

## A RESEARCH PAPER ON THE MAGGI MUDDLE CASE AND ITS IMPACT ON THE PSYCHE OF THE INDIAN CONSUMERS (18 TO 24 YEARS)

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### ABSTRACT

The journey of Maggi in India over the last 33 years has been quite phenomenal.

From being a foreign brand who found it difficult to establish it in the minds of the consumers to becoming one that eventually occupied their hearts, Maggi pioneered and became the leader in the Instant Foods Category. Its strategic marketing techniques, in-depth market analysis, and the ability to maintain strong stakeholder relationships contributed towards boosting the brand's growth.

However, in 2015, the prosperously growing brand got a major jolt as unhealthy levels of lead and MSG got detected in sample of its most popular product - the noodles by FSSAI. Maggi got ripped apart for months, and the Bombay High Court banned its production and distribution within the country. Subsequently Diwali saw the homecoming of the warrior, as Maggi Noodles passed all tests victoriously.

This paper covers the massacre that Maggi went through in 2015. It studies the effects of the crisis on the psyche of its target audience, specifically falling in the age group of 18-24 years, and the change in their buying behaviour. Reports say that after re-launch Maggi is leading the Instant Noodles Category, but whether it will be able to capture back its old market share of atleast 75% (with respect to the above mentioned target group) is what this research work aims to find.

**KEYWORDS:** Consumers, Crisis, FSSAI, Lead, Maggi Muddle, Maggi Noodles, Market Share, MSG, Nestlé India

### INTRODUCTION

Maggi is a brand that, for sure, needs no introduction!

“What Xerox is to photocopier and Colgate to toothpaste, Maggi is to noodles in India.” (The Economics Times, 2003)<sup>[1]</sup>

Nestlé's Maggi Noodles is one of those very few products that have remained the all-time-favourite of consumers in India. Reports from the past have shown that Maggi has a high recall value and captures the topmost position in the minds of the consumers. People have associated with it, entwining most memorable experiences along with it. It has always fit the saying – “*of the people, by the people and for the people*” in India.

However, this apparently ceased to exist in 2015 when the biggest PR crisis hit the brand. It all started when

FSSAI found unhealthy levels of lead and MSG in samples of Maggi Noodles, while its packets for years had carried stamps saying 'No Added MSG'. What followed next was a ban on production and distribution of nine variants of the product in the country in June 2015.

The pace of the crisis, which had been building up, got accelerated when the brand chose to send out robotic messages to its consumers, who for over 33 years had developed an emotional relationship with it. Thus, from one of the most trusted names in the market Maggi became an unreliable and unsafe brand overnight.

However, by November 2015, things started to look brighter as Maggi Noodles re-launched its products into the market, after getting clean chits from various organizations.

This thesis is an in-depth study of the brand Maggi and the crisis that hit it during the second half of 2015. Two specific problems that have been identified during the research are as follows –

- How has the Maggi Muddle case affected the psyche of its consumer base (falling in the age group of 18 to 24 years) and what has been its impact on their purchasing decisions and buying behaviour?
- Post the re-launch phase, will Maggi Noodles be able to capture its market share of at least 75% (in its target age group of 18 to 24 years in India) in the Instant Noodles Category?

## LITERATURE REVIEW

The crisis that hit Maggi in 2015 in India has been described as one of the worst controversies associated with the Food Category. Food is considered to be a very sensitive issue, and with the outbreak of the Maggi Muddle controversy, the brand left its various stakeholders wrapped up in utmost fear and doubt.

Garg (2015, pp. 48-50)<sup>[2]</sup> studied how the crisis affected Maggi's employees, suppliers, share market, consumers, brand ambassadors, and competitors. Due to the ban on the production and distribution of Maggi Noodles around 1500 employees got affected. Paras Spices Ltd., who's Nestlé Maggi was a vital client (contributing 45% of the total sales volume), received a massive jolt. Consumers became all the more conscious about what they were consuming and they reportedly started to check the ingredients of all consumables before buying.

Almost all the analysts and researchers who have studied the crisis are of the opinion that the crisis could have been very well averted if the brand, instead of staying in complete denial of the crisis, had strategically communicated to its various stakeholders to install their trust on the brand. Kanteti(2015, p. 1) said that – "The big disaster of Maggi is not because of lead, not because of MSG, it is because of "NO COMMUNICATION""<sup>[3]</sup>

## MAGGI RIPPLES

### Timeline of Maggi Muddle in India

Following is the timeline of Maggi Muddle that happened in India in the latter half of 2015 –

#### May, 2015

FSSAI regulators found unhealthy levels of MSG and 17 times more than the permitted level of lead in samples of Maggi Noodles in Barabanki, a district in Uttar Pradesh, India.

**3rd June, 2015**

Maggi Noodle got banned in New Delhi by the government for 15 days.<sup>[4]</sup>

Nestlé India created a page on its website, that is still accessible, with the title - 'MAGGI Noodles in India: Your Questions Answered' <sup>[5]</sup> answering several questions about the product.

**4th June, 2015**

The FDA of Gujarat banned Maggi Noodles for 30 days after 27 out of 39 samples showed objectionably high amounts of lead. Meanwhile the state of Assam put a complete ban on Maggi Xtra-Delicious Magical Masala Noodles variant for a month's period. Future Group's Nilgiris, Easyday, and Big Bazaar, banned the sale of the products too. This was followed by Maggi being banned in more than 5 states including Tamil Nadu.

**5th June, 2015**

Generations have grown up loving Maggi's signature tastemaker - the masala. A sample of 13 tastemaker sachets was tested by Delhi authorities out of which 10 were found to have excess lead content. The sample packets collected from Uttar Pradesh had 17.2 ppm of lead.

The food items produced under the banner of Maggi were banned in Andhra Pradesh. FSSAI called for an official recall of all the nine varieties of Maggi Instant Noodles and Maggi Oats Masala Noodles all over India.

Maggi Noodles was taken off the shelves as a country wide ban was called in by FSSAI who said that the products were "unsafe and hazardous"<sup>[6]</sup> for consumption.

**6th June, 2015**

Maggi noodle was banned for an unlimited period of time by the Central Government of India.

**August, 2015**

Tests conducted in US labs found no unhealthy levels of lead in the samples of Maggi Noodles.

**13th August, 2015**

The Bombay High Court removed the ban from over Maggi Noodles temporarily, and questioned the tests conducted previously that led to the ban of the product. Such tests, however, had not been conducted in laboratories accredited to NABL.

**October, 2015**

A sting operation conducted by the India Today Television team on FSSAI brought to light how FSSAI passed samples by conducting no tests in exchange of bribes.

**19th October, 2015**

The ban on Maggi Noodles was officially uplifted by Bombay High Court.

**9th November, 2015**

The ban was removed from over Maggi Noodles in India and Maggi was re-launched in the country amidst Diwali

celebrations. The company started its distribution in all the states except for Nagaland and Tripura.

### 30th November, 2015

Maggi Noodles resumed manufacturing in all the five plants in India – Moga in Punjab, Tahliwal and Pantnagar in Himachal Pradesh, Nanjangud in Karnataka and Bicholim in Goa.

### 11th December, 2015

FSSAI filed an appeal to the Supreme Court against the upliftment of the ban from over Maggi Noodles. They argued that the High Court had erred by asking the company to provide fresh packets of Maggi Noodles instead of asking a third party to do so. It was concluded by the bench that they would analyse the arguments given by FSSAI on 13th January, 2016.

### 13th January, 2016

After analyzing the arguments given by FSSAI, the Supreme Court bench decided not to pass any interim order. However, it ordered the government laboratory operating in Mysuru to conduct fresh tests on Maggi Noodles during the next eight weeks. The next hearing has been posted for 5th April, 2016.

### February, 2016

Maggi Noodles re-launched its second variety of Chicken Flavoured Instant Noodles which are available for sale on the online retail platform of Snapdeal as well. It has planned to re-launch some of the other seven varieties of noodles soon.

### Impact of the Ban on Maggi Noodles

Following is an elaboration of how the ban imposed on Maggi Noodles affected the various stakeholders of Nestlé and Maggi Noodles.

### Impact on Profits, Sales, Share Price and Stocks

Soon after the ban on Maggi, Nestlé (India) saw its profits drop to a negative level. At the end of quarter 2 of the financial year (i.e. 30th June, 2015), Nestlé incurred a net loss amounting to Rs 64.40 crores as shown in Figure (1)<sup>[7]</sup> below. That was the first time Nestlé had faced such a lost in a quarter in the last 17 years. Maggi holds 20% of Nestlé's product portfolio.

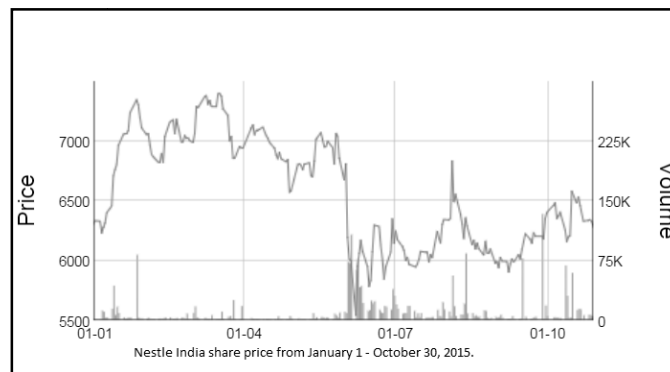


(Source: indianexpress.com, 2015)

Figure 1: Nestlé Incurs a Net Loss of 64.4 Crores in Quarter 2 of 2015

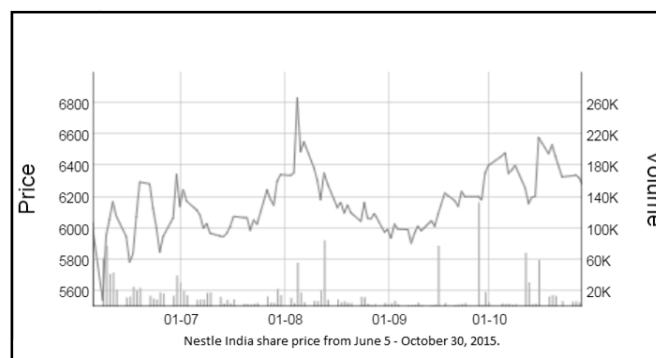
In the third quarter that ended on 30<sup>th</sup> September, 2015, Nestlé India's profit went down by 60% from what it was a year before. The profit amounted to Rs.124.2 crores only and this fall in profit was attributed to the fall in sales of Maggi Noodles.<sup>[8]</sup>

No sooner had the crisis hit Maggi Noodles, the share price of Nestlé India slumped down to the lowest level of the year i.e. to Rs 5,539.8. In the next two months, when situations for Maggi Noodles started to improve, the company reached its highest share price of the year, i.e. Rs 6,831.95 per share on 5<sup>th</sup> August, 2015.<sup>[9]</sup> Figure (2)<sup>[9]</sup> and (3)<sup>[9]</sup> shows the changes in the share price of Nestlé India in 2015.



(Source: dnaindia.com, 2015)

**Figure 2: Fluctuations in the Share Prices of Nestlé India from 1<sup>st</sup> January to 30<sup>th</sup> October, 2015**



(Source: dnaindia.com, 2015)

**Figure 3: Fluctuations in the Share Prices of Nestlé India from 5<sup>th</sup> June to 30<sup>th</sup> October, 2015**

The Ministry of Corporate Affairs put a fine of Rs 640 crores on Nestlé India. The suit was filed by the government before the consumer forum of NCDRC. 284.45 crores and 355.5 crores were charged for basic and punitive damages respectively.

### Impact on Stocks

Stocks amounting to Rs. 320 crores of Maggi Noodles were removed from the shelves and about Rs 20 crores was paid to a cement factory in Chandrapur in Maharashtra to burn them.

### Impact on Organizational Structure

The then Managing Director of Nestlé India, Etienne Benet was asked to resign on 24<sup>th</sup> July, 2015. Suresh

Narayanan in August, 2015 took over as Nestlé India's new Managing Director. He was later appointed as the Chairman as well after he announced the progressive results from the third quarter of Nestlé India.

### **Impact on the Brand Ambassadors**

According to FSSAI's Sections 52 and 53, people involved in advertisements that are misleading and the sale of misbranded food should be punished.

Sudhir Kumar Ojha, a lawyer from a district court in Muzaffarpur, who claimed to fall ill after consuming Maggi Noodles lodged FIRs against Amitabh Bachchan, PrietyZinta and Madhuri Dixit, the Brand Ambassadors of Maggi Noodles.

### **Impact on Consumers**

Given that from the very beginning Maggi has communicated with its various target audience groups at a personal level, it came as a shock to the consumers when the brand chose to reply to their queries in the most mechanical way. With the speculations filling the air, while some consumers felt that there was a breach of trust, others continued to support the brand.

### **Impact on Competitors**

With the ban on the production and distribution of the market leader in the Instant Noodles Category in India, Maggi Noodles's competitors found much scope to grow, while new brands also got a chance to enter into the market.

ITC's Yipee Noodles that had a meagre 10 to 12% share in the market before the country-wide ban not only became famous after launching its campaigns that promised quality and safety, but its market share increased to 50% during the ban period.

Wai-Wai Noodles, manufactured by Chaudhary Group (CG) that is based in Lalitpur in Nepal, took to aggressive marketing strategies to increase its brand visibility in the market.

During this time what came up as a surprise was the launch of Patanjali's Atta Noodles. Based on the changing culinary habits of the people and the move towards healthiness, Patanjali was formulated.

### **The Epitome of PR Disaster**

Though the Maggi Noodles controversy broke out in 2015, warnings had already been given in 2014 when tests conducted in Kolkata Central Food Laboratory with reports showed high quantities of lead and MSG in Maggi. Despite this report and continuous FDA warnings, Maggi did not feel important to take corrective actions or have a PR strategy ready. Instead it assumed that like any other controversy that happens in India, this one will also fade out from the minds of the people and no legal action will be taken against them. Nestlé also took the liberty of thinking that the government too will not be interested.

When Maggi Noodles fell in soup in 2015, everyone expected the brand to stand up and speak for itself. However, the brand chose to remain silent creating all the more uncertainty.

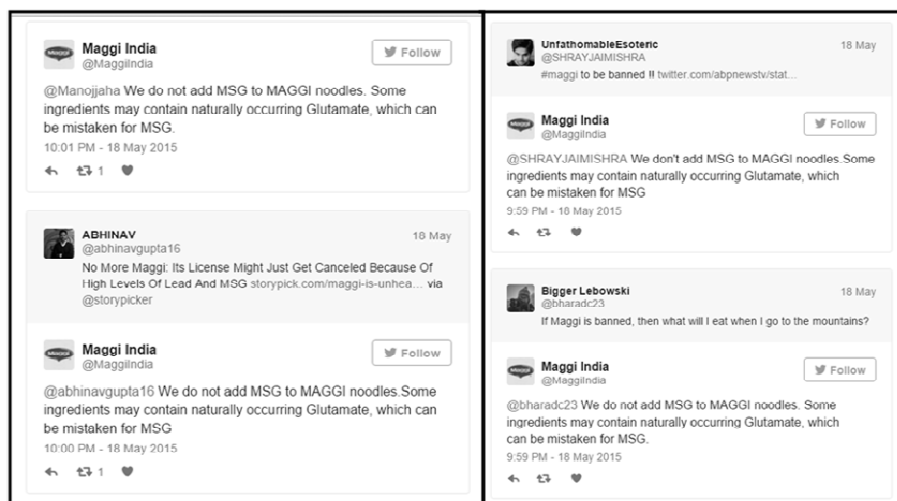
For a big Food Manufacturing Giant like Nestlé, it was expected that the CEO of the company would respond to the situation instantly, but that did not happen. Crisis managers say that Nestlé instead of being inactive could have

voluntarily recalled the product from the market. This would have helped the company to vouch their stand for the safety of Indians. Whatever communication happened from the side of the brand reflected dearth of empathy, avoidance of honesty and disregard of emotions and sentiments of the Indian consumers.

Journalists from various publications tried to contact Nestlé it turned out to be arrogant by not answering their queries.

With the advent of social media it doesn't take much time to mar the reputation of a brand. However, Maggi did not take social media marketing in a serious way to manage the crisis. When people raised their queries on various social media channels, what they got in return for weeks were heavy PDF files. The brand made a laughing stock of itself when it posted computer generated replies to anything asked. Figure (4)<sup>[10]</sup> below provides a glimpse of the same. The brand that over the years had built an emotional relationship with its customers refused to connect with them.

An image massacre on such a large scale calls for immediate acknowledgement from the side of the company. However, the company website never acknowledged this issue. They rather chose to stay in complete denial.



(Source: need2brand.com, 2015)

**Figure 4: Computer Generated Replies by Maggi India on its Twitter Handle**

## INITIATIVES TO PUT MAGGI NOODLES BACK ON THE RIGHT TRACKS

### PR Initiatives

Realizing that the conventional attitude of ignoring a crisis and letting it subside on its own no longer works in the current times, a week after FSSAI recalled Maggi Noodles, Nestlé India looped in New York-based Burson-Marsteller's subsidiary Genesis Burson-Marsteller to manage the crisis. The entire crisis was monitored by Principal & Co-founder of Genesis-Burson-Marsteller, Vice Chair, Asia-Pacific region - PremaSagar with a team of three to four executives.

The Global Chief Executive of Nestlé, Paul Bulcke flew down on 4<sup>th</sup> June, 2015 to handle the issue in India. This was followed by continuous meetings of the company with various government authorities. Eventually Nestlé also answered all the queries of the journalists and took them to its oldest manufacturing unit in India i.e. at Moga, Punjab. This factory, that also has the R&D centre, displayed its production quality standards to the journalists.

The mistake that Nestlé India had done earlier was rectified as the company set up active communication channels with 24x7 customer service that included telephonic communication, digital and social media. The aim of such a set up was to take queries from customers, engage with them, and provide correct and relevant information to the people. All conversations on the social media platforms were monitored. This time Maggi Noodles ensured that they reached out to its fans with the same emotional touch like before. So when consumers after watching the ad campaign of 'Miss You Maggi' tweeted or sent a personal message to Maggi Noodles via different social channels, the brand ensured that it replied back in a warm manner.

### **Marketing Campaigns Created During the Ban**

Maggi, in August 2015, came up with the 'Miss You Maggi' Ad campaign on Youtube, Facebook, and Twitter. Targeting its younger target audience groups, these commercials were crafted to show how vital a snack Maggi was and how youngsters miss the product. Featuring three guys in three different commercials, the brand did not talk about safety and health. They instead took an emotional route to make the viewer's feel nostalgic about the brand.

Further ads were also made where a girl talks about how her dad once cooked Maggi Noodles, but now with the ban on Maggi she is sceptical if he will be confident enough to cook again. Another ad showed how due to lack of Maggi Noodles in the life of a young girl and her boyfriend, they have frequent fights over cooking.

### **IMPACT OF MAGGI MUDDLE ON THE PSYCHE OF INDIAN CONSUMERS (18-24 YEARS)**

This section of the paper covers an intensive research work to find answers to two specific problems surrounding Maggi Noodles that have been raised at the start of the paper. They are as follows –

- How has the Maggi Muddle case affected the psyche of its consumer base (falling in the age group of 18 to 24 years) and what has been its impact on their purchasing decisions and buying behaviour?
- Post the re-launch phase, will Maggi Noodles be able to capture its market share of at least 75% (in its target age group of 18 to 24 years in India) in the Instant Noodles Category?

Keeping in mind the feasibility of the research work, the research work is limited to the Maggi Noodle's target audience group of 18 to 24 years that includes College/University going students and newly joined professionals. This group has one of the highest numbers of consumers of Maggi Noodles.

### **Research Work**

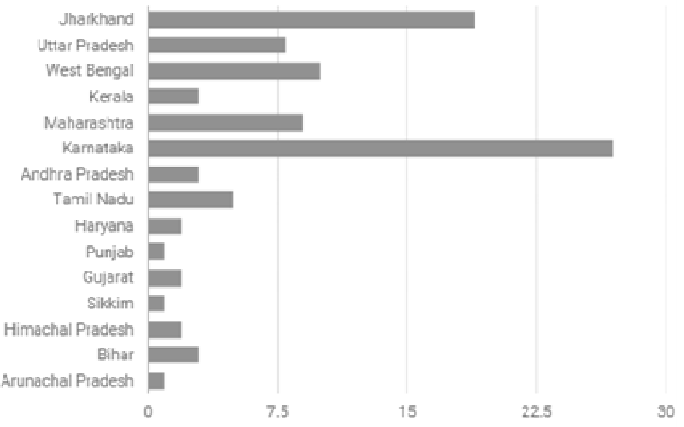
In order to understand how the Maggi Muddle case affected the psyche of its consumer base (falling in the age group of 18 to 24 years) and what has been its impact on their purchasing decisions and buying behaviour, primary data has been collected by sending out survey questionnaire to the target audience group from 5<sup>th</sup> March to 9<sup>th</sup> March, 2016.

The sampling technique used is Stratification followed by SRSWoR. The entire population of India had been broken down into strata, according to the target audience groups of MaggiNoodles. Then the stratum that holds people falling in the age group of 18 – 24 years from middle class families was selected. After this the sampling method of SRSWoR was applied in the stratum, where the survey questionnaire was randomly sent out the consumers scattered all over India.



**Survey**

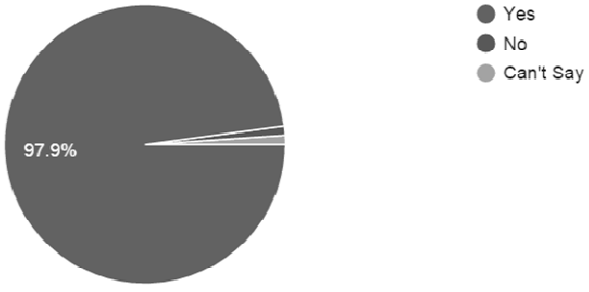
The sample size generated after conducting the primary research was 96, out of which 49 people were females and 47 respondents were males. 54.2% of the sample turned out to be students, while the rest 45.8% were working professionals. The geographical distribution of the sample units can be summarized by the graph in Figure (5).



**Figure 5: Geographical Details of the Respondents**

**SURVEY QUESTIONS AND INFERENCES**

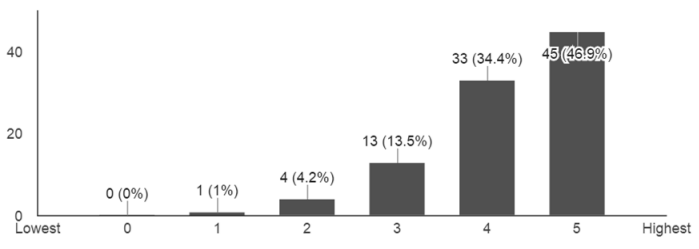
**Question: Have You Heard About the Maggi Muddle Case After Which Maggi Noodle was Banned in India In 2015?**



**Figure 6: Proportion of Respondents who heard About the Maggi Muddle Case**

Figure (6) reveals that 97.9% of the respondents said that they had heard about the Maggi Muddle case. Given the above data and the fact that the sample units come from various parts of the country it can be re-instated that the controversy had happened on a massive scale.

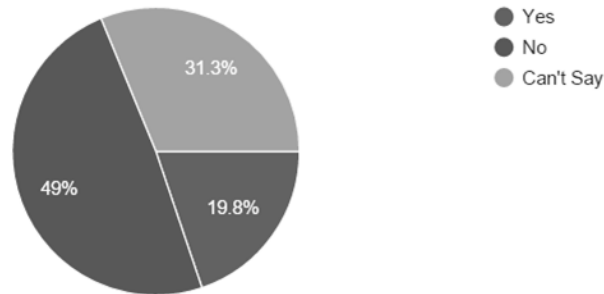
**Question: How Much Did You Trust the Brand Maggi Before the Maggi Muddle Case? (Rate on a Scale of 5)**



**Figure 7: Maggi Rated on a Scale of 5 In Terms of Trust Factor before the Crisis**

Figure (7) shows 46.9% of the sample giving Maggi Noodles 5 out of 5 on the trust scale. 2014's Annual Brand Equity Survey showed that Maggi had made it to the category of Top Five Most Trusted Brands in India<sup>[11]</sup>. Aggregating all the ratings from survey, the average trust score came up to 4.22 which again reinstates the fact that Maggi was one of the most trusted brands in India till before the crisis set in.

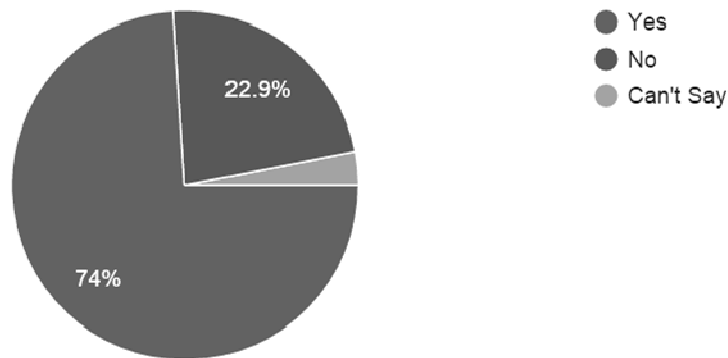
**Question: Do You Believe Maggi Noodles Contained Unhealthy Levels of Lead and MSG up until 2015?**



**Figure 8: Proportion of Respondents Who Believed Maggi Noodles to Contain Unhealthy Levels of Lead and MSG Up Until 2015**

From Figure (8) it can be seen that 49% of the sample has said that they didn't believe Maggi Noodles to contain unhealthy levels of lead and MSG up until 2015. However, the opinions of the rest of the respondents can be seen to be divided between the other two options. 19.8% of the people said that they believed Maggi to contain unhealthy levels of lead and MSG while 31.3% were sceptical and thus couldn't decide.

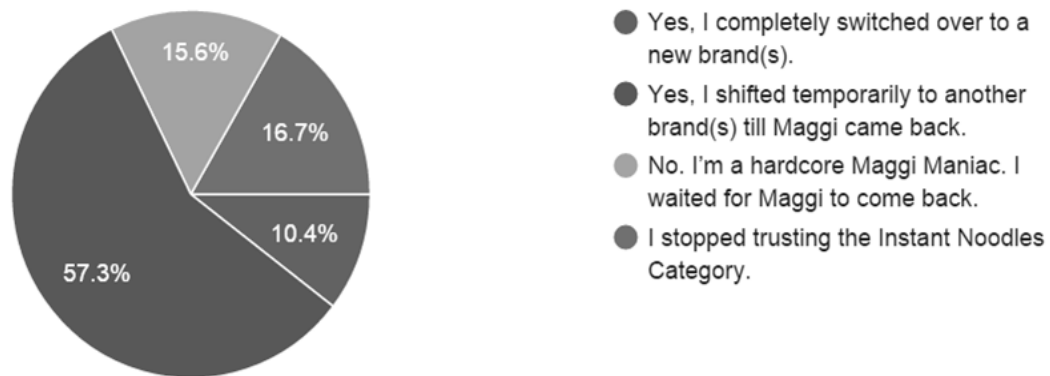
**Question: Did You Miss Maggi Noodles during all Those Months when it was not available in the Market?**



**Figure 9: Proportion of Respondents Who Missed Maggi Noodles during the Ban**

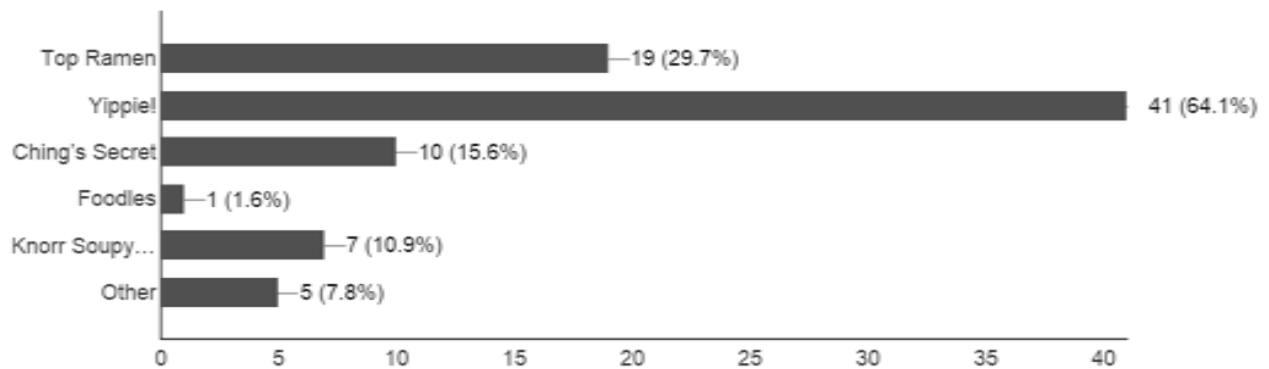
Figure (9) shows that 74% of the respondents missed Maggi Noodles during the ban. This particular way of thinking has been backed by secondary data which showed that #We Miss You Too on social media garnered over 5 million impressions<sup>[12]</sup>.

**Question: Did You Shift to Another Brand of Noodles During the Maggi Ban Period? Which Brand(S) of Instant Noodles Did You Shift Over to During the Maggi Ban?**



**Figure 10: Consumer Behaviour during the Ban on Maggi Noodles**

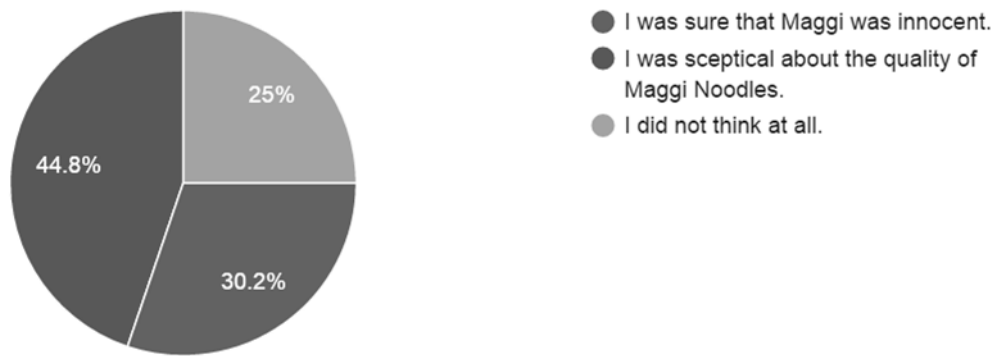
From Figure (10), it can be concluded that 15.6% of the respondents claimed to be hardcore Maggi fans, and instead of shifting to other brands, they patiently waited for Maggi Noodles to come back. However, 16.7% of the sample said that they stopped trusting the Instant Noodles Category.



**Figure 11: Shift to Other Brands of Noodles during the Ban on Maggi**

More than half the sample size, i.e. 57.3% said that during the ban on Maggi Noodles they temporarily shifted on to another brand(s), while 10.4% said that they completely switched over to a new brand. This behaviour of the consumers is quite predictable because the target audience being studied here includes College/University going students and newly joined professionals who need a substitute to snack on. Figure (11) shows that out of the 67.7% of the sample who shifted to other brands of Noodles (temporarily and permanently), 29.7% shifted to Top Ramen, while 64.1% shifted to Yippie Noodles. Such a huge shift towards Yippie can be attributed to the renewed marketing efforts undertaken by the brand during the time Maggi Noodles was banned.

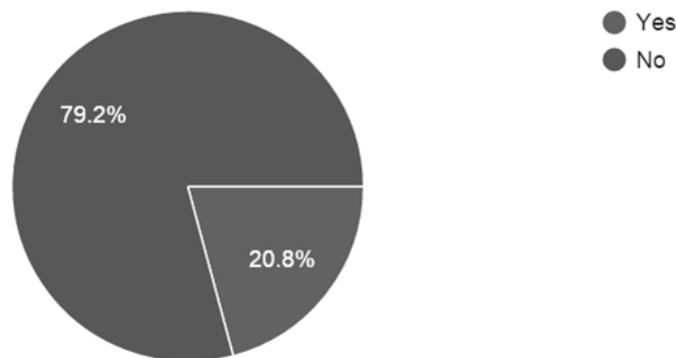
**Question: What Did You Think About Maggi Noodles During the Maggi Muddle?**



**Figure 12: What the Respondents Thought About Maggi Noodles during the Ban**

The above question aimed to track the thought process of the sample during the controversy. Figure (12) shows that 44.8% of the sample was sceptical about the quality of Maggi during the controversy. 30.2% of the people said that they were sure that their 'Meri Maggi' was innocent. 25% of the people said that they did not think at all about the brand.

**Question: Have You Stopped Buying Maggi Noodles After the Maggi Muddle Case?**



**Figure 13: Proportion of People Who Have Stopped Buying Maggi Noodles after the Crisis**

The love for Maggi is quite evident from the data shown in Figure (13) below. When asked if people have stopped buying Maggi Noodles after the Maggi Muddle, 79.2% i.e. 76 people replied as No while 20.8% said yes.

A combination of Figure (12) and Figure (13) can lead to a better understanding of the psyche of the respondents. So from Figure (12) it can be seen that 30.2% i.e. 29 people thought Maggi Noodles was innocent, 44.8% of the sample, i.e. 43 people were sceptical about the its quality while the rest 24 people did not think at all about Maggi Noodles during the ban.

An in-depth analysis of the data collected shows that all the 29 people who thought Maggi was innocent in Figure (13) continue to purchase Maggi after the upliftment of the ban. This can be attributed to the immense trust and love that these people have bestowed on the brand.

Out of the 43 people who were sceptical about the quality of the noodles during the ban, 28 started purchasing Maggi Noodles after the removal of the ban while 19 out of the 24 people who did not think at all about Maggi Noodles started buying Maggi again. The probable factors that have led people from the last two categories to start purchasing Maggi again could be the clean chits received by Maggi Noodles from various organizations reinforcing their trust on the brand, high recall value of the brand, and the marketing gimmicks used by the brand to reconnect with the consumers. All

this adds up to 76 respondents in the sample (i.e. 79.2%) who continue to buy Maggi Noodles after the removal of ban as seen in Figure (13).

## STATISTICAL HYPOTHESIS TESTING

This section will now address the second problem identified earlier as “Post the re-launch phase, will Maggi Noodles be able to capture its market share of atleast 75% (in its target age group of 18 to 24 years in India) in the Instant Noodles Category?”

After the re-launch of Maggi, Nielsen in February 2016 said that though Maggi Noodles was leading the market of Instant Noodles in India but its market share had fallen to 42% by January, 2016<sup>[13]</sup>. This raises the question that given the kind of marketing efforts that Nestlé India is putting in to reconnect the brand Maggi with its fans, will Maggi Noodles be able to capture a market share of at least 75%. Maggi Noodles had a market share of 77% in January, 2015 i.e. before the crisis<sup>[13]</sup>, and during its 25<sup>th</sup> anniversary, the brand had a whopping 90% of the Instant Noodles Category under it<sup>[14]</sup>. (Note that the market share numbers that have been mentioned here are referring to the entire market share that includes all the target audience groups while the hypothesis to be formulated will pertain to the target group of 18 to 24 years only, since that is the scope of the research work).

Given that Maggi Noodles has a past record of achieving such feats, it is not completely unrealistic to expect the brand to get back to capturing 75% or more of the market share in the target audience group studied here.

In order to take the research further and find an answer to the above question the method of Statistical Hypothesis Testing will be used.

*“It is believed that the market share of Maggi Noodles in its target audience group of 18 to 24 years will be atleast 75%.”*

The above hypothesis will be tested using the data collected from the survey and then inferences will be drawn about the entire target audience group of 18 to 24 years of Maggi Noodles in India.

In order to find the change in the market share of Maggi Noodles after the re-launch phase from the sample units the data collected from the following question of the survey will be taken -

**Question: “Have you stopped buying Maggi Noodles after the Maggi Muddle?”**

- Yes
- No

76 people out of the sample of 96 people replied as No to the above question, meaning that these people continue to buy Maggi Noodles after it got launched into the market.

Sample Size (n) = 96

Sample Proportion that continues to buy Maggi Noodles post the re-launch (p) =  $\frac{76}{96} \approx 0.792$ .

From the above hypothesis the Hypothesized Population Proportion (P0) will be equal to 75% i.e. 0.75. The Population Standard Deviation ( $\sigma$ ) can be calculated using the following formula -

$$\begin{aligned}
 \sigma &= \sqrt{[P_0(1 - P_0)]} \text{ Equation} & (1) \\
 &= \sqrt{[0.75(1 - 0.75)]} \\
 &= \sqrt{[0.75 * 0.25]} \\
 &= \sqrt{0.1875} \\
 &\approx 0.43301 \text{ (approximated to five decimal places)}
 \end{aligned}$$

The Sample Standard Deviation (s) can be calculated using the following formula

$$\begin{aligned}
 s &= \frac{\sigma}{\sqrt{n}} \text{ Equation} & (2) \\
 &= \frac{0.43301}{\sqrt{96}} \\
 &= \frac{0.43301}{\sqrt{96}} \\
 &= \frac{0.43301}{9.79796} \\
 &= 0.04419 \text{ (approximated to five decimal places)}
 \end{aligned}$$

Null Hypothesis ( $H_0$ ): It is believed that the market share of Maggi Noodles in its target audience group of 18 to 24 years will be less than 75%.

$$P_{H_0} < P_0$$

Alternative ( $H_1$ ): It is believed that the market share of Maggi Noodles in its target audience group of 18 to 24 years will be atleast 75%.

$$P_{H_1} \geq P_0$$

The hypothesis will be tested using the one-sample z-test method. The z-test method is being used here because the sample size (n) is Large. [Note: If the number of units in a sample is less than 30 then it is called a Small Sample. If the number of units in a sample is equal to or more than 30 then it is called a Large Sample.]

The z statistic can be calculated by using the following formula

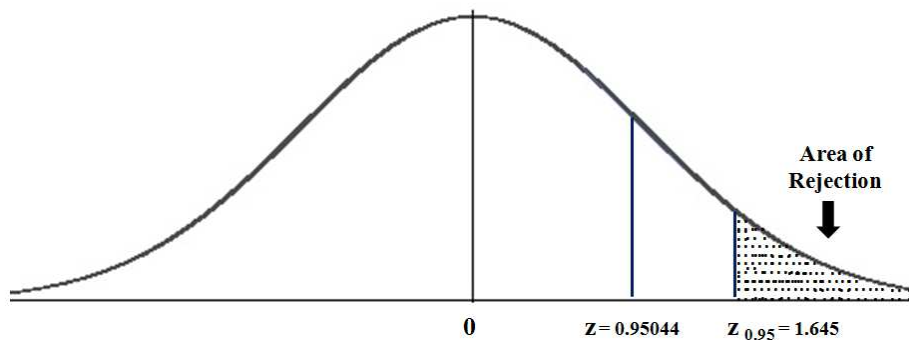
$$z = \frac{p - P_0}{s} \text{ Equation (3)}$$

$$z = \frac{0.792 - 0.75}{0.04419}$$

$$\approx 0.95044 \text{ (approximated to five decimal places)}$$

The above hypothesis will be put to test at a significance level of 5%. Therefore taking  $\alpha = 0.05$ , the null will be accepted if  $z \leq z_{1-\alpha}$ . This is a one-tailed test.

From the z table we can find  $z_{1-0.05} = z_{0.95} = 1.645$ . The values of z and  $z_{1-\alpha}$  can be plotted in the following graph of normal distribution in Figure (14).



**Figure 14: Graph showing the Normal Distribution**

It can be seen that  $z (0.95044) < z_{1-\alpha} (1.645)$ . Therefore, the null hypothesis cannot be rejected and we conclude that  $P_{o} > 0.75$  is not statistically significant at 5% level. The Area of Rejection is shown by the dotted region under the curve.

Thus from the above hypothesis testing it can be concluded that that the market shares of Maggi Noodles in its target audience group of 18 to 24 years in India will be less than 75%.

## CONCLUSIONS

Over the last three decades, immense trust has been built on the brand Maggi by its consumers. And, a lot of residual trust and love was left behind in their minds even after the crisis set in. And this got strengthened as Maggi Noodles passed all the tests that it was put through. Also post August 2015, the company pulled up its socks and strategized its marketing techniques in a way that was customer engaging, connecting with its fans on an emotional level. This is something that the brand had been doing for years but had forgotten in 2015 that led to the PR massacre. Also, what cannot be forgotten is that Maggi Noodles has a very high recall value, Maggi Noodles has once again become the market leader post the re-launch phase as it currently holds 42% of the market.

The hypothesis testing, however, on the other hand showed that the market share of Maggi Noodles in its target audience group of 18 to 24 years in India will be less than 75%. This is quite surprising because the data collected from the survey showed that post the re-launch phase there are a lot of active and potential consumers of Maggi Noodles, and such a percentage stood to 79.2%. However, at the backdrop of deriving the inference from the hypothesis testing, what can be said is that what may be statistically significant or insignificant may not reflect in the same way in the real market scenario. The inference derived is based on the data collected five months after the re-launch of Maggi Noodles in India. There is an immense scope for such results to change given that Maggi continues to craft marketing strategies that will engage and connect it to its target audience groups. Maggi has a high re-call value, and the brand should capitalize on this to reinstall the trust in the minds of its consumers.

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