 1950-51 to 104.86 million tonnes during 2014-15, which is nearly 5 times. The yield was 668 kg/ha in 1950-51 which has increased to 2390 kg/ha during 2014-15. According to the Fourth Estimates of Department of Agriculture, GOI, India has produced 112.91 Metric Tonnes of rice and in the 2017-18 crop year (July- June) (www.timesofindia.com).

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Rice is grown in almost all the states in the country however the major 5 states in rice production are West Bengal, UP, Andhra Pradesh, Punjab and Tamil Nadu. The west Bengal produces 15 percent of total quantity of rice produced in the country.

In India, most of the cereals are produced and consumed in the form of rice and wheat. Currently rice is the major cereal for the people of eastern and southern India. According to the United States Department of Agriculture, 100000 metric tonnes of rice has been consumed in our country 2018 (www.indexmundi.com). This huge number clearly shows just how much the consumption of rice is and what impact this has on the country's agricultural economics.

Indian rice market is primarily dominated by unorganized sector because of the presence of several local players and the easy availability of rice through small retail stores which are also called as Kirana stores. But the organized industry has started to make their presence in the last couple of years as the targeting Tier 1 and 2 cities where the urbanisation has increased. The market consists of a various segment of the rice market in India like basmati, packed and further segmented into its types. India's rice production, as well as the consumption, has increased over the last few years and also involvements of many top companies have evolved the organised rice industry. Along with the production, India is also the top nation to export rice accounting nearly exports of 25% of global rice export. Overall India's rice export is dominated by basmati rice as India is the highest producer of basmati rice in the world. Iran and Saudi Arabia are the largest importer of basmati rice from India and contribute the highest value share in India's overall basmati rice export. Indian domestic rice market has grown at the CAGR of above 4% from in the last five years. Domestically though, India's non-basmati rice holds the more significant portion as compare to basmati rice as the production of basmati rice is limited to only to few states but is considered a premium segment of rice. The unorganised dominated market is now shifting towards an organised market which is growing nearly at a CAGR of 12% due to consumer awareness, and increasing urbanization playing an essential role in developing the packed rice market in the nation. Packed rice market in India is highly dominated by basmati rice and with the new health rice segments like brown rice and organic rice whose demand have increased in recent years.

Prominent companies operating in packed rice sector are KRBL, LT foods, Kohinoor foods, Amir Chand Jagdish Kumar (Export) Ltd, Adani Wilmar limited. The leading packed rice brands are India Gate, Dawaat, Kohinoor, Lalbaba and Aeroplane. Private label brands like Big Basket, Amazon, Flipkart, and Grofers are trying their hands in this sector plus the edible oil sector like Fortune brand have started penetrating in this sector.

Now, in marketing consumer is the king. A consumer's choice always takes the pole position in any market decision. Purchase decision is composed of consumer's feelings, thoughts, experience and external factors that he considered before making any purchase. Purchase decision of the consumers depicts and expresses their behaviour and the way they making decisions about their buying process (Fishbein & Ajzen, 1975) [3].

Decision making is a process of developing and selecting a course of action to solve a specific problem. It is the root of all activities. People at all level must constantly make decisions and solve problems of every action of an individual

is the result of conscious or unconscious decisions arrived by him or her (Stoner, 1988) [14]. A manager of a production system has to make decisions regarding resource allocation and income distributions to maximise profit. It is he who confronts the problem whether large or small and decides what actions to take. Managers have to bear responsibilities of production, marketing, finance, human and information resource management etc. in an organisation. A typical buying process consists of the following sequence of events – problem recognition, information search, evaluation of alternative, purchase decision and post-purchase behaviour. The marketer's job is to understand the behaviour at each stage.

The attitudes of others, unanticipated situational factors, and perceived risks may all affect the decision to buy, as will consumers' level of post-purchase product satisfaction, use and disposal and the company's actions (Kotler, 2012) [7].

Buyers are subjected to go many influences when they make their purchasing decisions. This is true for both consumer and industrial buyers as decisions of an individual are governed by multitude of factors (Singh, 1968) [11].

In consumer marketing, cultural, social, personal and psychological factors were conceived as influencer in decision making process (Kotler, 1985) [8].

Cultural and subcultural factors, social factors such as consumers' reference groups, family social roles and statuses; personal factors such as his age and life cycle stages, occupation, economic circumstances, lifestyle and personality and self-concept; his motivation, perception, beliefs and attitudes are found playing very important role in decision making process of the consumer (Schiffman, 1983) [13].

Consumer behaviour is influenced by three factors – cultural (culture, subculture and social class), social (reference groups, family and social roles and statuses) and personal (age, stage in the life cycle, occupation, economic circumstances, lifestyle, personality and self-concept), (Kotler, 2012) [7].

Consumer behaviour consists of all of human behaviour that goes in making purchase decisions. An understanding of the consumer behaviour enables a marketer to take marketing decisions which are compatible with its consumer needs. These are four major classes of consumer behaviour determinants and expectations, namely, cultural, socioeconomic, personal and psychological. The socio economic determinants of consumer behaviour consist of age, marital status, occupation, education, income, family size etc (Ganapathi *et al.*, 2010) [13].

Johnston *et al.* (2001) [6] and Tait *et al.* (2011) [15], concluded from their research that especially the rich and educated part of the society generally prefers the presence of ecological certifications to shape their choices for purchasing of fruits and other consumables.

A study in Chile (Araya, 2019) [1] showed that the results are consistent with interpretive nutritional information affecting consumer decisions when they provide decision-makers with new information regarding the nutritional content of foods. The effectiveness of this type of warning label may depend on whether consumers can discriminate between healthy and unhealthy labelled products within a product category. Importantly, the regulation severity allowed for non-labeled cereal products, whereas almost all UPCs in the chocolate and cookie categories ended up tagged as unhealthy products. The availability of healthier unlabeled substitutes will critically depend on how strict the regulation standards are. Furthermore, the results also suggest that purchase incidence

by low socioeconomic groups and families with children are susceptible to be modified by the provision of simplified nutritional information. These findings are highly relevant for policymakers who typically target both groups, given their higher risk of developing obesity.

People are now more brand conscious. They are showing more trust and belief with a packaged and branded product than any loose items in terms rice. Brand can be described as a name, term sign, symbol, design or some combination of these elements, intended to identify the goods and services of one seller or a group of sellers and to differentiate them from the competitors. The different components of a brand are brand names, logos, symbols, package designs and so on (Kotler, 2012) [7]. Branding helps to bridge the firm with their customers by identifying the product are no exception which is only possible only through uniqueness of brand by its logo, name, type and use of the product (Haimid *et al.*, 2012) [5]. These branding strategies have become an accepted part of marketing activity and it is the norm for manufactured and processed food products to be offered to consumers as branded products (Salokhe, 2017) [10]. The consumer is likely to develop a set of brand beliefs about where each brand stands on each attribute. The set beliefs held about a particular brand is known as ‘brand image’. The consumer belief may be at variance with the true attributes owing to his or her particular experience and the effect of selective perception, selective distortion and selective retention. It is also termed as ‘Perceived Instrumentality’ or ‘Expectancy’ or ‘Variance’. Beliefs for attributes, such as ‘cost’ could be measured in terms of ‘high-low’ (evaluation) etc. most marketing studies appear to utilize the evaluation approach (Pessimier and Wilkie, 1974) [9].

In an emerging Indian retail environment, vegetables and fruits are most frequently purchased from nearby market than grocery and cereal products. High consumer ratings on product attribute of freshness or cleanliness along with price and quality suggests that food retailing needs to be customized as per their requirements (Ali, Kapoor and Moorthy, 2010) [2].

Methodology

Locale of Research: The present study was conducted in the small town of Kanchrapara which is under Kanchrapara Municipality of North 24 Parganas in the state of West Bengal in India. The township was grown more than hundred years

ago and it was famous for railway workshop. The market place provides all sorts grocery, vegetables and fruits, clothing electronics, jewelleryes and other essential goods to the consumers of nearby towns and villages.

Sampling: The district North 24 Parganas and Subdivision Barrackpore 1 was selected purposively. The township Kanchrapara was also selected purposively considering the access of the researcher to different communities of the township. Out of 24 wards, two wards were selected randomly. Total 180 respondents were selected from the two wards based on random number table.

Eleven independent variables along with other dependent variables were collected and measured. Descriptive statistics, correlation and step-wise regression was done on these variables. To identify their choices of rice brands, attribute importance was measured with a 4-point scale along with their brand belief with semantic differential scale. Then their actual choice behaviour was measured. After that, with Fishbein’s Expectancy Value Model (1962) association between rice brand choice and rice brand expectation was measured.

Fishbein’s Expectancy value model is as follows

$$A_{jk} = \sum_{i=1}^n W_{ik} B_{ijk}$$

Where,

A_{jk} = Consumer k’s attitude score for brand j,

W_{ik} = The importance weight given to attribute i by consumer k

B_{ijk} = Consumer k’s belief as to the amount of attribute i offered by brand j,

N = the number of important attributes in the selection of a given brand.

Techniques of field data collection: Personal interview method was followed by the researcher for collection of data from the selected families. Prior appointment was made for data collection. The period of data collection was April 2019 to December 2019. In this connection a letter from the university and endorsement from local councillors facilitated the process.

Results and Discussions

Distribution of the Consumers according to their Income Group

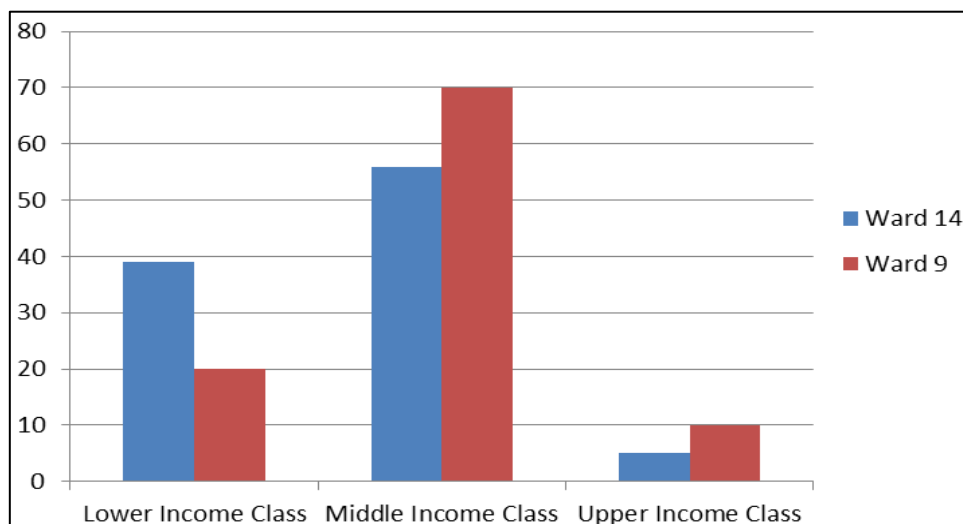


Fig 1: Distribution of the consumers according to their income group

It has been observed that 39% of the consumers from Ward 14 belong to lower income class whereas 5% of them belong to upper income class. But in Ward 9, 20% are from lower income class and 10% are from upper income class. In both wards, the middle income

class consumers are dominant with 56% and 70% respectively.

Distribution of the Consumers according to Education

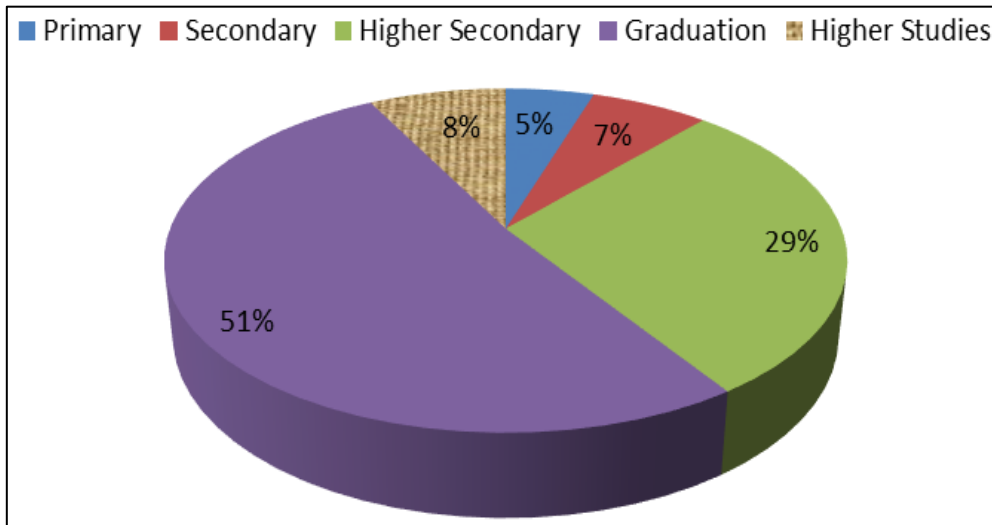


Fig 2: Distribution of the Consumers according to Education

More than half (51%) of the consumers in both Ward 14 and 9 are graduate whereas 29% of them studied up to higher

secondary level.

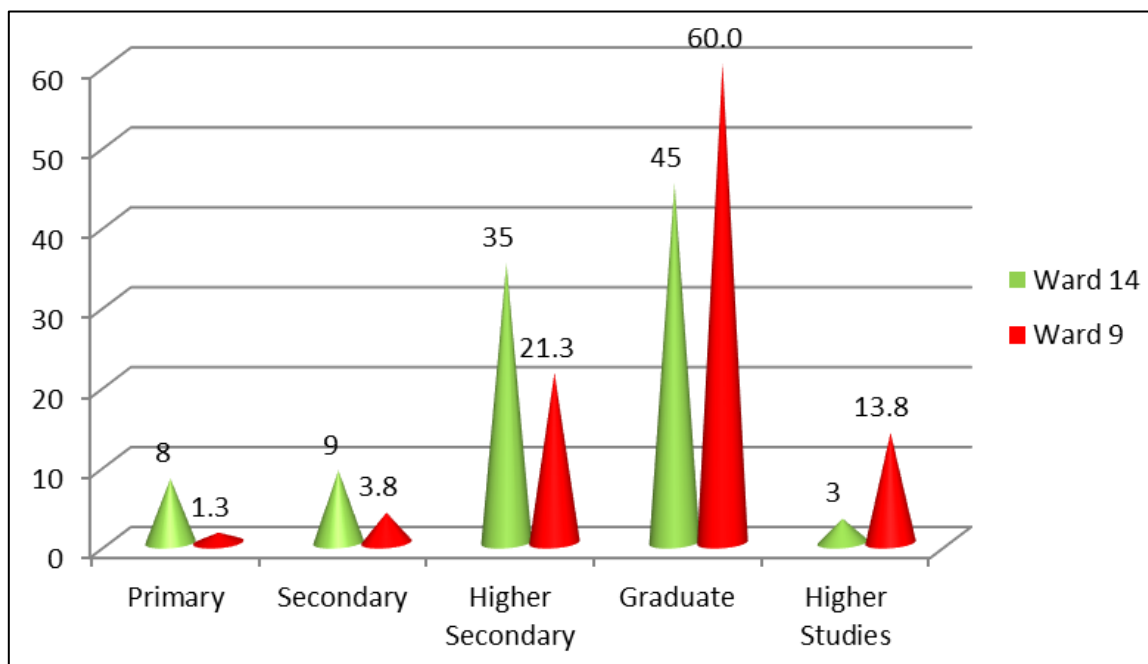


Fig 3: Ward wise distribution of the consumers according to education

But it has been clearly observed that Ward 9 is somewhat ahead than ward 14 in terms to education with 60% and 13.8% of the respondents are graduate and done higher studies, whereas the percentage for these two categories in ward 14 is 45% and 3% respectively. But ward 14 have higher number (35%) of higher secondary level consumers in comparison to Ward 9(21.3%).

Distribution of the Consumers according to Age Group:

Age group wise, both wards are somewhat at commonality where 51.16% and 58.38% of the respondents are adults in ward 14 and 9 respectively. Similarly, Ward 14 and Ward 9 both have 30.23% and 22.75% of elderly person (more than 60 years old) and 18.60% and 18.86% of children (below 18 years of age) respectively.

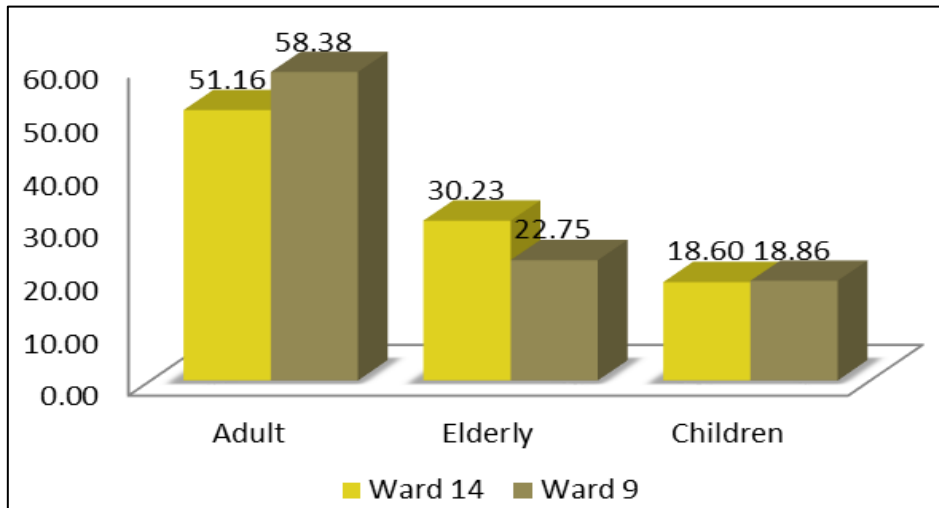


Fig 4: Distribution of the consumers according to age group

Distribution of the Consumers according to Type of Jobs

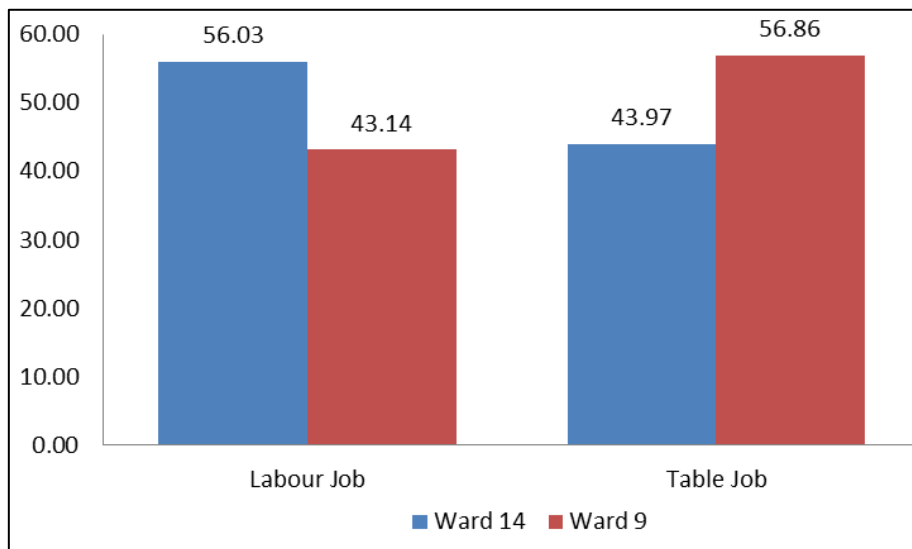


Fig 5: Distribution of the Consumers according to Type of Jobs

The study has found that Ward 9 has more people (around 57%) doing Table job, whereas in ward 14, 56% of the consumers are engaged in jobs that requires physical labour.

Distribution of the consumers according to gender

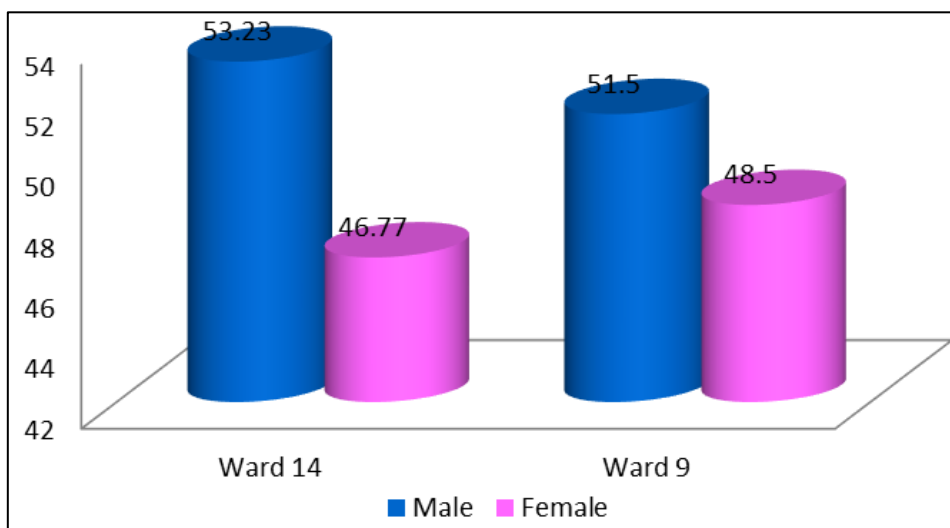


Fig 6: Distribution of the Consumers according to Gender

The study showed that gender difference is a little bit more prominent in Ward 14 than Ward 9. 53.23% of consumers in Ward 14 are men in comparison to 51.50% in Ward 9.

Descriptive Statistics of Independent Variable With Respect To Range, Minimum, Maximum, Mean, Standard Deviation, Variance, and Coefficient of Variance (CV%)

Table 1: Descriptive Statistics of Independent Variable With Respect To Range, Minimum, Maximum, Mean, Standard Deviation, Variance, and Coefficient of Variance (CV%), N=180

Variable	Range	Minimum	Maximum	Mean	Std. Deviation	Variance	CV%
Years of formal education (x ₁)	15.000	6.000	21.000	13.956	2.621	6.870	18.781
Family income(annum) (x ₂)	8446000.000	54000.000	8500000.000	458094.44	770121.79	593087572036.	168.11
No. of Adult (x ₃)	5.000	0.000	5.000	2.183	0.794	0.631	36.383
No. of Elderly (x ₄)	4.000	0.000	4.000	1.072	0.852	0.727	79.499
No. of Children (x ₅)	3.000	0.000	3.000	0.750	0.731	0.535	97.517
Labor job (x ₆)	2.000	0.000	2.000	0.606	0.544	0.296	89.853
Table job (x ₇)	4.000	0.000	4.000	0.606	0.759	0.575	125.264
No. of Males (x ₈)	5.000	1.000	6.000	2.111	0.939	0.881	44.472
No. of Females (x ₉)	5.000	0.000	5.000	1.917	0.864	0.747	45.100
No. of rice meals/day (x ₁₀)	3.000	0.000	3.000	1.767	0.486	0.236	27.484
Geographical orientation (x ₁₂)	2.000	1.000	3.000	1.106	0.342	0.117	30.977
Rice consumed/day (y ₁)	1500.000	0.000	1500.000	582.500	258.214	66674.721	44.329

From the Table 5.1.6, the descriptive statistics of the independent and dependent variables were implemented. For example, highest amount of years of formal education is 21 whereas the lowest is 6 years. On the other hand, average income of the total 180 respondents was Rs. 405098 per

annum.

Correlation Matrix of 12 Independent Variables with Amount of Rice Consumed per Day (y₁)

Table 2: Correlation Matrix of 12 independent variables with amount of rice consumed per day (y₁) N=180

	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	X ₇	X ₈	X ₉	X ₁₀	X ₁₁	X ₁₂	Y ₁
X ₁	1	.289**	.200**	.141	-.032	-.506**	.505**	.136	.159*	.097	-.089	-.206**	.177*
X ₂		1	.260**	.252**	.161*	-.261**	.563**	.398**	.201**	.045	-.041	-.040	.356**
X ₃			1	-.102	.233**	-.181*	.371**	.422**	.519**	.010	-.008	-.133	.485**
X ₄				1	-.105	-.047	.165*	.409**	.357**	.041	-.027	-.065	.390**
X ₅					1	.004	.143	.513**	.373**	-.024	.020	-.028	.426**
X ₆						1	-.772**	-.089	-.142	-.181*	.174*	.105	-.210**
X ₇							1	.336**	.273**	.098	-.089	-.032	.356**
X ₈								1	.163*	.033	-.019	.015	.610**
X ₉									1	.007	-.008	-.234**	.565**
X ₁₀										1	-.988**	-.120	.609**
X ₁₁											1	.124	-.600**
X ₁₂												1	-.187*
Y ₁													1

From the table above it can be observed that all of the independent variables are significantly correlated with the dependent variable, Amount of rice consumed per day (y₁). Out of them, only x₁ and x₁₂ were significant at 0.05 level as

rest of the independent variables are significant at 0.01 level.

Correlation (r) of rice consumed/day (g) (y₁) with 12 causal variables (x₁-x₁₂)

Table 3: Correlation (r) of rice consumed/day (g) (y₁) with 12 causal variables (x₁-x₁₂)

Sl. No.	Independent Variables	'r' Value	Remarks
1	Years of formal education (x ₁)	.177	*
2	Family income(annum) (x ₂)	.356	**
3	Number of Adult (x ₃)	.485	**
4	Number of Elderly (x ₄)	.390	**
5	Number of Children (x ₅)	.426	**
6	Labour job (x ₆)	-.210	**
7	Table job (x ₇)	.356	**
8	Number of Males (x ₈)	.610	**
9	Number of Females (x ₉)	.565	**
10	Number of rice meals/day (x ₁₀)	.609	**
11	Number of flour meals/day (x ₁₁)	-.600	**
12	Geographical orientation (x ₁₂)	-.187	*

**Correlation is significant at the 0.01 level; *Correlation is significant at the 0.05 level; N=180

It was observed from the study that coefficient of correlation (r value) for all the independent variables were significant with the amount of rice consumed per day (y₁) at 0.01 level

excepting Years of formal education (x₁) and Geographical orientation (x₁₂) (significant at 0.05 level).

Consumers' Perception of Four Rice Brands

The perception of consumers regarding four commonly used rice brands was studied through an analysis of the direction and intensity of their attitudes towards the brands. The

measuring device administered was the semantic differential on nine product attributes. Mean score of each attribute of each brand was described in the graphics below.

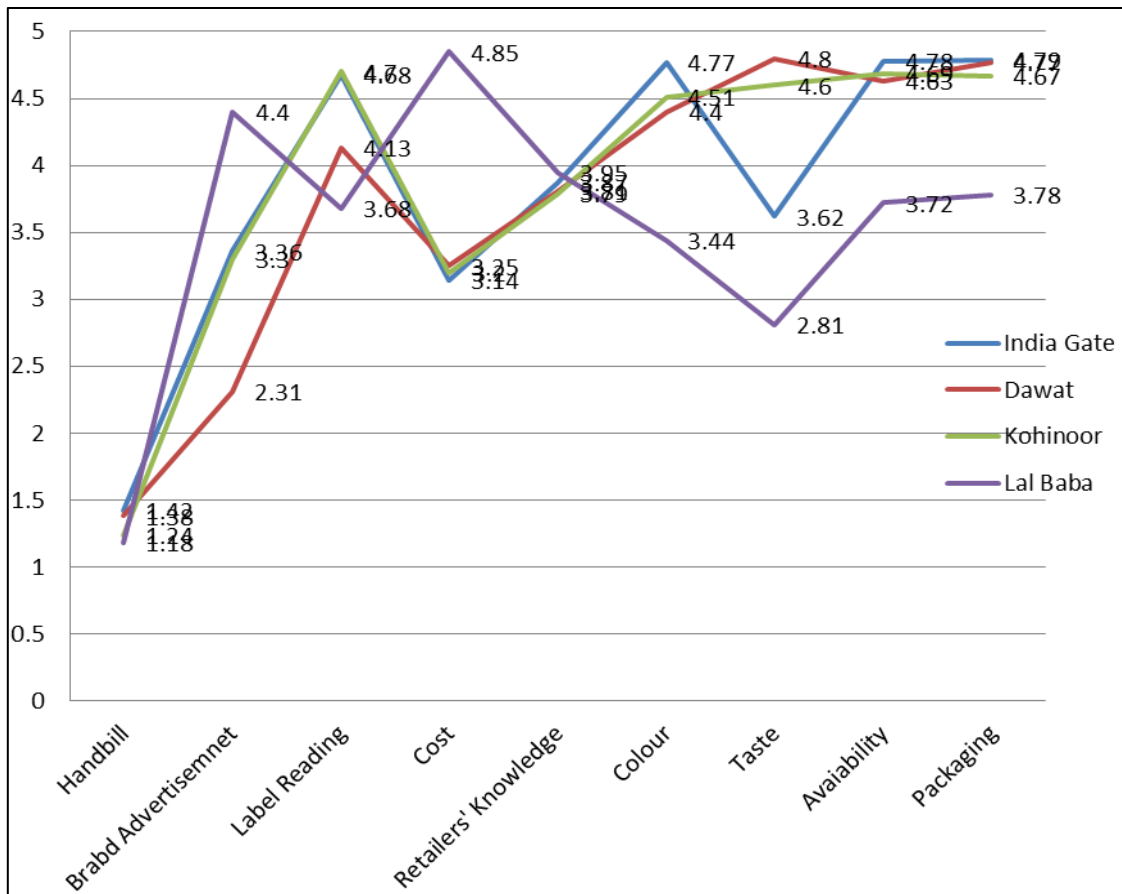


Fig 7: Consumers' Perception of Four Rice Brands

Table 4: Consumers' Perception of Four Rice Brands

	India Gate	Dawat	Kohinoor	Lal Baba
Handbill	1.42	1.38	1.24	1.18
Brand Advertisement	3.36	2.31	3.3	4.4
Label Reading	4.68	4.13	4.7	3.68
Cost	3.14	3.25	3.2	4.85
Retailers' Knowledge	3.87	3.81	3.79	3.95
Colour	4.77	4.4	4.51	3.44
Taste	3.62	4.8	4.6	2.81
Availability	4.78	4.63	4.69	3.72
Packaging	4.79	4.77	4.67	3.78

From the above figure and chart we can figure the consumers' attitude on four rice brands, i.e. India Gate, Dawat, Kohinoor and Lal Baba.

While it's more or less same for the handbill category for the four brands, it significantly differs in case of Brand Advertisement where Lal Baba certainly tops other brands and Dawat is a bit inferior in terms of the category according to the consumers.

In terms of Label Reading, Lal Baba drops significantly whereas India Gate and Kohinoor have more easier to read label.

But in case of cost, consumers value Lal Baba more than any other of the four brands, but it's more or less same for the retailers' knowledge where consumers deemed that the retailers have more or less same amount of knowledge for each of these four rice brands.

Consumers think that the colour of India Gate rice is brighter than any other rice brands where Lal Baba certainly drops in that category.

But both India Gate and Lal Baba certainly drop in terms of taste where consumers deemed that Dawat among all of the four brands have the best taste, with Kohinoor closely following it.

However in terms of availability, it is certainly India Gate that tops the other brands as it is more easily available in the market according to the consumers where Lal Baba is not quite available as all of the other four brands in the market.

In terms of packaging also, Lal Baba is certainly a bit lacking according to the consumers whereas the other three brands, India Gate, Dawat and Kohinoor are neck and neck in this matter.

Brand Expectations and Brand Choices for Rice Brands

Consumers build attitude towards alternative brands by combining their evaluation criteria with their brand belief to arrive at a buying decision. The outcome of this process is ranking of alternative brands in terms of their relative preference position, and the selection of the most preferred brand for most of the occasions.

The 'Expectancy Value Model' which was discussed earlier elaborately stated that the consumer gives weight to every brand belief (B_{ijk}) and its attribute importance (W_{ik}) in arriving at a global attitude (A_{jk}) toward each brand (Kotler, 1976).

In this case, not all of the respondents choose to purchase rice brands and purchase unbranded rice. Hence those respondents

were omitted. So only 115 respondents were considered for this calculation.

Table 5: Brand Expectations and Brand Choices for Rice Brands

Brand Choice Expected Brand	A1	A2	A3	A4	Total	χ^2 Value	Contingency Coefficient (C)	Highest Limit of C	Percentage of E_1A_1
E_1	86	15	13	1	115	558.261**	0.74	0.866	70.65%
E_2	15	84	14	2	115				
E_3	21	11	83	0	115				
E_4	22	0	21	72	115				

Because not all of the 180 respondents choose to buy branded rice and instead buy unbranded rice from local market, they have not been considered for this analysis. Thus only 115 respondents who actually purchase rice among these four brands were considered.

The expectation and choice of 115 consumers on four rice brands i.e. India Gate (i_1), Dawat (i_2), Kohinoor (i_3) and Lal Baba (i_4) are presented in the table. The combination of expectancy and choices depicts the nature of preference and choice made. Out of 16 possible combinations, the E_1A_1 , E_2A_2 , E_3A_3 and E_4A_4 situations described the same preference and actual choice of brand 325 such situations (70.65%) were obtained from the table. It is in congruence with the theory as stated earlier.

X^2 test was done against the hypothesis (H_0) that there was no such association between brand expectancy and brand choice. X^2 value was found significant at 0.01 level which supported that there was indeed an association between them. Then Contingency coefficient was calculated from the χ^2 value to determine the degree of association between actual and expected. It was found very close to the highest limit (0.866), i.e. very high degree of association. So statistically it is proved that expectancy value model is closely approximates (70.65%) the evaluation procedure of consumers in selecting rice brand.

Conclusion

Rice is one of the important staple food which feeds billions of people throughout the world. Rice and wheat are the main cereal crops in India which is consumed by almost the whole nation on a daily basis. Cereals have rich carbohydrates that give ample energy and also provide fats, vitamins and some other essential nutrients. Cereals are probably the greatest source of energy for human beings.

Indian domestic rice market has grown at the CAGR of above 4% from in the last five years. Domestically in India's rice market non-basmati rice holds the more significant portion as compare to basmati rice as the production of basmati rice is limited to only several states but is considered in the premium segment of rice. The unorganised dominated market is now shifting towards an organised market which is growing nearly at a CAGR of 12% consumer awareness, and increasing urbanization are playing an essential role in developing the packed rice market in India. Packed rice market in India is highly dominated by basmati rice and with the new health rice segments like brown rice and organic rice whose demand have increased in recent years.

It has been observed that 39% of the consumers from Ward 14 belong to lower income class whereas 5% of them belong to upper income class. But in Ward 9, 20% are from lower income class and 10% are from upper income class. In both wards, the middle income class consumers are dominant with 56% and 70% respectively.

More than half (51%) of the consumers in both Ward 14 and 9 are graduate whereas 29% of them studied up to higher secondary level. But it has been clearly observed that Ward 9 is somewhat ahead than ward 14 in terms to education with 60% and 13.8% of the respondents are graduate and done higher studies, whereas the percentage for these two categories in ward 14 is 45% and 3% respectively. But ward 14 have higher number (35%) of higher secondary level consumers in comparison to Ward 9(21.3%).

Age group wise, both wards are somewhat at commonality where 51.16% and 58.38% of the respondents are adults in ward 14 and 9 respectively. Similarly, Ward 14 and Ward 9 both have 30.23% and 22.75% of elderly person (more than 60 years old) and 18.60% and 18.86% of children (below 18 years of age) respectively.

It was observed from the study that coefficient of correlation (r value) for all the independent variables were significant with the amount of rice consumed per day (y_1) at 0.01 level excepting Years of formal education (x_1) and Geographical orientation (x_{12}) (significant at 0.05 level).

The expectation and choice of 115 consumers on four rice brands i.e. India Gate (i_1), Dawat (i_2), Kohinoor (i_3) and Lal Baba (i_4) were identified. The combination of expectancy and choices depicted the nature of preference and choice made. Out of 16 possible combinations, the E_1A_1 , E_2A_2 , E_3A_3 and E_4A_4 situations described the same preference and actual choice of brand 325 such situations (70.65%) were obtained. X^2 test was done against the hypothesis (H_0) that there was no such association between brand expectancy and brand choice. X^2 value was found significant at 0.01 level which supported that there was indeed a strong association between them.

In essence, the market research process is the backbone of a product and business launch. Well-done market research helps to understand the marketplace requirements, likes, demands and helps to find competitors with similar products in the market. As a result, this will help to create marketing strategies and will improve the decision-making process. Forming these strategies will improve the position on the market and beat the competitors along the way.

As rice market is ever increasing in India and the business of branded rice product is booming, this type of market information about consumers' behaviour can be really helpful to understand the behaviour and attitude of the consumers towards a particular brand. The producers, processors (rice mills), packaging industries, and marketing channels who have stakes in the whole process will be benefitted from the research. This will help them as decision support mechanism for strategy formulation and to make better decisions. This will ultimately provide feedback to the production sector, i.e. farming gentry and improve their lives as a whole. Hence it justifies the considerations of pluralistic extension to a great extent.

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