

Perception of Maggi Noodles Amongst Delhi Residents: Before and After Controversy

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Abstract: The instant noodles market in India went through an unprecedented crisis with the banning of the country's favourite 2 minute snack: Nestle's Maggi in June 2015. The reports of food regulators confirmed the presence of lead and MSG in excess in Maggi. Maggi enjoys a fan following like no other branded noodles and with the company claiming the noodles safe for consumption, there is a need to know whether decades old association with any brand changes consumers' perception after discovery of health risk and has the perception of Maggi brand changed significantly after the controversy. Also, it is important to know the perception of Maggi across demographic variables like occupation and family income since Maggi has traditionally enjoyed greater popularity amongst students and single working population. The findings show that consumer perception about Maggi has gone from good (before controversy) to bad (after controversy) across all demographic segments of population. However, the service class is more affected by the controversy than students and the higher income class is affected more than the lower income group.

Keywords: Controversy, Income, Maggi, Occupation, Perception.

I. Introduction

Maggi is the flagship product of Nestle- a Swiss multinational with presence in more than 130 countries, selling more than 1 billion products every day. Nestle merged with Maggi -an international brand of seasonings, instant soups and noodles in 1947 and has been its top performing products ever since especially in Malaysia and India.

Nestle's Maggi noodles has been an ultimate success story in India-it is a product embraced by kids, teenagers and parents alike. Maggi's association with India dates back to 1982 when instant food was something unheard of. With its entry, Maggi created an entirely different product line -instant noodles and has seen unprecedented success in a diverse market.

According to the World Instant Noodles Association, India consumed 5,340 million cups or bags of instant noodles through 2014. It counts among the fastest growing markets in the world for the snack, having almost doubled in size since 2010 when it accounted for 2,940 million units. Maggi is estimated to have a 70 per cent share of the market, and contributes nearly 30 per cent to its parent's company Nestle's annual turnover.[1] For nearly three decades, Indians have shared an emotional bond with this product that goes beyond brand loyalty. It is our solution to hunger at any time of day or night. Thus our country was more than in a bit of a shock when UP's Food Safety and Drug Administration proved beyond doubt that Maggi contained more than permissible levels of lead - a highly poisonous substance and MSG (monosodium glutamate). This was a serious blow to the brand which was one of the top 5 trusted brand according to survey by Brand Equity in 2014. What followed was ban on Maggi in several states, dropping of Maggi from the shelves of big retailers and Army issuing an advisory to its canteens against stocking the product.

The company's response to the controversy can be best described as too little too late. The company issued a standardized statement reiterating that the noodles are safe for consumption and the samples have been verified at independent labs. However, the country's apex food regulator FSSAI, ordered Nestle to recall all types of Maggi noodles from the market and imposed ban on its sale.

The Maggi controversy has been a watershed moment in packaged food industry and snowballed into FSSAI being extra cautious and denying approvals to a variety of products. Though controversies related to packaged food is not new - this controversy has redefined the instant noodles market and is likely to change consumer's perception towards all packaged foods per se.

II. Literature Review

Consumer Perception is a process by which a consumer senses the surroundings, analyses the information and assigns meaning to it. The information retained defines the ways to meet his need and wants. Consumer Perception is relevant for marketers as consumers base their decision on perception rather than facts. All the marketing strategies revolve around creating a favorable perception of the product in the minds of the consumers. Controversies surrounding food products and beverages are not new to India.

Pepsi and Coke Fiasco

On August 5th 2003, The Centre for Science and Environment (CSE), an NGO in India issued a press release stating: "12 major cold drink brands sold in and around Delhi contain a deadly cocktail of pesticide residues". [2]. As an aftermath, the government verified these claims through independent testing and banned the sale of these soft drinks. A Survey of Consumer's opinion about the government's decision to ban the soft drinks revealed that most of the consumers were comfortable with the ban and wouldn't risk their health till the companies made amends.[2]

Cadbury Fiasco

In the same year, In October 2003, testing of Cadbury's chocolates in Mumbai revealed the presence of worms. Cadbury which commanded a giant 70% share of the chocolate market in India suffered a big blow as the consumer sentiment was already on the downside due to recent soft drinks controversy. Though the reason behind the infestation was storage problems, yet the consumer trust was shaken up and sales were hit by almost 30 % in the festive season. 'In a survey carried out in 2013 by TUV SUD , a global testing and certification company, amongst a total of 1,063 customers and 116 businesses in India, it was found that Indian consumers accorded higher importance to safety aspect of the product rather than brand loyalty. According to the said survey, around 90 % of the consumers were willing to pay extra for safety assurance. [5]

III. Need Of The Study

Maggi has been the staple quick snack of our country and in the light of the recent controversy, it is pertinent to know whether the perception of the consumers towards the company and the product has changed and whether there has been a change in the consumption pattern of consumers. Our country had embraced this product like no other, so it is important to determine whether there has been a change in the loyalty of the consumer base and to what extent the change in perception is distributed across occupation and income groups. There is a section of consumers who are vocalising their support in the form of videos and jokes and there are some who feel this is just a publicity stunt by the company to come into the limelight. With differing opinion on the controversy , the authors are interested in knowing whether decades of trust can be impaired by allegations of harmful substances in the product consumed and whether these allegations spill over to the competitors and affect consumers' perception of the related products.

IV. Objectives Of Thestudy

The following were the objectives of thestudy:

1. To study perception about Maggi before and after controversy.
2. To study the impact of family Income on perception about Maggi Pre-Postcontroversy.
3. To study the impact of Occupation on perception about Maggi Pre-Post controversy.
4. To find the reasons for change in perception of Maggi post controversy

V. Researchhypothesis

1. Perception about Maggi is equal before and after controversy.
2. Perception about Maggi across different Family Income groups is equal.
3. Perception about Maggi across different occupation groups is equal.

VI. Data And Methodology

A total of 64 samples were selected from different segments of the population. The main demographic targeted were the younger age group as they are more conscious & aware about the brand. Also we tried to focus more on students, lower middle class group and service class who have paucity of time and would be more interested in easy and fast cooking.

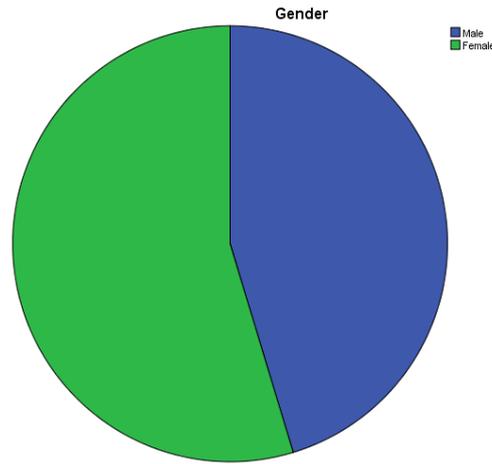
People who have been consuming noodles were better able to answer the questions regarding the taste, price, image, brand & the reasons for their consumption & purchase.

In first our study population was divided into two samples that were found as follows:

Sample 1: (Male)

Sample 2: (Female)

		Frequency	Percent	Valid Percent	Cumulative Percent
VVa lid	Male	29	45.3	45.3	45.3
	Female	35	54.7	54.7	100.0
	Total	64	100.0	100.0	



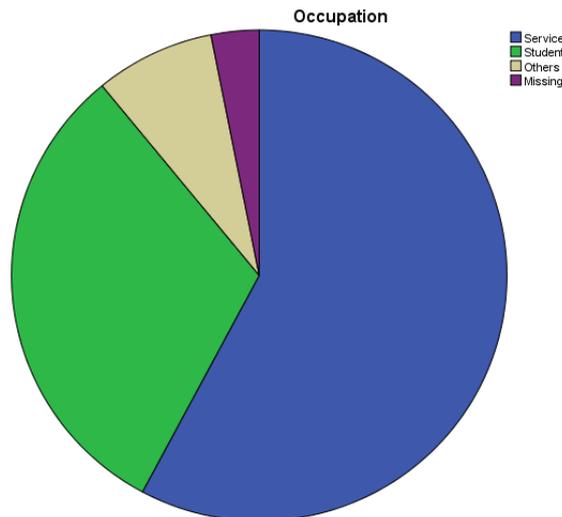
In next part study population was divided into three samples that were found as follows:

Sample 1: (Students)

Sample 2: (Service)

Sample 3: (Others)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Service	37	57.8	59.7	59.7
	Student	20	31.3	32.3	91.9
	Others	5	7.8	8.1	100.0
	Total	62	96.9	100.0	
Missing	System	2	3.1		
Total		64	100.0		

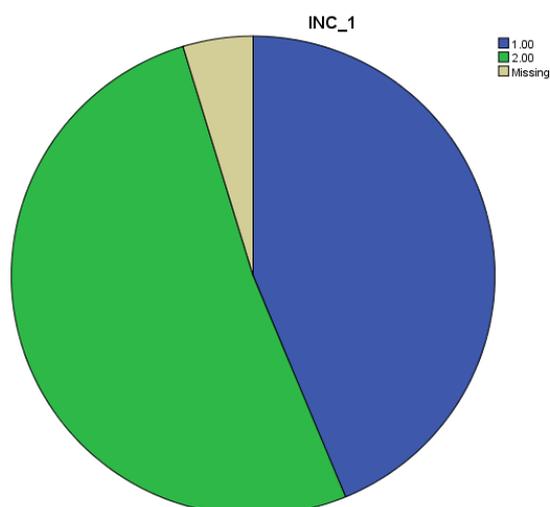


In next this study population was divided into two samples that were found as follows:

Sample 1: (less than equal to 50000 monthly family incomes)

Sample 2: (More than 50000 monthly family income)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1.00	28	43.8	45.9	45.9
	2.00	33	51.6	54.1	100.0
	Total	61	95.3	100.0	
Missing	System	3	4.7		
Total		64	100.0		



Some questionnaires were distributed to respondents and Some questionnaires were administered through face to face interview.

Pretesting

It was pretested (self-administered tests) on a sample of 15 respondents who were chosen as a result of judgment sampling and feedback was considered in finalizing the questionnaire.

Results Ofpretesting

Cronbach Alpha was computed to know the reliability of our data. Cronbach Alpha for internal consistency was .741 which shows that there is reliability and internal consistency.

Dependent And Independent variables

Perception of product has been identified as the dependent variable in this study. It consists of seven dimensions related to Maggi measured before and after controversy.

1. The first aspect is Quality
2. The second aspect is Price (Value for money).
3. The third aspect is Outlook towards Advertisement.
4. The fourth aspect is Reputation of Company.
5. The fifth aspect is Brand Image.
6. The sixth aspect is Proper Disclosure of Product content.
7. The seventh aspect is Involvement with consumers.

Data Analysis method

There were 7 questions in questionnaire to measure perception and each question had 5 options (1=Very bad, 2=Bad, 3=neither, 4=Good, 5= Very good). The questions were combined into one summated scale on which the tests were performed.

Very bad perception = Less than equal to 13,

Bad perception = More than equal to 14 and less than equal to 20,

Good perception = More than equal to 21 and less than equal to 27,

Very Good perception = More than equal to 28

All data were analyzed using the Statistical Package for the Social Sciences (SPSS) 20.0 software. As the number of respondents are more than 30, data is normally distributed and all parametric tests can be applied (Central Limit Theorem).

Statistical Tools used

1. Co-efficient of Reliability
2. Paired, t-test
3. Test of Homogeneity of Variances
4. Arithmetic mean and median

VII. Results And Discussion

In this research, internal consistency analysis was conducted to assess the reliability of this constructed measurement for perception of Maggi before and after controversy.

Table 4: Case Processing Summary

		N	%
Cases	Valid	38	59.4
	Excluded ^a	26	40.6
	Total	64	100.0

a. Listwise deletion based on all variables in the procedure.

Table 5: Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.865	.864	7

The internal consistency analysis yielded Cronbach's alpha coefficients 0.864, which is significantly higher than the 0.7. Hence, based on the validation of construct reliability it is concluded that research construct of Perception is reliable in this study.

Perception About Maggi Pre-Post Controversy

As in our study we want to capture perception about Maggi Pre&Post controversy so Paired “T” test is applied. According to our scale, MeanscoreofPre- controversy perception about Maggi is 27.4074 and Standard Deviation is 4.4953. This means Pre- controversy perception about Maggi is very good. MeanscoreofPost- controversy perception about Maggi is 16.4815 and Standard Deviation is 6.39204. This means Post- controversy perception about Maggi is bad.

Table 6 : Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
PPair 1	Per_Maggi_BeforeControversy	27.4074	54	4.49536	.61174
	Per_Maggi_AfterControversy	16.4815	54	6.39204	.86985

Table 7 : Paired Samples Test

		Paired Differences				t	Df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Per_Maggi_Before Controversy - Per_Maggi_After Controversy	10.925	6.8428	.93119	9.0581	12.79366	11.733	3	.000

At significance level of 1%, Paired t-test result shows p value is less than 1%. We can say there is statistically significant difference in perception about Maggi Pre-Post controversy at a significance level of 1%.

Perception About Maggi Pre-Post Controversy Across Different Family Income Groups

In this part of study we want to capture Family income effect on perception about Maggi Pre-Post controversy so Paired “T” test is applied. Firstly, Paired t test was run on the respondents whose family income is less than equal to Rs.50000. According to our scale, MeanscoreofPre- controversy perception about Maggi is 26.6250 and Standard Deviation is 3.33379. This means Pre-controversy perception about Maggi is good. MeanscoreofPost- controversy perception about Maggi is 17.2917 and Standard Deviation is 6.23091. This means Post- controversy perception about Maggi is bad.

Table 8 : Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Per_Maggi_Before Controversy	26.6250	24	3.33379	.68051
	Per_Maggi_After Controversy	17.2917	24	6.23091	1.27188

Table 9: Paired Samples Test

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Pair 1	Per_Maggi_Before Controversy - Per_Maggi_After Controversy	9.3333	6.5518	1.3117	7.7100	11.0166	22	.000	

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PP air 1	Per_Maggi_BeforeControversy - Per_Maggi_AfterControversy	9.3333	7.22716	1.47524	6.28157	12.38510	6.327	23	.000
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At significance level of 1%, Paired t-test result shows p value is less than 1%. We can say there is statistically significant difference in perception about Maggi Pre-Post controversy of group whose income in less than equal to Rs. 50000 at a significance level of 1%. On the basis of mean value we can conclude that respondent belonging to this group have good perception before controversy which turned bad after controversy.

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Per_Maggi_BeforeContr oversy	28.1071	28	5.39093	1.01879
	Per_Maggi_AfterContro versy	15.9286	28	6.77648	1.28063

Secondly, Paired t-test was run on the respondents whose family income is more than Rs.50000. According to our scale, Mean score of Pre-controversy perception about Maggi is 28.1071 and Standard Deviation is 5.39093. This means Pre-controversy perception about Maggi is very good. Mean score of Post-controversy perception about Maggi is 15.9286 and Standard Deviation is 6.77648. This means Post-controversy perception about Maggi is bad.

		Paired Differences				t	df	Sig. (2-tailed)	
Pair 1	Per_Maggi_BeforeControversyPer_Maggi_AfterControversy	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
		12.1785	6.57185	1.24196	9.63028	14.72687	9.806	27	.000

At significance level of 1%, Paired t-test result shows p value is less than 1%. We can say there is statistically significant difference in perception about Maggi Pre-Post controversy of group whose income is more than Rs. 50000 at a significance level of 1%. On the basis of mean value, we can conclude that respondent belonging to this group had good perception before controversy which turned bad after controversy. Lastly, mean difference (9.33333) in first group (family income less than equal to 50000) is less than mean difference (12.17857) in second group (family income more than 50000). It means controversy has affected the higher income group more.

Perception About Maggi Pre-Post Controversy Across Occupation

In this part of study we want to capture the effect of Occupation on perception about Maggi Pre-Post controversy, so Paired “T” test is applied. Firstly, Paired t-test was run on salaried individuals. According to our scale, Mean score of Pre-controversy perception about Maggi is 27.4063 and Standard Deviation is 4.613196. This means Pre-controversy perception about Maggi is good. Mean score of Post-controversy perception about Maggi is 15.3125 and Standard Deviation is 5.899. This means Post-controversy perception about Maggi amongst service class turned bad.

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Per_Maggi_BeforeContr oversy	27.4063	32	4.61316	.81550
	Per_Maggi_AfterContro versy	15.3125	32	5.89936	1.04287

		Paired Differences				t	df	Sig. (2-tailed)	
Pair 1	Per_Maggi_BeforeControversyPer_Maggi_AfterControversy	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
		12.1785	6.57185	1.24196	9.63028	14.72687	9.806	27	.000

Table 15: Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		MMean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
PP air 1	Per_Maggi_Before ControversyPer_M aggi_AfterControv ersy	9.58824	7.56686	1.83523	5.69772	13.47876	5.225	16	.000
PP air 1	Per_Maggi_Before ControversyPer_Ma ggi_AfterControver sy	12.0937	6.42254	1.13536	9.77818	14.40932	10.652	31	.000

At significance level of 1%, Paired t-test result shows p value is less than 1%. We can say there is statistically significant difference in perception about Maggi Pre-Post controversy of service persons. On the basis of mean value, we can conclude that respondent belonging to this group had good perception before controversy which turned bad after controversy.

Table 14: Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Per_Maggi_BeforeContr oversy	27.9412	17	4.24957	1.03067
	Per_Maggi_AfterContro versy	18.3529	17	7.33946	1.78008

Secondly, Paired t-test was run on the Students. According to our scale, Mean score of Pre-controversy perception about Maggi is 27.9412 and Standard Deviation is 4.2495. This means Pre-controversy perception about Maggi is very good. Mean score of Post-controversy perception about Maggi is 18.3529 and Standard Deviation is 7.3394. This means Post-controversy perception about Maggi is bad of this group.

At significance level of 1%, Paired t-test result shows p value is less than 1%. We can say there is statistically significant difference in perception about Maggi Pre-Post controversy of students at a significance level of 1%. On the basis of mean value, we can conclude that respondent belonging to this group have good perception before controversy which turned bad after controversy. Lastly mean difference (12.0937) in first group (Service) is less than mean difference (9.58824) in second group (students). It means controversy has affected the serviced class people more than the students.

Reason Of Association With Maggi Before Controversy

There were 9 questions relating to reasons for associating with Maggi before controversy and disassociating after controversy.

Table 16 : Reasons before controversy

		Reason of associati on with Maggi Before Controve rsy w.r.t Easy to Cook	Reason of associati on with Maggi Before Controve rsy w.r.t Variety	Reason of associati on with Maggi Before Controve rsy w.r.t High quality	Reason of associati on with Maggi Before Controve rsy w.r.t Lack of substitut es	Reason of associati on with Maggi Before Controve rsy w.r.t Advertis ement	Reason of associati on with Maggi Before Controve rsy w.r.t Taste	Reason of associati on with Maggi Before Controve rsy w.r.t Easy Availabil ity	Reason of associati on with Maggi Before Controve rsy w.r.t Healthy Food	Reason of associati on with Maggi Before Controve rsy w.r.t Brand loyalty
N	VV alid	59	59	59	58	57	58	58	59	58
	MM issin g	5	5	5	6	7	6	6	5	6
Mean		4.6102	3.7288	3.7797	3.3793	3.7895	4.0690	4.3793	2.9492	3.7414
Median		5.0000	4.0000	4.0000	3.0000	4.0000	4.0000	5.0000	3.0000	4.0000
Mode		5.00	4.00	4.00	2.00 ^a	4.00	4.00	5.00	3.00	4.00

a. Multiple modes exist. The smallest value is shown

Table 17 : Reasons After Controversy

		Reason of association with Maggi After Controversy w.r.t Easy to Cook	Reason of association with Maggi After Controversy w.r.t Variety	Reason of association with Maggi After Controversy w.r.t High quality	Reason of association with Maggi After Controversy w.r.t Lack of substitutes	Reason of association with Maggi After Controversy w.r.t Advertisement	Reason of association with Maggi After Controversy w.r.t Taste	Reason of association with Maggi After Controversy w.r.t Easy Availability	Reason of association with Maggi After Controversy w.r.t Healthy Food	Reason of association with Maggi After Controversy w.r.t Brand loyalty
N	VValid	55	55	56	54	53	54	54	56	55
	MMissing	9	9	8	10	11	10	10	8	9
Mean		4.2909	3.2182	2.4286	3.0000	2.5472	3.2963	2.8704	1.8571	2.2545
Median		5.0000	3.0000	2.0000	3.0000	2.0000	3.0000	3.0000	1.0000	2.0000
Mode		5.00	3.00	2.00 ^a	3.00	2.00	4.00 ^a	1.00	1.00	1.00

a. Multiple modes exist. The smallest value is shown

On the basis of mode value result in Table 16 , there were various reasons why consumers associated with Maggi like ease of cooking Variants, quality, taste, health benefits, brand royalty, easy availability etc. On the basis of modevalue result showing in Table 17, there are various reasons why they don't want to associate with Maggi like Quality: After knowing the news related to lead content in Maggi they feel Quality is very low. Secondly, Lack of substitutes: Consumers feel that the kind of satisfaction offered by Maggi is not replaceable so they haven't substituted it. Thirdly, before controversy people felt good after watching Maggi advertisement but now they are not so comfortable with the same. Fourthly after controversy people also find low availability of Maggi which is due to the ban imposed on its sale. People no longer found it healthy given the alleged presence of harmful substances. Lastly, in the light of controversy, brand loyalty has disappeared.

VIII. Conclusion

The research confirms the unfavorable general consumer sentiment about instant noodles. Overall the perception of Maggi as a brand has gone from very good to bad which indicates that product safety matters more than years of loyal brand association. Also, the controversy has affected the serviced class individuals more than the students which indicate the fact that many students living outside of their homes and being loyal consumers are still not willing to accept the fact of their favorite noodles contains harmful substances. Also, the higher income group has been more affected by the controversy in terms of magnitude of bad perception as compared to lower income groups which goes to show that while the upper segment of the income class can still afford to throw off their stock of Maggi noodles, the lower income class is still not ready to discard their favorite snack.

IX. Limitations Of The Study

The sample size is small and the study is restricted to Delhi residents so the results can't be said to mirror national sentiment.

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