

Factors Affecting Consumer Purchase Decision Of Laptops

**Ravi Soni*

***Rohit Lohani*

****Mahim Sagar*

INTRODUCTION & OVERVIEW OF THE MARKET

A comparative study of the various sales pamphlets of different laptop producing companies seems to suggest that almost all the laptop brands offer nearly the same configuration (processors, RAM and graphics cards) and features (webcams, fingerprint scanners) in their products to the consumers. None of the brands can be seen as enjoying their product as exceedingly superior to its competition. With all things virtually equal within the box, what is it that makes a consumer choose one brand over another (Brand Preference and Product Differentiation)? Is it still within the box or outside of it that drives the decision? What is it that compels a consumer to purchase the Dell laptop instead of the HP when a consumer is comparing them side by side? Is it just the price? Did the consumer previously had a bad experience with HP? Are the Dell commercials intriguing enough to make consumers buy their products? Does a younger family member, with a higher degree of technical competency, tell an older family member that Dell is the only thing to buy? While the evaluative buying criteria consumers use when purchasing these products maybe known, what was not known was the impact each of them have in contributing to that decision.

This paper is aimed at answering the above stated questions, and thus, aims to identify the factors affecting the consumer purchase decisions of laptops in the Indian market.

Notebook, laptop and PC market alone stands at ₹ 10,000 crore with notebook PC shipments touching nearly 1.8 million units [8]. According to IDC reports, the consumer notebook industry has seen a huge annual growth of 202% and 141% over the past two consecutive years. [10],[11].

Table 1 : India PC Shipments (in Millions) By Form Factor, 1q 2008 Vs. 1q 2007

Form Factor	JFM '07 (Q1 2007)	JFM '08 (Q1 2008)	Change
Consumer Desktops	.482	.453	-6%
Commercial Desktops	1.082	1.029	-5%
Consumer Notebooks	.093	.223	141%
Commercial Notebooks	.226	.367	63%
Total	1.883	2.073	10%

Table 2: India PC Shipments (In Millions) By Form Factor, 2007-08 Vs. 2006-07

Form Factor	JFM '07 (Q1 2007)	JFM '08 (Q1 2008)	Change
Consumer Desktops	1.908	2.013	5%
Commercial Desktops	3.731	4.207	13%
Consumer Notebooks	.230	.694	202%
Commercial Notebooks	.881	1.339	52%
Total	6.750	8.253	22%

**Student, 5th year Dual Degree(B.Tech+M.Tech), Computer Science Department, IIT Delhi, Delhi.*

Email :ravisoni777@gmail.com

***Student, Textile Department, IIT Delhi, Delhi. Email : pakkasir@gmail.com*

****Faculty, Department Of Management Studies, IIT Delhi, Delhi. Email : mahimsagar@gmail.com*

The major players in the notebook category are HP, Compaq, Lenovo, Toshiba, Sony, Acer and Dell. Samsung and LG, the global electronic powerhouses, have recently forayed into this category. Nokia is also planning to enter this lucrative market in the ultra portable small screen (<10 inch screen size) laptop category. As of now, Hewlett Packard (HP) is in the top spot with market share of 37%, while Lenovo occupies the second position (16%), Acer (10%) at third followed by Dell, Toshiba & HCL. [9]

LITERATURE REVIEW

❖DECISION MAKING THEORY AND INFORMATION ACQUISITION

To make a decision, the needs of an individual have to be met. As mentioned, for this discussion, the individual will be the consumer with the need for a product. In the normative model of decision making, the customer collects information about alternatives, evaluates them based on their features and makes a decision that will maximize the value of that decision (Lau, 1995; Abelson & Levi, 1985)[1].

Otherwise, known as the value-maximization theory, the normative model has been criticized as too broad, ignoring human limitations (Moorthy, Ratchford & Talukdar, 1997; Thaler, 1985)[2] and an evolutionary, bounded rationality model emerged to enhance it. Here, consumers were assumed to have limited processing capability, who selectively search alternatives and terminate the search when a suitable solution has been found (Simon, 1985)[3]. Further, criticism emerged from this model as well. By selective selection, the consumer is compromising the random nature of the information search and may compromise the decision choice. How a consumer collects his information affects the choice strategy he uses. For example, decision makers choose a certain strategy depending on the complexity of the task. The more complex the decision task, the more likely people employ strategies to simplify that task (Johnson & Payne, 1985; Thorngate, 1980).[5] While several theories exist, the value-maximization model has remained relatively intact and enhanced with the limitation of human processing capacity.

❖INFORMATION PROCESSING THEORY OF CONSUMER CHOICE

The theoretical framework of Bettman's (1979)[6][7] Information Processing Theory of Consumer Choice (IPTCC) consists of six key elements that represent the hypothetical value chain, each chronologically and cumulatively dependent on the other, with four key summary points:

- ❖The choice process is iterative and goal-directed.
- ❖Rather than strictly sequential, the process is cyclical.
- ❖In certain circumstances, consumers abandon the conscious decision process in placement of “*learned rules and procedures*”.
- ❖Selection, or what is termed “choice decisions” can be made at several different levels within the process.

❖CONSUMER BUYING BEHAVIOR

Purchasing behavior is the decision processes and acts of people involved in buying and using products. It is determined by the level of involvement in purchase behavior. The four type of consumer buying behavior are [4]:

❖**Routine Response/Programmed Behavior**--Buying involves low involvement, frequently purchased low cost items; need very little search and decision effort; can be purchased almost automatically. Examples include soft drinks, snack foods, milk etc.

❖**Limited Decision Making**--Is applied to buying product occasionally. Perhaps when you need to obtain information about an unfamiliar brand in a familiar product category. Requires a moderate amount of time for information gathering. Examples include Clothes--know product class but not the brand.

❖**Extensive Decision Making**/Complex high involvement, unfamiliar, expensive and/or infrequently bought products. High degree of economic/performance/psychological risk. Examples include cars, homes, computers, education. Spend a lot of time seeking information and deciding. Information from the companies MM; friends and relatives, store personnel etc. Go through all six stages of the buying process.

❖**Impulse Buying**- No conscious planning.

❖EFFECT OF MARKETING STRATEGIES

When product vendors know more about their products than consumers do, the market is said to have asymmetrical information. The information balance is heavily skewed towards the manufacturer rather than toward the consumer. In an instance like this, a product's brand could serve as the differentiating element that sets the wheels in motion towards

a better distribution of information. What distinguishes the brand itself between other individual attributes that could be more easily commoditized is that the former personifies the collective and cumulative effect of past marketing strategies. (Wernerfelt, 1988). An individual strategy at any given point in time, like charging a premium price, offering an extended warranty or selling through specific channels may contribute to the differentiation every company seeks, but it is highly contingent upon market conditions.

✿EFFECT OF HUMAN BEHAVIOR

Human behavior drives consumer choice, and in highly commoditized markets, where very little differentiates one product from another and most attributes are similar, consumers rely on more emotionally driven, behavior-oriented attributes that will influence their purchase. The attitude one has as it relates to technology determines their likelihood for consumption. The importance of brand to be used as evaluative buying criteria is significant as is technology attitude. Both of these are somewhat subjective and difficult to measure, making it challenging for product manufacturers to differentiate themselves in the eyes of the consumer. If the product's physical attributes appear to be undistinguishable versus the competitor when compared by the consumer, it will be these qualitative, more intangible considerations that will sway the consumer toward one brand over the other.

✿DELL STUDY

In a study done by Dell in 2003, they believe that customers want increased customization of personal computers. When it comes to laptops, customers are demanding more portability and durability. In addition to demanding more from the physical features of laptops, customers need greater performance capabilities. Consumers are depending more and more on laptops for organizing their lives and holding vital information using the best technology. [13]

✿DATAMONITOR STUDY

A recent (2007) study by Datamonitor [14] investigated the product features that matter most to business users. The study was conducted in small, medium, and large-sized European companies and the key findings are:

- ✿95% state that mobility is an important or very important priority feature.
- ✿85% regard flexible working as an important or very important factor.
- ✿Nearly 70% of respondents cite robustness as important or very important.
- ✿Nearly 70% of the respondents carefully scrutinize extended warranty options and 63% look carefully at extended service options.
- ✿Systems and data security, easy connection to networks, advanced power management, and system accessories are among the very important notebook considerations.
- ✿The study concludes that the greatest factors involved in notebook purchases are mobility and security features, weight, and battery life.
- ✿Extended service and warranty options also have very strong appeal as this allows companies to better handle the notebook failures when they do occur.

✿PYRAMID RESEARCH ANALYSIS

Pyramid Research [14] conducted an independent analysis of mass market notebook PC buyer demand for mobile broadband. The study also explored mass-market PC buyers' preferences and behaviors regarding device size, hardware specification, services, PC usage and data-network usage. The report presented the findings from over 12,000 face to face interviews that were carried out with consumers across twelve developed and emerging-market countries. The key findings are:

- ✿Built-in mobile broadband connectivity boosts demand for notebooks.
- ✿Notebook PC usage will be dominated by communication and entertainment usage scenarios that require the PC to have good audio and integrated CD/DVD capabilities, while other PC features need only match the market average.
- ✿Notebook buyers plan to use their PCs in different locations outside the home and will increasingly value the ability to communicate using widely accessible mobile broadband.

✿IMRB STUDY

IMRB (Indian Market Research Bureau) eTech 2008 study [15] pointed out the most important reasons for buying a notebook: Education and office work. It also points out that when the propensity to spend was on the rise, product forms that deliver intangible benefits like enhanced convenience and image like notebooks got a wider acceptance. As a result, sales of notebooks grew relatively faster than the functional desktop. Being similar in technology to desktops,

notebooks need to differ by offering enhanced mobility, styling and exclusive applications.

RESEARCH GAP AND PROBLEM DEFINITION

From the review presented above, we can see that the research has been conducted in various areas in marketing of laptops. Although the results provide valuable inputs in terms of consumer trends in the laptop market, but there is a lack of research in the context of the Indian market. Hence, there is a considerable research gap in terms of purchasing behavior of laptops in the Indian market. Further, there are a number of factors which have not been thoroughly looked at. We have found that many experts consider several factors such as brand awareness, advertisements, recommendations and previous ownerships of laptops; important for the consumer to make the buying decision. We have used the DELPHI technique to determine this [19]. We interviewed the marketing managers of companies like Samsung, Sony and Dell. These were the factors which all of them considered to be important. Therefore, we have tested the importance of these factors, by surveying 100 people about their perceptions of these factors. *Thus, our problem definition is - An evaluation of factors affecting consumer purchase decision of laptops.* The evaluation is based on a survey, which contains qualitative and quantitative questions. The various factors have been described above. By purchase decision, we mean the actions a person takes in purchasing and using products and services, including the mental and social processes that precede and follow these actions [18].

RESEARCH QUESTIONS

Humans are very inquisitive and seek answers to questions that are posed as a result of their observations and interpretations. Research acts as a framework to help guide an individual through the process of producing high quality, reliable answers to those questions, enabling better decision making. All research begins with the simplest form of a question. While the process for development and refinement is built into the design of the research and its methodology, the spark of inquiry that fuels it is primal and basic. This study strove to answer a series of eleven research questions and uses statistical techniques to conclude about the factors affecting the purchase decision of a laptop.

SURVEY DATA & METHODS

✿SURVEY ASSUMPTIONS

1.The factors which will be tested to see their influence on the consumers while purchasing a laptop are **Brand, Features, Previous Ownership, Recommendations, Magazine/Online Reviews and Advertising**. Some of these factors have often been studied in relation with laptop purchasing behavior in existing reports, while other factors have been assumed on the basis of recent advertisements/promotions by the leading laptop companies (e.g. Color and styling by Dell).

2.The consumer segment, which formed the majority of the customer base consisted of males, aged between 18-35, mostly students and executives. This segment is either the direct consumer of the laptops or is directly involved in the purchasing decision of the remaining customer segment (e.g. a student involved in the purchase decisions of his mother, who is a housewife).

✿SURVEY METHODOLOGY

The survey was carried out in New Delhi. The survey form had 20 questions. The first 4 questions were about the demographic features of the survey participants. The next 12 questions were related to the quantitative aspect of the research problem. The researchers used Likert scale [17] to quantify the perceptions of the consumers towards various factors like brand preference, recommendations, trade shows and advertisements. The remaining 3 questions are open questions for qualitative purpose only. The population of the study were the 18-35 year old male consumers living in New Delhi, although most were aged between 18-23 years of age.

✿SAMPLING TECHNIQUE

Judgmental sampling was used to ensure that all the participants had purchased at least one laptop for their personal use and institutional buyers were not included. 100 people were surveyed. The largest computer market in Delhi was chosen for interviewing. Additionally, the survey was filled online by consumers and the process was closely administered.

❁LIMITATIONS

The survey target sample consisted of participants from Delhi only and does not necessarily represent the entire Indian market.

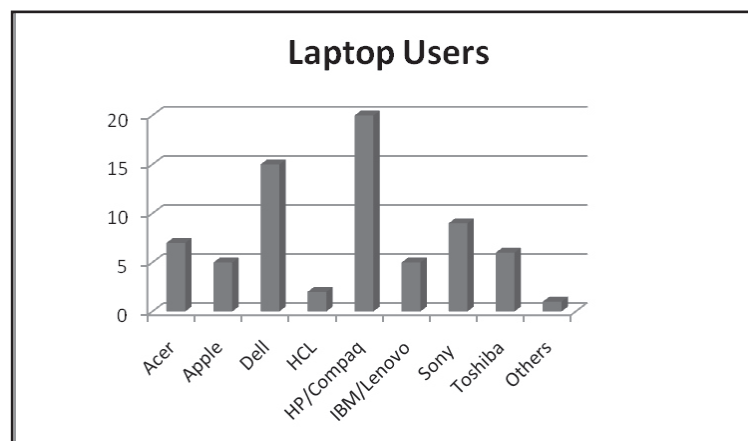
RESULTS

In the questionnaire, 12 questions used the Likert scale. The responses (on the scale) to various questions were observed to follow a normal distribution. Means of the responses were calculated. This was followed by a p-value test. The researchers have presented only those results, where the p-value (two-tailed test) was less than 5 % significance level.

INTERPRETATION OF DATA

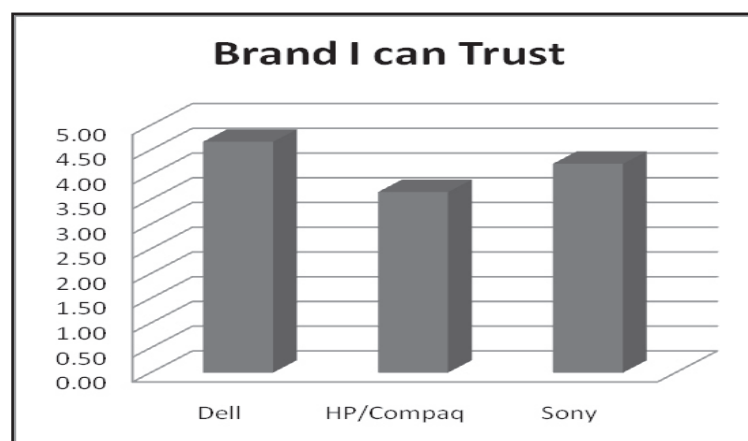
1. The top 3 selling brands were found to be HP/Compaq, Dell and Sony. There was no significant correlation between the incomes and the brand chosen. This could be because of availability of a large number of models priced differently in all the brands.

Graph 1 : Laptop Users For Various Brands, Among 100 Users Surveyed



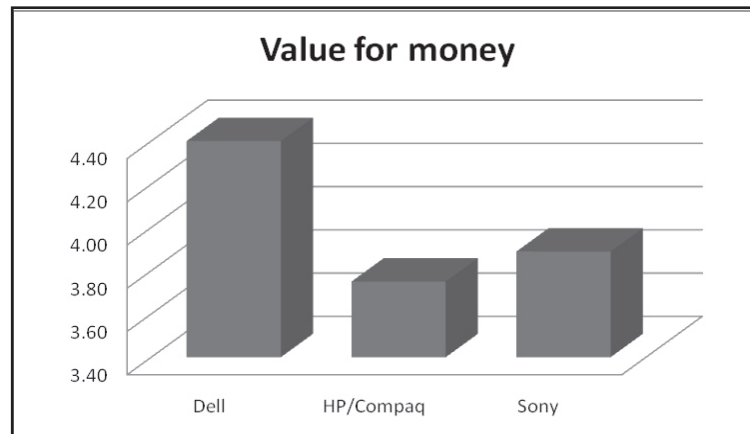
2. Dell had the highest rating as a trustworthy brand, followed by Sony and HP.

Graph 2 : Average Rating By Users On A Scale Of 5



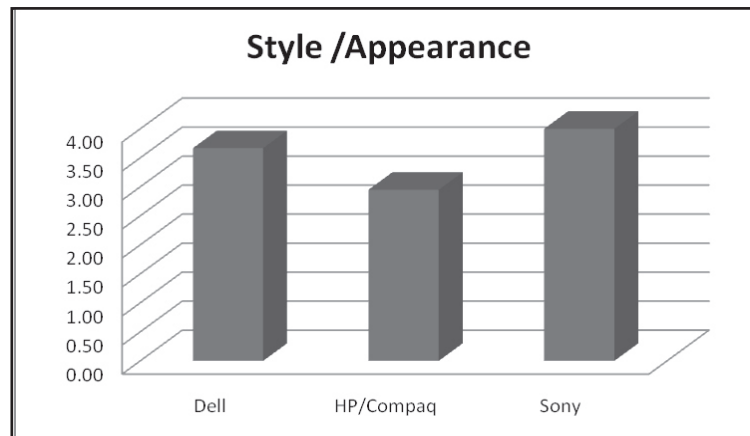
3. Customers have been extremely satisfied with Dell, and strongly agreed to the fact that Dell products gave total value for money.

Graph 3: Average Rating For 'Value For Money' Of Laptop Brands



4. Sony received the highest grade on styling and appearance. HP, on the other hand, received the lowest grade in this respect.

Graph 4: Average Rating For 'Style/Appearance' Of Laptop Brands



5. Sony also scores high on additional features such as webcam, finger print reader etc. The researchers inferred that customers who want more augmentation prefer Sony. Also, they are very satisfied with this augmentation that Sony provides them.

6. According to the survey, people buy Sony because they feel that brand name is very important, and it affects the performance of a laptop. Dell received good reviews in magazines and on internet, and this becomes one of the key reasons why people buy Dell. Those who buy HP/Compaq, do it because of a strong recommendation from their friends.

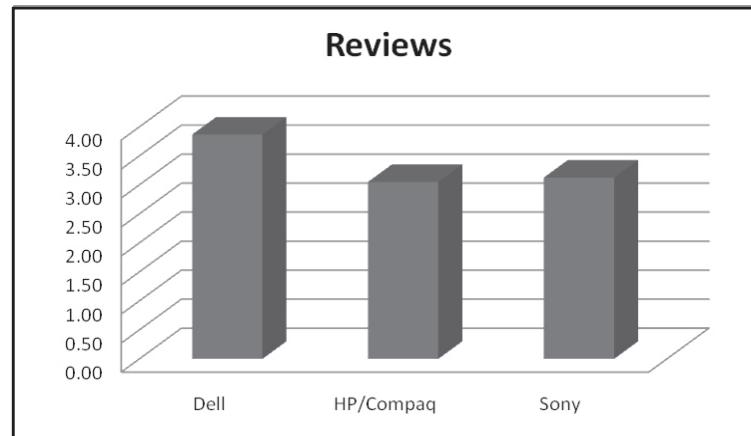
7. A significant finding from the survey is that, trade shows do not affect the brand that the people want to purchase. This is a very significant outcome as companies consider trade shows as a very important part of their brand promotion campaign. All consumers have rated it low, irrespective of their laptop brand.

8. People are not extremely influenced by advertisements of HP and Dell. Though the advertisements done by Sony have a significant impact on whether people buy Sony or not. It can be argued that Sony is able to create good brand awareness and it is able to convince buyers about its styling/appearance through its advertisements. So, advertisements have been found to be extremely effective in case of Sony. Dell and HP have failed to generate the brand awareness through their advertisements in print and TV. Thus, they could look at the reasons for failure of their advertising campaigns.

9. The researchers have found that the customers of Sony laid a lot of emphasis on styling and appearance. Also, about

78 % of the people who bought Sony were willing to pay more for an aesthetically pleasing experience. The researchers observed a dilemma in case of people who bought HP in this case. Though they think that their laptop does not score high on styling and appearance, about 65 % of them were willing to pay extra for these features. Thus, HP/Compaq could come up with models that have a better appearance, given the results of this survey.

Graph 5: Average Points For Reviews Of Laptop Brands



CONCLUSION

In the research, the researchers found a number of interesting things about the top 3 selling brands in the laptop market. Sony has been able to create a good awareness among people about the various augmentations in terms of design and added features about its products. Further, it has been able to generate high brand loyalty among its users. HP and Dell need to re-look at their advertising campaigns as they seem to be ineffective. Further, the trade shows do not seem to affect the brand bought, so the companies should re-consider taking laptops to the trade shows. HP has been the market leader, and its sales are promoted by word of mouth. HP should introduce models with extra features, as the customers who buy HP are willing to pay for these features.

BIBLIOGRAPHY

1. Abelson, R. P., & Levi, A. (1985). Decision making and decision theory (3rd ed.). In G. Lindzey & E. Aronson (Eds.), *The handbook of psychology* (pp. 2303-10). New York: Random House.
2. Moorthy, S., Ratchford, B. T., & Talukdar, D. (1997). Consumer information search revisited: Theory and empirical analysis. *Journal of Consumer Research*, 23(3), 263-277.
3. Simon, H. A. (1985). Human nature in politics: The dialogue of psychology with political science. *American Political Science Review*, 69(2), 293-304.
4. Thorngate, W. (1980). Efficient decision heuristics. *Behavioral Science*, 25(2), 219-225.
5. Johnson, E. J., & Payne, J. W. (1985). Effort and accuracy in choice. *Management Science*, 31(2), 395-414.
6. Bettman, J. R. (1979). *An information processing theory of consumer choice*. Reading, MA: Addison-Wesley.
7. Bettman, J. R. (1979). *An information processing theory of consumer choice*. Reading, MA: Addison-Wesley.
8. Website :- <http://economictimes.indiatimes.com/Interview/Masaru-Tamagawa-MD-Sony-India/articleshow/4262490.cms> (As visited on 2nd March, 2009).
9. Website :- <http://www.idcindia.com/press/feb27.html> (As visited on 2nd March, 2009).
10. Website :- <http://www.idcindia.com/press/Jun12.html> (As visited on 6th March, 2009).
11. Website :- <http://www.idcindia.com/press/june08.html> (As visited on 7th March, 2009).
12. Lecture by Alex Brown, University of Delaware : <http://www.udel.edu/alex/chapt6.html> (As visited on 7th March, 2009).
13. Case Study :- SWOT Analysis- Dell Corporation 2003: www.pinegars.com/PDF_Files/Paper%202a.pdf
14. Case Study :- https://web.toshiba-asia.com/product/doc/PC_Bulletin_323_-_Notebook_robustness_is_very_important.pdf
15. Website :- <http://hspa.gsmworld.com/upload/news/files/13112007042846.pdf> (As visited on 13th March, 2009).
16. Website :- <http://economictimes.indiatimes.com/Features/Brand-Equity/Picture-for-notebook-sales-not-perfect/articleshow/4342179.cms> (As visited on 15th March, 2009).
17. Website :- http://en.wikipedia.org/wiki/Likert_scale (As visited on 15th March, 2009).
18. Website :- <http://www-rohan.sdsu.edu/~renglish/370/notes/chapt05/> (As visited on 17th March, 2009).
19. Website :- http://en.wikipedia.org/wiki/Delphi_method (As visited on 17th March, 2009).