
DATA ANALYTICS- ANALYSING MAGGI'S PRODUCT LINE EXTENSION STRATEGY AND CONSUMER PREFERENCES USING JASP

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Abstract: *The word two minutes is synonymous with the brand Maggi. Maggi a flagship brand of Nestle has grown with times and has witnessed acceptance across all age groups. Be it a school child, mother or loving grandmother it has been in the shopping list of all. However in the recent past Maggi has seen accusations, ban and has been on headlines for all wrong reasons. Maggi as a brand has always been the favourite of consumers and post the crisis has recovered and is back in the market with full range of flavours. Maggi classic masala has been the most preferred flavour among the consumers.*

Maggi comeback after the crisis with full range of product line extensions. The introduction of many new flavours in Maggi pushed behind the bad memories of the ban and the crisis. Consumers were targeted with full line promotions. The retailers were well stocked with all flavours anticipating demand. However, whether was it a wise move on the part of Nestle to introduce so many flavours?

The articles cited in Harvard Business review indicates that such an aggressive tactic may not really work. With the comeback Nestle has to be more careful about the brand and has to take measures to consolidate its image as line extensions can actually weaken the brand image and can be considered a desperate move by the competition.

Most companies are pursuing product-expansion strategies—in particular, line extensions—full steam ahead. But as John A. Quelch and David Kenny argue in “Extend Profits, Not Product Lines” (September–October 1994), more and more evidence indicates that such aggressive tactics can be hazardous.¹

The pitfalls of such aggressive expansion if it is not well managed: hidden cost increases, weakened brand images, and troubled relations with distributors and retailers. Marketers argue for more line extensions to serve an increasingly segmented marketplace, and sales managers use extensions to justify hiring more salespeople. While manufacturing managers are concerned about the complexity of production and the finance department has a clear interest in cost control, the information systems needed to cull the data that would justify a

more focused product line are often not in place.² This study analyses the consumer attitude towards the different flavours of Maggi and whether the strategy of line extension is a wise move?

Keywords: *Product expansion, Product line extension, brand image, segmented market place*

INTRODUCTION

Maggi a well-accepted brand from Nestle has been in the news for several reasons. The major crisis that shook the consumer faith regarding the brand also made the brand come back with full fervour. Until few years back every household kitchen had stock of Maggi to be used in case of emergency. The easy to make recipe was indeed a boon for mothers and those working mothers could stock their kitchen so as to ensure those late evening from work days to be free from drudgery. Working mothers could relax that children don't starve after they come back from school as they can make their own Maggi. The recent Maggi crisis shook the faith of these mothers making them wonder is it really a wise decision to give Maggi to the children. The shopkeepers took Maggi off their shelves and mothers were hesitant to buy any other brand thus giving break to instant noodles altogether. When Maggi made a comeback after clearing the tests, it came down in full force with several campaigns to rebuild the image and at the same time also introduced line extension of Maggi. Maggi introduced four new flavours namely hot heads in peri peri, green chilli, Chilli Chicken and Pepper via the major ecommerce firm Snap deal. In addition, they have also introduced cuppa noodles in two versions namely Maggi Cuppa Chilly Chow' and 'Maggi Cuppa Masala' priced at Rs 40 for a 70 gm pack. The company has also launched a special noodle pack for those who prefer their meals without onion and garlic. 'Maggi No Onion No Garlic Masala' is available at Rs 15 for the 70 gm pack.

In addition, they also introduced four local flavours of Maggi instant noodles—Amritsari Achari, Mumbaiiya Chatak, Super Chennai and Bengali Jhaal. The initial plan was to launch through the Paytm Mall and then introduce in the retail outlets. Nestle also had tied with Google Search Engine to promote Maggi aggressively online.

According to a PTI report, Nestle India claims a 55.5 per cent share in the instant noodle market, "However, financially it could take a few more quarters to fully overcome the Rs 500-crore hit it took because of the ban last year." With many rival brands like Patanjali and ITC pacing up their game, it seems Nestle India has finally devised a

strategy to get back into the ring. There are about 20-25 product launches, some of them have happened, some are happening and some will happen in four to six weeks' time. This is probably the single largest window of new product launches in a long time" Nestle India chairman Suresh Narayanan told PTI.

LITERATURE REVIEW

1. Most companies are pursuing product-expansion strategies—in particular, line extensions—full steam ahead. But as John A. Quelch and David Kenny argue in “Extend Profits, Not Product Lines” (September–October 1994), more and more evidence indicates that such aggressive tactics can be hazardous.¹
2. “MAGGI Noodles has regained its leadership in the hearts and minds of the Indian consumer. It has been the consistent and abiding passion at Nestlé to marry the benefits of our extensive knowledge of flavours, technology and the science of nutrition with the tastes and experiences that delight our consumers. **MAGGI HOT HEADS, MAGGI CUPPA** and **MAGGI No Onion No Garlic Masala** are result of this passion and determination which we are pleased to offer.”³
3. This is not the first time Nestle will be selling Maggi noodles on an online marketplace. On 9 November 2015, five months after the country’s food regulator Food Safety and Standards Authority of India (FSSAI) banned its noodles, the company relaunched them on Snapdeal. The entire stock was sold within the first two hours and Nestle sold 45 million packs of Maggi noodles within two weeks of the relaunch, Mint reported on 24 November 2015.⁴
4. The findings reveal three types of customers—the devotees, doubters and dropouts—who had different perceptions about the crisis and attributed different levels of responsibility to the corporation based on their attitude and affect toward the brand, attitude toward the corporation, attitude toward the regulatory institution, and levels of nationalism⁵

BACKGROUND OF STUDY

Data analytics technologies and techniques are widely used in commercial industries to enable organizations to make more-informed business decisions and by scientists and researchers to verify or disprove scientific models, theories and hypotheses. The current study is about analysing the marketers’ decision to introduce new flavours in Maggi immediately

after the ban and also the impact of these flavours on consumers' preferences towards Maggi noodles. The study tries to analyse how far the decisions were relevant by using JASP.

ABOUT JASP

JASP was introduced in 2017 by a group of researchers at the University of Amsterdam, a free open-source statistics package that includes both standard and more advanced techniques and puts major emphasis on providing an intuitive user interface.

The current version already supports a large array of analyses, including the ones typically used by researchers in the field of management (e.g. ANOVA, t-tests, multiple regressions).

The JASP meta-analysis module was supported by a SSMART grant from the Berkeley Initiative for Transparency in the Social Sciences (BITSS), an initiative of the Center for Effective Global Action (CEGA).

The new release of JASP supports extensive ranges of commonly used techniques for meta-analysis. In addition to being open source, freely available for all platforms, and providing a considerable number of analyses, JASP also comes with several neat, distinctive features, such as real-time computation and display of all results.

OBJECTIVES OF THE STUDY

1. To analyse the consumer attitude towards new flavours of Maggi
2. To understand the consumer attitude towards Maggi after its comeback
3. To evaluate the line extension strategy of Maggi

RESEARCH METHODOLOGY

The study is done in the city of Dombivli and Thane by employing a survey questionnaire among 252 respondents using Google forms. The sample comprised of male and female respondents between the age group of 18 to 60 years thus representing a wider group. The secondary data has been collected from Newspapers, websites, blogs and research articles.

The study focused on the consumer opinion about the lead content in Maggi post their come back and whether it had changed their perception towards the brand. In addition the

respondents' preference towards the various new flavours that has been introduced recently was also measured. The data obtained through the survey was analysed using JASP.

Hypothesis

H_0 – Product line extension did have an impact on the consumer preferences towards Maggi noodles

H_1 - Product line extension did not have an impact on the consumer preferences towards Maggi noodles

Data Analysis and Results

Scale Reliability Statistics	
	Cronbach's α
scale	0.571

Note. Of the observations, 230 were used, 0 were excluded listwise, and 230 were provided.

Pearson Correlations				
		Age	Frequency you consume Maggi	
Age	Pearson's r	—		
	p-value	—		
	Upper 95% CI	—		
	Lower 95% CI	—		
Frequency you consume Maggi	Pearson's r	-0.028	—	
	p-value	0.669	—	
	Upper 95% CI	0.101	—	
	Lower 95% CI	-0.157	—	

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 1: Correlation analysis between Age and Frequency of Maggi consumption

The Researchers wanted to analyse whether there was any correlation between the variables age and Frequency of consumption. Correlation analysis using Pearson correlation test was undertaken to study the correlation between the variables namely: Age and Frequency you consume Maggi. A correlation value of -0.028 indicating there is negative correlation between the variables. The value of -0.028 is significant at the confidence level of 95% or at the level of significance of 0.05

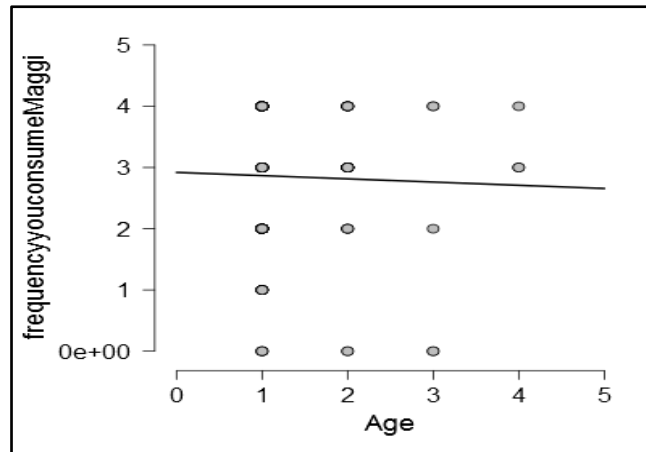


Fig 1: Correlation Scatter diagram

Pearson Correlations			
		Perception post ban	Flavours you like the most
Perception post ban	Pearson's r	—	
	p-value	—	
	Upper 95% CI	—	
	Lower 95% CI	—	
Flavours you like the most	Pearson's r	-0.002	—
	p-value	0.978	—
	Upper 95% CI	0.128	—
	Lower 95% CI	-0.131	—

* p < .05, ** p < .01, *** p < .001

Table 2: Correlation analysis between Perception post ban and the flavours that are liked

Further the analysis was done to find the correlation between the variables perception post ban towards Maggi and Flavours they like the most among all the flavours available both new and existing flavours. Correlation analysis using Pearson correlation test was undertaken to study the correlation between the variables namely: Perception post ban and Flavours you like the most.

A correlation value of -0.002 indicating there is negative correlation between the variables. The value of -0.002 is significant at the confidence level of 95% or at the level of significance of 0.05. The above statistics proves that post ban there is no significant change in people’s perception towards the flavours though Maggi has introduced 11 flavours. And Still Maggi Masala remains the most favourite flavours among masses. In addition, the researchers had also focussed on the frequency of consumption and the flavours preferred the most and as reflected in the histogram that Classic Masala is the most preferred flavour among the respondents.

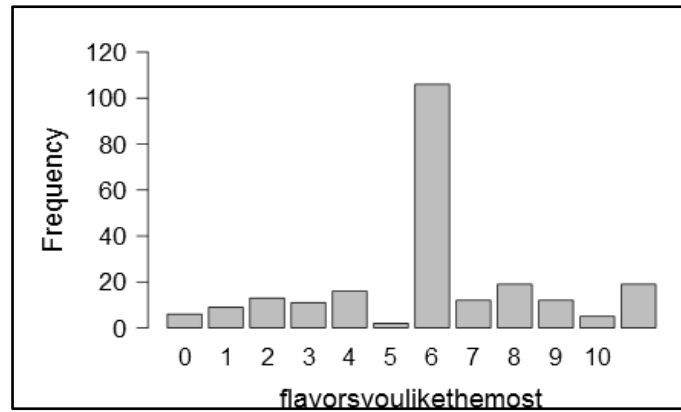


Fig 2: Histogram indicating the most liked flavours

ANOVA					
	df	Deviance	Residual df	Residual Deviance	p
NULL			23	277.70	
Flavours you like the most	11	261.326	12	16.38	< .001
Perception post ban	1	1.410	11	14.97	0.235

Model Summary										
Model	R	R ²	Adjusted R ²	RMSE	R ² Change	F Change	df1	df2	p	Durbin-Watson
1	0.002	0.000	-0.004	2.620	0.000	7.410e -4	1	228	0.978	2.047

To reconfirm the findings the researchers undertook the linear regression analysis using perception post ban as independent variable and the flavours they like the most as dependent variable. The ANOVA test indicated that the significance level between the two variables is 0.001 which is < 0.05 indicating that the null hypothesis H₀ is rejected and the alternate hypothesis H₁ is accepted.

The above findings clearly indicated that the decision to go for a new flavour range in Maggi noodles did not really have much impact on the respondents’ consumption pattern and buying behaviour

Coefficients								
Model		Unstandardized	Standard Error	Standardized t	p	2.5 %	97.5 %	
1	(Intercept)	6.019	0.561	10.735	< .001	4.914	7.124	

Coefficients								
Model		Unstandardized	Standard Error	Standardized	t	p	2.5 %	97.5%
	Perception post ban	-0.009	0.347	.SXC	-0.027	0.978	-0.692	0.673

The estimated regression equation is:

$$Y = a + b X$$

$$Y = 6.019 + (-0.009)X$$

Given this equation, we can estimate unknown values of Y with known values of X variable.

Note: Here, Y is our dependent variable: Perception post ban

And, X is our independent variable: Various flavours introduced

The estimated R value is 0.002, means there is 0.02 percent correlation between the variables. The adjusted R square value is -0.004, which implies that -0.4 percent of the variation in dependent variable Y is explained by the independent variables, X₁ and X₂.

The Durbin-Watson score is 2.047, which means there is no autocorrelation. Thus proving that though post ban Maggi had introduced new flavours by applying product line extension strategy but it has not made any significant difference in people's perception.

Discussion and Implications

Maggi's comeback post ban has indeed been significant. With all the allegations and consumer confidence level going low about their favourite brand the company decided to make its comeback by introducing several product line extensions. The ambitious plan to introduce 25 new products started by introducing several new flavours in Maggi. The findings suggest that though post ban many respondents felt that the lead content has not reduced but still they continue to consume Maggi and they prefer it over the other brands of noodles. In addition, though several new flavours have been introduced the consumers still continue to consume Maggi classic Masala Noodles due to its taste. Though the crisis for Maggi started with the classic masala noodles failing in the test for permissible level of lead content and MSG still the respondents continue to prefer the same flavour. This indicated that the brand equity of Classic Masala Noodles continue to remain high. In addition, though Nestle has taken several marketing measures to promote the new flavours, Classic Masala

noodles remain all-time favourite among the respondents of all age groups. This indicates that the product line extension strategy of Maggi did not have much impact on the consumers.

LIMITATIONS AND SCOPE FOR FUTURE RESEARCH

This study has been done within the limited geographic area. However, in future the same research can be done considering wider segment of the audience across the country. In addition further research can also be undertaken to evaluate the reasons for selecting online media for launching and promoting the product. A study can also be undertaken to compare the various flavours of Maggi noodles with the other brands of noodles available in the market.

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