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## Application of Paralysis Analysis Syndrome in Customer Decision Making

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### Abstract

The term "analysis paralysis" or "paralysis of analysis" refers to over-analyzing (or over-thinking) a situation, or citing sources, so that a decision or action is never finally taken, resulting in paralyzing the outcome. It is a general myth that when a consumer is given more choices by the vendor the sales go up. This research paper attempts to apply this principal to consumer decision making process during choosing a product. This paper presents the details of the study. It was found that consumers are known to postpone their buying decision when they are spoilt for choices, while they have closed deals quicker when there have been lesser options to choose from. It was concluded that when customers have more choices, they buy less; in decision-making people often simplify using the wrong criteria; more choices lead to greater dissatisfaction because expectations are raised. This also provides a product comparison or version comparison chart and helps to simplify the interface: prune unnecessary options or tuck them in an optional "advanced options" section.

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## 1. Introduction

The term "analysis paralysis" or "paralysis of analysis" refers to over-analyzing (or over-thinking) a situation, or citing sources, so that a decision or action is never finally taken, resulting in paralyzing the outcome. A decision can be treated as over-complicated, with too many detailed options, so that a choice is never made, rather than try something and making a change if a major problem or deviation arises. A person might be seeking the optimal or "perfect" solution, and for fear of making any decision which could lead to erroneous results, always keeps seeking a better solution.

The phrase describes a situation where the opportunity cost of decision analysis exceeds the benefits that could be gained by enacting some decision, or an informal or non-deterministic situation where the sheer quantity of analysis overwhelms the decision-making process itself, thus preventing a decision

It is a general myth that when a consumer is given more choices by the vendor the sales go up. This research paper attempts to apply this principal to consumer decision making process during choosing a product. This paper presents the details of the study.

## 2. Methodology

### 2.1. Hypothesis:

Sales of the given product go up in case more choices are made available for that product

### 2.2. Samples and Sampling Techniques

An opinion survey was conducted by sending questionnaires to 500 people of which, 100 people responded to the survey. Secondary data was collected from various sources and research papers to check this hypothesis. The sample was chosen using stratified convenient random sampling method.

The respondents belonged to the following strata / categories

- Management professors who taught consumer behavior and marketing
- Marketing managers of various companies in FMCG sector
- Consumers working at Junior and Middle level managerial positions

Secondary data was collected from books, journals, research papers and websites

**Table 1: Category wise choice of products for study**

Product Category	Pasta	Mobile Phones
FMCG ( Low Value, Frequent)	✓	
Mid value ( infrequent)		✓

As shown in the Table 1, pasta was chosen as one product which is in FMCG category and Mobile phone in the infrequent, mid value purchase category of products

**Table 2: Sampling Size and sampling methods**

	Products	
	Pasta	Mobile Phones
Sample Size for stores / Vendors	2 Small Stores and 2 Departmental Stores in each of the chosen city	2 Single Stores and 2 Multi Brand Stores in each of the chosen city
Consumers	50 respondents	50 respondents
Sampling Method for products and consumer	Sampling Method for choice of products under study and consumer and experts	

As shown in Table 2 small stores and 2 big department stores were chosen from Pune. Data was collected from the stores and consumers. It was analyzed using statistical data analysis tools.

The data was quantitative and qualitative in nature. This data was analyzed, summarized and presented in this report.

### 3. Data Representation and Analysis

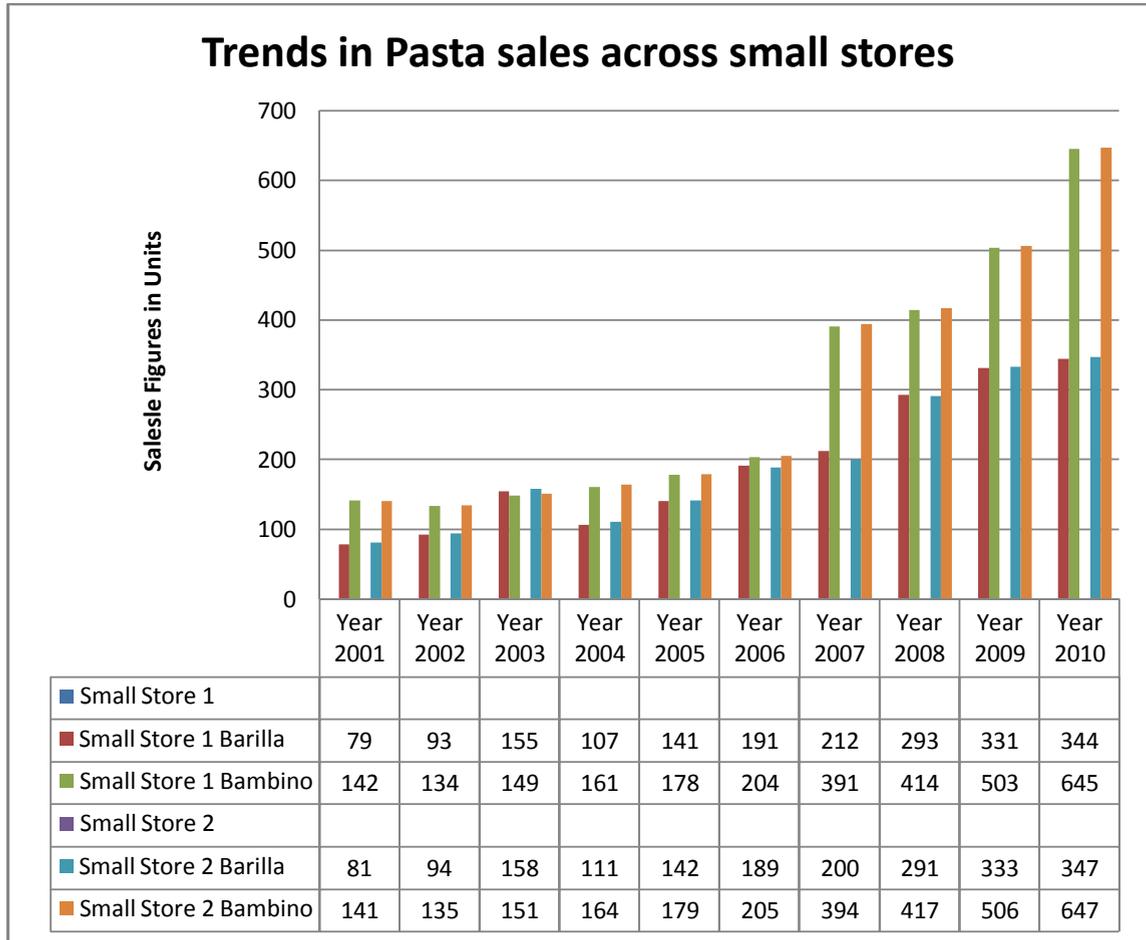
#### 3.1. Primary Data Analysis

Products identified for the study is Pasta in FMCG category and Mobile phone in infrequent purchase category.

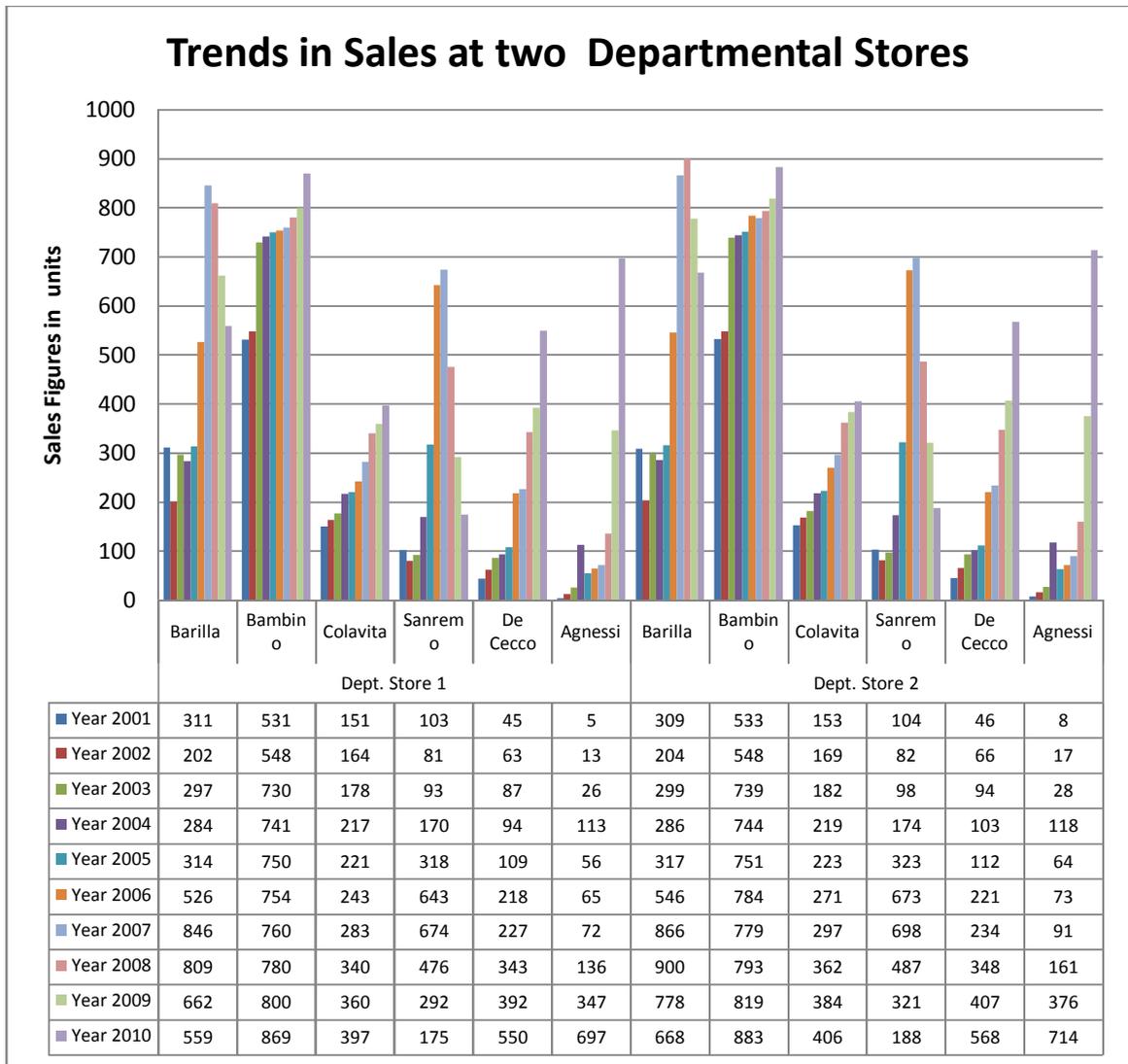
The study attempts to look at the trends in unit sales of the two pasta brands in two small stores and five brands of pasta in two departmental stores. The idea of choosing a small store and a departmental store is to observe if there is a difference between the units of pasta brands sold across these stores because of wider choice available. Similar logic applies in the choice of stores to study the unit sales of mobile phones. The data was collected from both the vendors and the consumers. The study attempts to explore the link between increases in sales, due to wider choice.

Vendors shared the records of the unit sales figures for the period of year 2001 to 2010. This information was shared in strict confidence.

**Figure 1: Trends in Pasta sales across small stores**



**Figure 2: Trends in Pasta sales across Departmental stores**



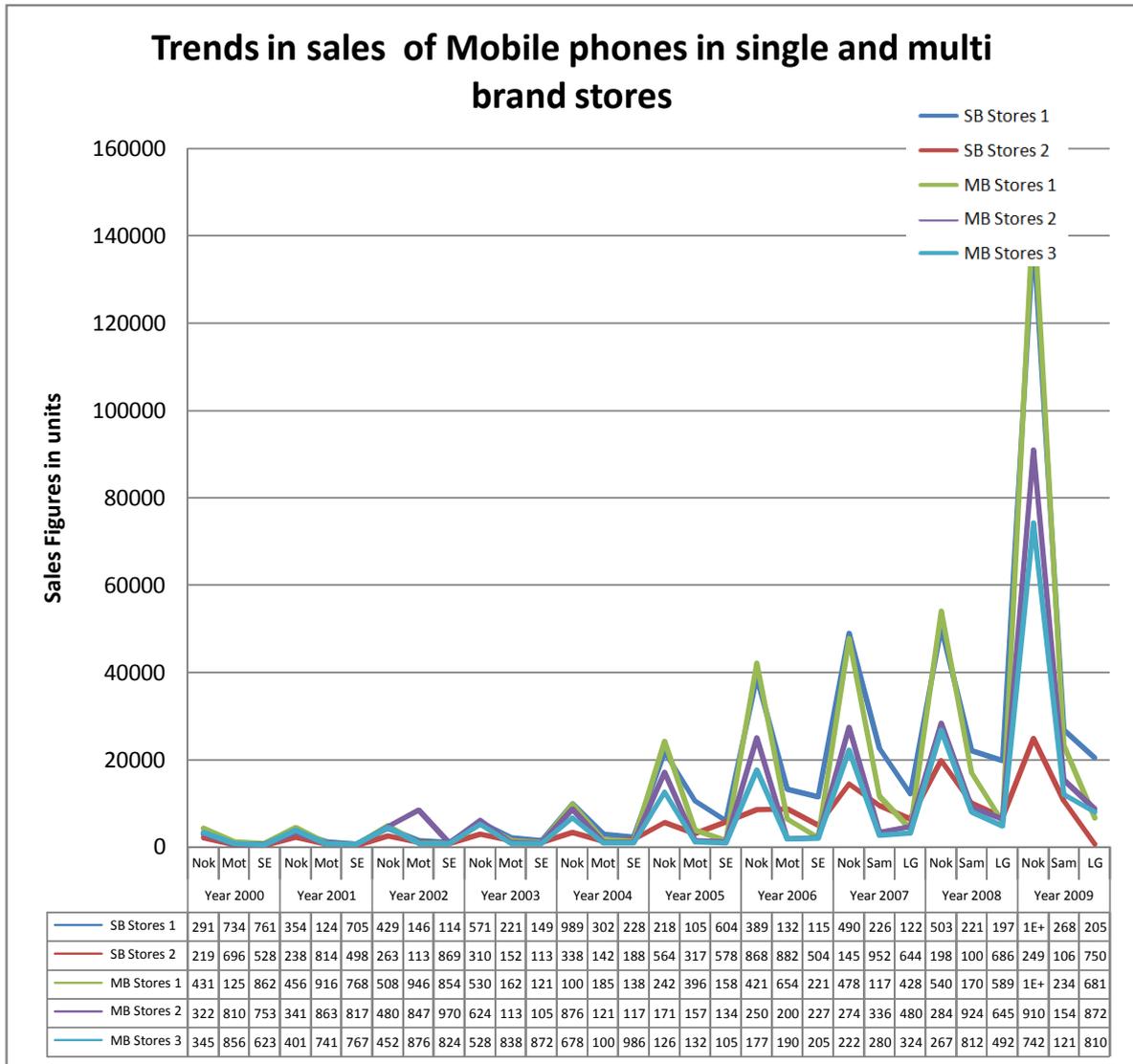
The data shows that given a wider choice the sales of the given products increase. The comparative higher sales of pasta in departmental store 2 since year 2005 as compared to that of the sales in departmental store 1, led to further investigation to understand the reasons for this phenomena. The supervisor of the pasta section helps the consumer manage his/her choices better by using the following techniques:

- Finding the requirements and taste preferences of the consumer
- Giving suggestions based on the above findings
- Helping the consumer compare the brands based on the price, nutrition value, taste and ingredients

This helps the consumer of pasta to manage his or her choices and prevents the consumer from getting overwhelmed with the large amount of choices.

The study also examines if the same logic is applicable to mobile phones which is an infrequent purchase and relatively a high price item.

Figure 3: Trends in Mobile sales in single and Multi brand Departmental stores



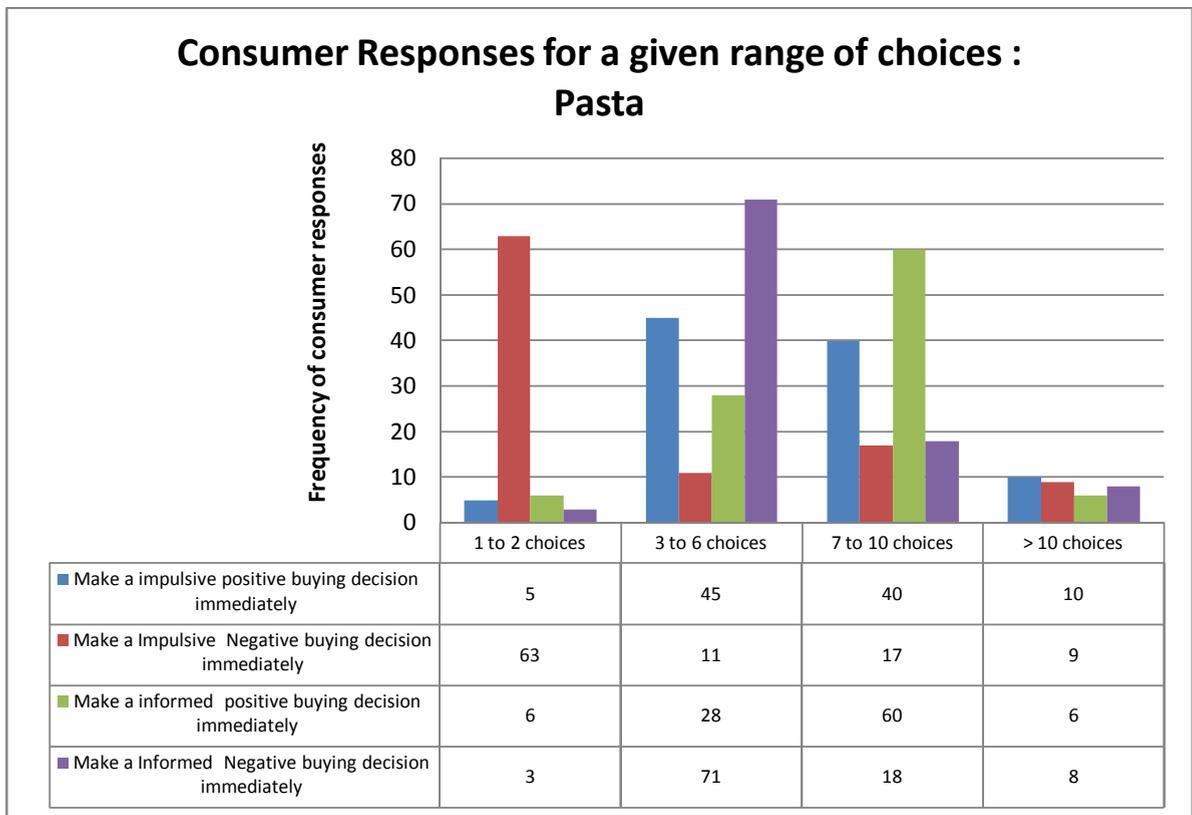
Sales of Nokia in Single brand store are lower as compared to its sales in other multi brand stores. All the single and multi brand stores are located in the same vicinity. People visit the multi brand stores more because of wider choice available and hence the sale of the brand under study, i.e. Nokia, increases.

It is also observed that the sales of Nokia in Multi brand store 1 are higher than the other Multi brand stores. When investigated further it was found that the store helps the consumer to manage their choices and helps them to choose from the wide range of choices, thus preventing the consumer from getting overwhelmed with the choices.

To find the consumers perspective, an opinion survey was carried out to find out as to what prompts a consumer to make a positive buying decision in case of pasta and mobile phones.

The analysis of data of this opinion survey is as follows:

**Figure 4: Consumer Responses for a given range of choices: Pasta**

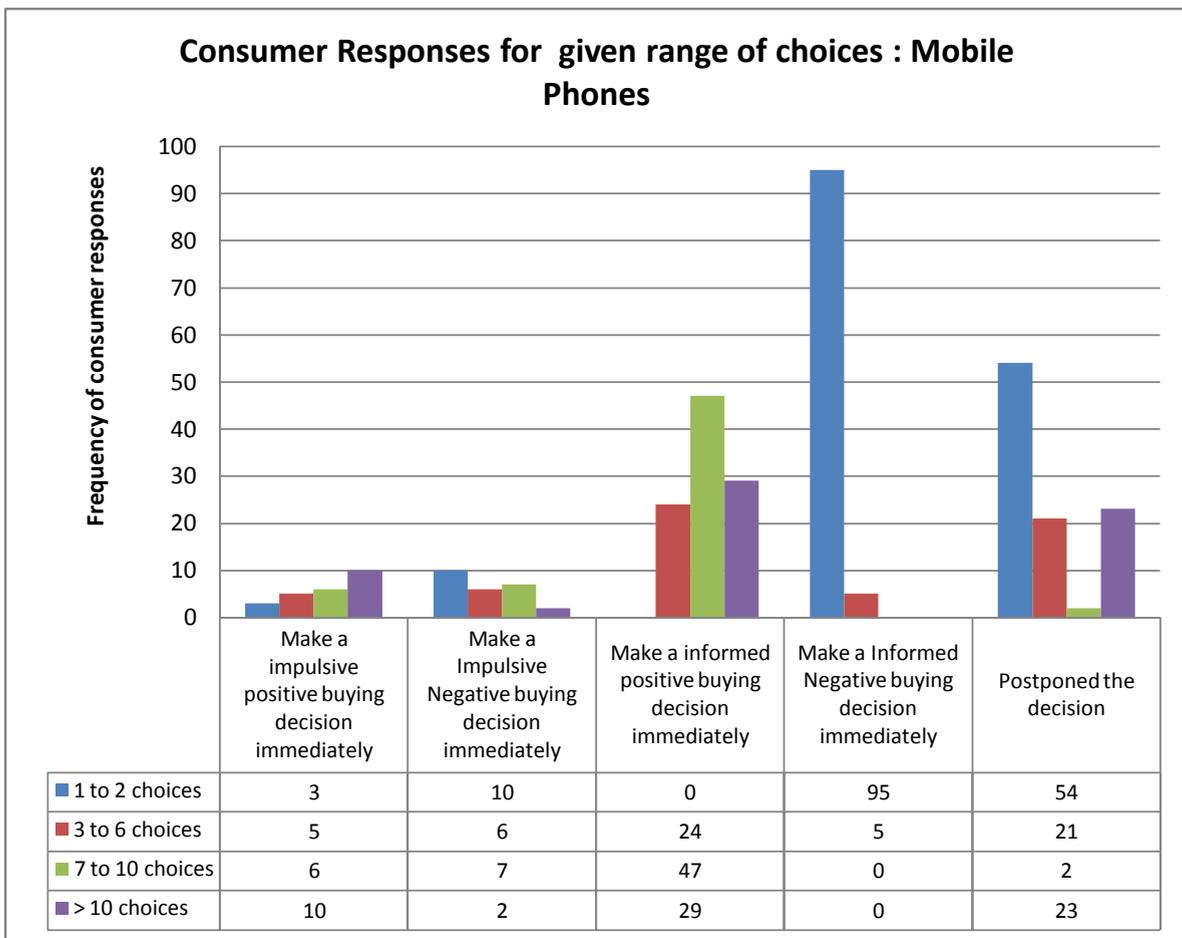


**Observations:**

- In case of limited choices consumer tends to make a negative buying decision immediately. Thus the store loses an opportunity to make a sale.
- In case of 3 to 6 choices, the consumer makes an impulsive positive buying decision because it is easy for the consumer to choose quickly without much thinking. This results in an immediate sale in most of the cases.

- In case of 7 to 10 choices the consumer prefers to make an informed positive decision and in most cases would need some help in managing the choices. However if this can be managed properly the sales will be much higher as compared to the second option of giving only 3 to 6 choices thus increasing the sales.
- In case of > 10 choices consumers would tend to postpone the buying decision.

**Figure 5: Consumer Responses for given range of choices: Mobile Phones**



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- In case of > 10 choices 36 % of consumers would tend to postpone the buying decision. 45 % would make a informed buying decision, 16 % would make a impulsive buying decision and 3 % would make a negative buying decision. However this situation does not help the store to increase the sales.

### 3.2. Secondary Data Analysis

According to Saad, a well-known researcher in consumer behavior and **Evolutionary psychology (EP)**, EP can enrich consumer behavior research. He suggests that one of the main benefits of taking a Darwinian perspective to consumer research would be to permit researchers to address scientific issues at both proximate and ultimate levels. In contrast, EP views the mind as consisting of Darwinian modules that have each evolved to solve very specific survival problems. Thus, the process that the mind uses to solve one adaptive problem is not necessarily the same process that would be used to solve a different one. Unlike the ideas proposed by domain-general theorizing, the processes that the mind uses to solve a specific problem are not necessarily transferrable to other domains. Currently, most consumer researchers use domain-general theorizing, producing vast amounts of unconnected findings, and would be greatly supplemented by the application of domain-specific theorizing. He also suggests that a Darwinian perspective would permit consumer researchers to recognize the importance of both domain-general and domain-specific mental modules and theorizing. According to Saad the mind is an accumulation of general-purpose, domain-independent mental processes and algorithms, as demonstrated by behaviorism, various cognitive approaches, and the “cost-benefit” framework.

Consumer products are built to lure people who may or may not need the product but want to have them (as status symbol more so or less but not based on actual needs. A new phone, computer, car, watch, etc... every year may not be necessary).

The limitless options we encounter make it difficult to finalize a choice. In a study led by Sheena Iyengar, a management professor at Columbia University Business School, one group of people was presented with samples of six different jams available for purchase while another group was presented with twenty four different jams. The twenty four jam group showed much greater interest when sampling, but the six jam group was ten times more likely to actually purchase a jam. Sheena's advise perhaps suits more to a specific product category which in this case has been FMCG impulse goods. Exercising choice depends upon many factors other than the variety syndrome. How much variety is appropriate would depend upon the psychographic profile of the target segment. It is correct to say that a 'small' number of choices helps in taking an immediate decision. But how to arrive at that 'small' number requires considerable researching into. Moreover it would be interesting to study how many choices would be a good number in case a decision has to be made by a group versus an individual. When a company reduces number

of lines or products it carries, it allows the company to manage the logistics in a better manner hence a healthy top line.

When considering low involvement fast moving consumer goods, her point can be seen that too many choices can confuse the consumers. However, in infrequent, expensive, and high involvement purchases, the opinion survey suggests that a wide range of options are important in order to match the customers' needs. The crucial task for the seller is then to fully understand the demands and guide their client to the solutions which will fit them the most.

More choices lead to confusion and less sales is true more to a specific product category like FMCG impulse goods. Exercising choice depend upon many factors other than the variety syndrome. How much variety is appropriate would depend upon the psychographic profile of the target segment. It is correct to say that a 'small' number of choices help in taking an immediate decision. But how to arrive at that 'small' number requires considerable researching into. Moreover it would be interesting to study how many choices would be good number in case a decision has to be made by a group versus an individual. When a company reduces number of lines or products it carries it allows the company to manage the logistics in a better manner hence a healthy top line.

As per the research, consumer choice for a variety of goods has the following characteristics:

- It is good to limit variety in case of individual decision making situation for FMCG category of goods.
- Offer a larger variety of options & features if purchase decision has to be taken by a team in a case of B2B category.
- Greater choice is directly proportional to the education & income level of the buyer.
- Generally it is more efficient to offer 7-10 choices for convenience goods

Thus it is fairly evident that only giving choices to a consumer do not help to increase the sales. The vendor also needs to help the consumer manage the choices and narrow down on that single choice he wanted to make.

As a communicator, instructor or salesmen, one must learn to organize the available information (choices) in a way that enables the recipient to progressively digest the ideas. It's almost like the concept of "low hanging fruit", if it is too challenging to begin with, many will inherently dismiss the information and move on. From the decision-maker perspective, a person who is impulsive, has a tendency to get caught up in "analysis paralysis" or "contingency thinking". When making quick, decisive decisions one tends to fare much better. Of course decisions with greater long term impact require more contemplation; the fast and furious approach allows one to move quickly and resiliently throughout the onslaught of his/her daily choices.

Economists talk about increasing product variety. The idea is that increased variety helps to increase the welfare of the consumer by allowing them to find a product that more closely matches their needs. Effectively their real income has increased. However, as is often lampooned, economists often treat people as perfect number crunches, where

increasing the number of choices would have no effect on people's states of mind. Of course that is generally not true. There is some tradeoff between getting the product that best matches your needs (by increasing variety) versus the amount of effort it takes to choose as the number of possibilities increases. Given that, you can think of a theoretical optimal number of varieties that balances the incremental benefits of an additional option versus its cost.

Designing the way the choices are presented to minimize the amount of effort it takes to make them is a great example of innovation that increases consumer welfare. Generally, we think of increasing innovation associated with the introduction new products, but it doesn't have to be. It could be a better way to sort through the currently available set of products.

So it is important to build a bridge between the ideas in economics that variety is good thing versus a common perception that a consumerist society with many choices is exhausting.

Theodore in Jan 28 2012: Choice Blindness, "The study was led by Lars Hall, at Lund University. It was inspired by a 2005 study, led by Petter Johansson, which showed male subjects, a pair of female faces. The subjects were asked to choose the face that they found more attractive. Then, the mischievous scientists used a "card trick" to reverse the outcome of the choice.

Here's where the results get a little sad: Less than 30 percent of subjects noticed that their choice had been changed. Our eyes might have preferences, but this doesn't mean our mind can remember them."

Organizing the multitude of choices (even when it results in fewer choices) helps the decision-making process by providing a framework for eliminating the uninteresting options.

The phenomena called 'The PARADOX of Choice'. It says that there are a "magic" number of choices that would benefit us rather than harm us. But the fact is, it's impossible to calculate it, and even if you did, and enacted policies, this would have to be a choice that everyone would have to make. In theory, if we did decide to decrease our amount of choices, we would be giving up a freedom (even if it does lead to "imprisonment" or paralysis). And it seems like any policy restricting our choices would be oppressive and I'm sure the average person would not be in favor of it, even if our abundance of choice is leading to unhappiness. This is a paradox.

Thus the key is to help consumers manage choices and not overwhelm them with choices.

#### **4. Conclusion**

Consumers are known to postpone their buying decision when they are spoiled for choices; while they have closed deals quicker when there have been lesser options to choose from.

Other inferences drawn are as follows:

- When Customers Have More Choices, They Buy Less

- In Decision-Making, People Often Simplify using the Wrong Criteria
- More Choices Lead to Greater Dissatisfaction Because Expectations are Raised
- Reduce the Number of Choices and Decisions that End-Users Have to Make
- Provide a Product Comparison or Version Comparison Chart
- Select Useful Defaults that Apply to Most People
- Simplify the Interface: Prune Unnecessary Options or Tuck Them in an Optional "Advanced Options" Section
- 
- Avoid the Paralysis of Choice by Providing a Simplifying Criterion
- Different Target Audiences Have Different Levels of Expectations and Competence in Handling Variety

Thus when confronted with too many choices, people are often crippled by the large number of variables they have to juggle to make a decision. Using some of the tips given in this article, one can improve customer satisfaction and perhaps even increase sales by avoiding this paralysis of choice.

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