

## Radical Incremental Innovation in Products and Brands: Factors Influencing Customer towards their Adoption

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### ABSTRACT

Recent demonetization did affect the electronics sector too. In this study, the emphasis is on the electronics and electrical sector in India, as researched in online digital platforms as well as Brick & Mortar stores. India needs manufacturers that can produce more variety of electronic goods in order to cater to the changing needs, wants and demands of the informed customer. A lot of infrastructure is required for the same. Primary data for the study collected using survey method through the Questionnaire that were filled by the sample customer chosen from the population and to attain the consumer responses. Usage of online questionnaire through Google docs had been the easier, faster and more convenient way to collect such large number of responses. The questionnaire used online had been self-administered and customer friendly one, with the objective to keep it simple yet understand the affect of Innovations on the buying behaviour of the customers. Researcher did pilot test on a sample of 40 potential customers and the Cronbach alpha value proved that the research can be taken further. The objectives of study, the hypotheses and the data analysis gave fresh and exciting inputs in terms of understanding what the customer perceives and how responds to any type of innovation.

**Keywords:** Innovation Adoption, Technology, Electronics, Consumer Purchase, Internal-External factors

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### I. CONTEXTUAL SCENARIO

Indian electronics market is likely to grow significantly in the future. This will create space for Indian manufacturers in the global market and win the market share in the domestic market. India's local production of electronics products is not sufficient to meet the overall demand in the country. Currently the electronics demand has been largely met through imports and there is a widening demand-supply gap. The change in dynamics in electronic manufacturing holds more significance as India imports 65% of its current demand for electronic products. Electronic items are now the second-most valued category of imports after petroleum products and if the situation remains unchanged, the country's electronics import bill may well surpass its oil import expenses by 2020. This calls for the understanding of the customer towards the technological innovations – whether incremental innovation, radical or disruptive innovation or modular innovation. This becomes important that India now starts manufacturing its own electronics based on the above behaviour of customers. In order to realize this dream of local electronics manufacturing, the Indian electronics industry must strengthen its ecosystem and move toward increased domestic value addition from just being involved in last mile assembly. Currently, India possesses limited capabilities across manufacturing

value chain activities. There is a limited component supplier base and high dependency on imports for components. This has resulted in low levels of localization amid weak manufacturing ecosystem. Therefore, the Indian electronics industry must focus on increasing the level of local value addition in electronics products. For the Indian electronics market to grow, there are few hurdles it needs to overcome. Some important things to pay attention to in the electronics market are the competition and the bargaining power of the buyers. Competitive rivalry is quite high in this sector, as players use innovation and product differentiation to beat peers. A small innovative feature by one brand can lead to a significant loss of market for another brand offering a similar product. Each of these players adopts different strategies to capture market share; for example, one player innovates while another diversifies, thus intensifying the rivalry in the sector. The threat of substitute products is low in the electronics sector. Threat is low because there is no substitute for electronics. The purpose of an electronic gadget gets solved by adopting to it and no other alternative been used. The only threat is present within the industry due to product innovation by peers. The bargaining power of suppliers is low, as product differentiation is less. Low switching costs for customers. The bargaining power of buyers is

high, as buyers possess considerable product information these days, which helps in comparison. Availability of similar options from various brands makes the consumers strong bargainers.

## II. METHODS

This study aims at studying the Indian customers in order to identify their approach on how they perceive and adopt the technological innovation in the electronic products they purchase and use.

The objectives are:

- To understand the Consumer behavioral patterns towards adopting the leading electronic brands with respect to innovative technologies used
- To analyze the extent to which innovation is required in the present scenario to boost customer innovation adoption
- To find out the effects of type of innovation on the market of an existing product in the sector after its diffusion takes place

The Indian electronics market has seen a change in itself in the last decade because of the growing awareness among people and their increased dependence on electronic gadgets. Major manufacturers like Samsung, LG, IFB etc are cashing on this market scenario by bringing in new and different products every now and then. The major electronic items used earlier were television, refrigerator, air conditioners and washing machines. But with the change in the needs of the consumers, the products used are also evolving. Basic electronics now range from a television set to hair care products and skin care devices. Making Innovation strategy the way to make right trade decisions and choose the right practices for the organization. Pisano (2015) Found out that Innovation initiatives frequently fail, and successful innovators have a hard time sustaining their performance—as Polaroid, Nokia, Sun Microsystems, Yahoo, Hewlett-Packard, and countless others have found. Despite all the investment of management, time and money, innovation remained a not so successful pursuit for many companies. The reason is not very common but is effective. It is the failure of execution. The problem lies with the lack of an innovation strategy. Good strategies promote alignment among diverse groups within an organization; clarify objectives and priorities, and help focus efforts around them. Companies regularly define their overall business strategy (their scope and positioning) and specify how various functions such as marketing, operations, finance, and R&D, will support it. Without an innovation strategy, innovation improvement efforts can easily become a way of failure. A company without an innovation strategy won't be able to make trade-off decisions and choose all the elements of the innovation system. This does not mean another

competitors system can be copied and used. But a useful strategy that helps in implementing the innovation efficiently is important. A tight and effective connection between innovation and strategy can help in forming a long term innovation leadership that will help the company capture market and sustain for a long time. A company's innovation strategy should specify how the different types of innovation fit into the business strategy and the resources that should be allocated to each. Innovation and competitive rivalry in the smart phone industry: does a dominant design exist? Cecere, Corrocher, Battaglia (2015) Found out that. Frequent technical changes and new products coming every now and then have made this industry extremely competitive and dynamic, even though the market share is highly concentrated in the hands of very few leading companies. These companies dominate in both market and technology. Smart phones being the most common gadget used by the Indian population, it is brought in by a lot of new companies also. This study investigated In particular, The companies bring out new designs trying to counter the old ones from their competitors and also to capture a whole new market share with these new designs. The number of smart phones has also increased at a fast rate because of the entry of a number of new companies in the market. Some old players exist and are doing well while few have seen a fall because of the new designs that have come and the changed preferences of the users. A smart phone these days is not just a phone but an entire system that has a lot of significance in the life of the user. Christensen, Horn, Johnson (2008) Studied how innovation is required in schools also in order to remain in race. Schools exist to maximize human potential. They are supposed to develop the skills, capabilities and shape the attitudes of students. Schools are also supposed to help children think differently and encourage the development of multiple perspectives. But schools in the US are struggling to meet these lofty objectives. It is not that schools do not use computers. But the way schools use computers leaves a lot to be desired. Schools use computers to marginally improve the way they already teach and run their system. Christensen emphasizes that the right way to use computers is as a disruption tool that will remove traditional teaching, help students to learn in the way they are naturally equipped to do and use teachers to coach students and give them individual attention. Disruptive technologies evolve in a completely different way. Christensen visualizes how computers may disrupt completely the manner in which education is imparted today. Disruptive innovation may proceed in two stages. The first stage is the introduction of computer based learning. The next stage would be the deployment of student centric technology. Collaborative learning libraries will

enable participants to instruct and learn from one another. These networks will harness the collective wisdom of a much larger number of people as opposed to the current monolithic teacher or administration centric model. Adner (2006) found out that innovation doesn't succeed in isolation. Any innovation needs complimentary innovation to attract customers. The arrival of colour TVs, HDTVs in the early 1990s could not succeed because of unavailability of supporting elements like broadcasting standards, signals etc. If risk of partner failure is high, consider slowing your development cycle to conserve resources and refine your. This is important because anything that comes in the market affects a number of other products too. If a product is there in the market, the need for a product that supports similar functions rises. In such a case if a company brings in a product that is completely new and performs new functions, the customers take some time to absorb and relate to the product. Innovation must be adopted by the most effective entity at first. The more intermediaries who must adopt an innovation before end users can, the higher the uncertainty of market success. Failure to account for delays in intermediaries' adoption and to adjust your expectations accordingly can doom the effort. The success of some new Products being more than others Henard, Szymanski (2001) studied that product innovation is increasingly valued as a key component of the sustainable success of a business's operations. As a result, there has been a noticeable increase in the number of studies directed at explicating the drivers of new product success. To help managers and researchers synthesize this growing body of evidence, the authors conduct a meta-analysis of the new product performance literature. The authors also find that the predictor-performance relationships can vary by measurement factor (e.g., the use of multi-item scales, subjective versus objective measures of performance, senior versus project management reporting, time elapsed since product introduction) or contextual factor (e.g., services versus goods, Asian versus North American markets, competition in high-technology versus low-technology markets). They discuss the implications of these findings and offer directions for further research. How wireless home networks evolved: presenting the role of policy-makers in a standards-based market Parekh (2010) examined the role of policy-makers in emerging, standards-based technology markets. Specifically, the role of U.S. regulators in the evolution of the wireless home networking market is analyzed. Wireless technologies are expected to play an important role in most home networks. For the past few years, the wireless segment of the home networking market has been characterized by a standards war between two different technologies. This paper attempts to assess the actions of regulators

within the larger context of the evolving market and to make relevant policy recommendations. This introduction provides the reader with background information on wireless home networking and is structured as follows. The first major section presents the market drivers and applications associated with home networking. The second major section describes the networking media choices available to the home networking consumer and makes the case for wireless technologies. This introduction concludes with a statement of the hypothesis that this paper will test, a description of the methodology employed and a rationale for the structure of the paper. Developing innovation capability in organisations: a dynamic capabilities approach Lawson, Samson (2009) studied the need of having knowledge from various fields in order to understand innovation management. Innovation management, according to the paper, can be viewed as a form of organisational capability. Successful companies invest in this capability and execute effective innovation strategies that help in effective acceptance of their innovation, services and products. They focus on their vision and mission while simultaneously applying their innovation with the help of an effective innovation strategy. They consider their competitors, the organisational intelligence, creativity and idea management in order to achieve their vision and mission. This helps in bringing in their innovation to the market with a capability to capture the attention. A substantial investment in innovation in terms of capability, ideas and strategy bring out a definite innovative product or service that is considered useful by the audience as well as the competitors. High-Definition Television: Assessing Demand Forecasts for a Next Generation Consumer Durable Bayus (2013) studied that High-Definition Television promises to be the next generation of television. This technology has broad implications for consumer markets, as well as the underlying manufacturing, technology development, and R&D activities of firms. The impact of a discontinuous innovation: Outcomes experienced by owners of home computers McQuarrie (2009) studied the evolution of the microcomputer and its adoption.

### III. DESIGN

The research design used in this study is exploratory followed by descriptive research design. In this study the exploratory research helps in identifying the key factors that define the electronics market and the consumer mindset for the same. The research design for this study constitutes of the collection of consumer responses through an online questionnaire. The data will consist of the consumer behaviour, their needs, their perception of an electronic product and the requirements that make them purchase the products. Since there is no

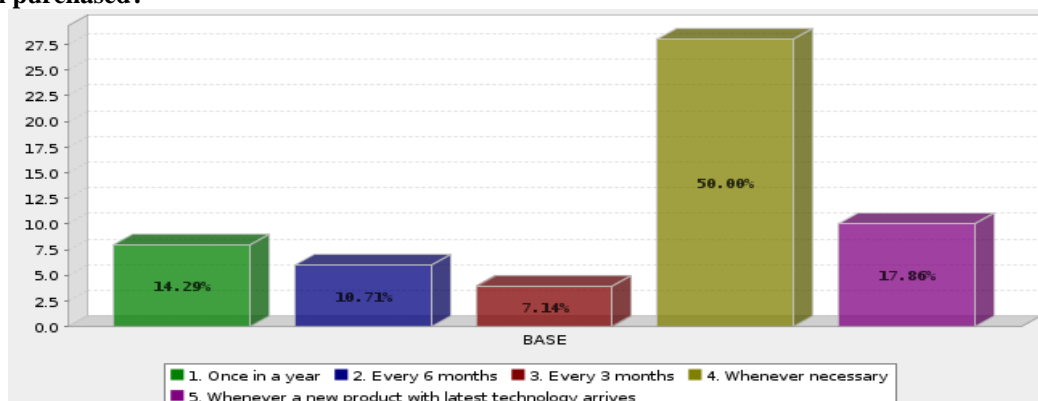
information about how the Indian consumer behaves when it comes to the electronics adoption in the market, this data will help. A descriptive research generally helps in understanding the characteristics of the market or the consumers. It also helps in determining the perception of the product characteristics. Once the data is collected and analyzed, it becomes important to describe what characteristics or parameters are helpful in getting a further understanding of the consumer. These characteristics are then defined. It helps in determining the results more accurately. It gives the in depth knowledge of the area that is studied.

In context of this study, a sample would be the people who use any kind of electronic gadget, be it a mobile phone or a hair dryer. To gather data for a study, it is not feasible to study the entire population. So a

representative of the population that is to be studied is selected. To conduct this study, a sample size of 400 respondents shall be taken. The questionnaire is to be filled by all the 400 respondents. It is a convenience sampling method. Convenience sampling is done because the sample is found on the basis of ease of approaching them. The selection of the representative or the sample can be done by sampling techniques. While selecting a sample it is recommended to select it such that there is minimal error. On the basis of the selected sample the inferences are noted down. These are called sample statistics. These statistics help in studying the characteristics of the population.

#### IV. ANALYSIS & INTERPRETATION

**Q1. How frequently do you purchase electronic goods that are technologically better than the older version purchased?**

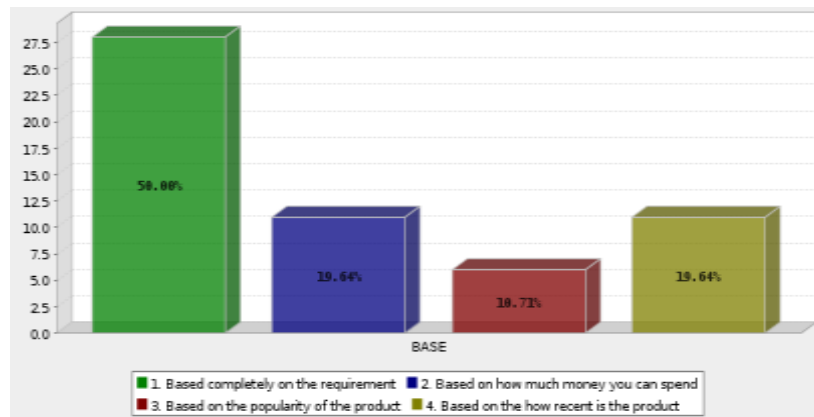


**Exhibit 4.1: Purchase frequency of electronic items**

	Answer	Count	Percent	
1.	Once in a year	24	14.29%	
2.	Every 6 months	18	10.71%	
3.	Every 3 months	12	7.14%	
4.	Whenever necessary	84	50.00%	
5.	Whenever a new product with latest technology arrives	30	17.86%	
	Total	400	100%	
Mean : 3.464		Confidence Interval @ 95% : [3.122 - 3.807]		Standard Error : 0.175
		Standard Deviation : 1.307		

**Table 4.1: Purchase frequency of electronic items**

It can be seen in the exhibit 4.1, that most people buy electronic products when they find it necessary. 50% respondents say they purchase electronics based on its need. This somehow means that a need is above everything else. Approximately 18% respondents purchase a product because it has new technology. 14.29% people purchase an electronic product once a year. 10% people purchase an electronic product every six months. 7.14% people purchase an electronic product every three months. This somehow portrays that the customers purchase and electronic product based on their need more than anything else. This also presents the fact that Indian customer still prefers his need over any other aspect.



**Q2. How do you make the purchase decision for an absolutely new technological (radical) product?**

**Exhibit 4.2: Purchase decision making criteria**

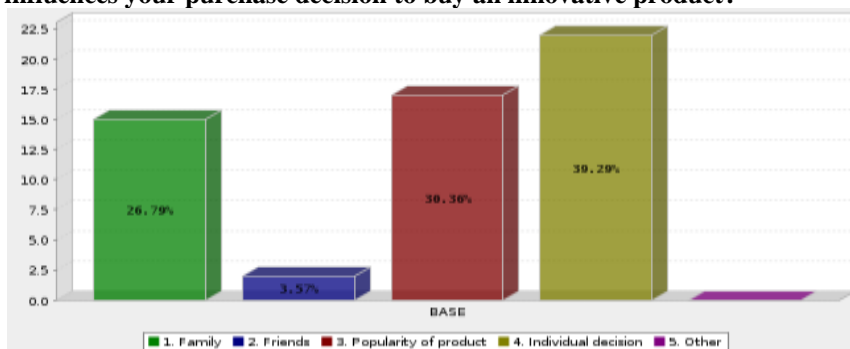
	Answer	Count	Percent	
1.	Based completely on the requirement	84	50.00%	
2.	Based on how much money you can spend	33	19.64%	
3.	Based on the popularity of the product	18	10.71%	
4.	Based on the how recent is the product	33	19.64%	
	Total	400	100%	
Mean :	2.000	Confidence Interval @ 95% : [1.688 - 2.312]	Standard Deviation : 1.191	Standard Error : 0.159

**Table 4.2:** Purchase decision making criteria

The exhibit 4.2 presents the decision criteria of the consumers while making an electronic purchase. 50% of the respondents say that they purchase an electronic product based on its requirement. They purchase it because they need it. This means the decision about a product being purchased comes out of its necessity and requirement. 19.64% decide to purchase and electronic product based on the amount of money they can spend on the product. Another 19.64% say they decide to purchase a product based on how recent the product is. This means they find out the

most recent product that has the latest technology and make a decision. 10.71% say their decision is based on the popularity of the product. The purchase decision can be said to depend majorly on the need as can be seen in the exhibit 4.2. The need for a product does not necessarily arise from its latest technology or popularity, but comes from the usefulness of the product. For an average Indian customer, a product that is required is more important than the one that arrives with the latest technology. So the requirement of the product becomes a major decision criterion.

**Q3. Who/what influences your purchase decision to buy an innovative product?**



**Exhibit 4.3: Influencers in the purchase decision**

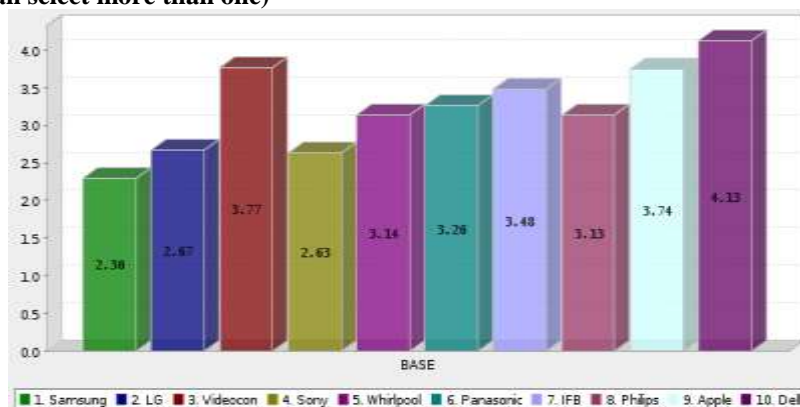
	Answer	Count	Percent	
1.	Family	45	26.79%	
2.	Friends	6	3.57%	
3.	Popularity of product	51	30.36%	
4.	Individual decision	66	39.29%	
5.	Other	0	0.00%	
	Total	400	100%	
Mean : <b>2.821</b>		Confidence Interval @ 95% : <b>[2.501 - 3.142]</b>		Standard Deviation : <b>1.223</b>
				Standard Error : <b>0.163</b>

**Table 4.3:** Influencers in the purchase decision

The exhibit 4.3 represents the factors that influence the purchase decision of the customers. As can be seen in the exhibit 4.3 and the table 4.3, 39.29% respondents say it is their personal decision. This means that they do not seek advice or ask for any help while making a decision to purchase an electronic product. 30.36% of the respondents say their decision is influenced by the popularity of the product that they are considering. This means that they decide the product to be purchased taking into consideration how popular the product is. Not putting their need of individuality first, they choose it based on the fame of the product. 26.79% respondents say their decision is influenced by their family. This

means that people do purchase electronic products based on what their family wants. This also means that an electronic product is not purchased just because it is the requirement or has latest technology, but because a family decides to purchase it. This is an example of a typical Indian customer. Indian customers are said to be influenced more by their family and the surroundings than making their own decisions. 3.57% respondents say their decision is influenced by friends. This can be understood as the effect of the peer group. A product arrives or is there in the market and the customer decides to purchase it because his friends use the same product

**Q4. What product would you buy from the following brands after their innovative variant is launched?(you can select more than one)**



**Exhibit 4.4:** Brand preferences of the consumers

	Question	Count	Score	
1.	Samsung	231	2.299	
2.	LG	183	2.672	
3.	Videocon	171	3.772	
4.	Sony	291	2.629	
5.	Whirlpool	171	3.140	
6.	Panasonic	186	3.258	
7.	IFB	400	3.482	
8.	Philips	201	3.134	

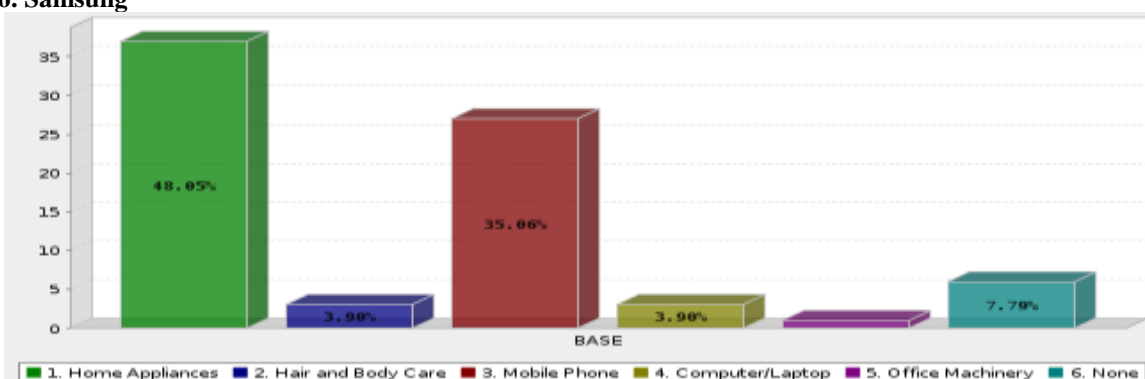
9.	Apple	246	3.744	
10.	Dell	189	4.127	
		Average	<b>3.226</b>	

**Table 4.4:** Brand preferences of the consumers

The exhibit 4.4 presents the brand preferences of the consumers. As can be seen in the exhibit 4.4, Sony stands out. This means that whatever the electronic product is, Sony is the brand that is preferred the most. Apple takes the second place which is surprising because Apple has only laptops and mobile phones in the market. This means that the two products from apple are purchased quite a lot to bring it to the second place. Samsung, as can be seen in the exhibit 4.4, is the third most preferred

brand. This means that Samsung electronics are also considered to be good. Philips also has a good reputation in the market. More than 200 respondents say they purchase electronics from Philips. After Philips, Panasonic and dell have a good consumer base. Videocon and IFB being the least preferred brands mean that people do not consider the products from these two brands good enough. LG is also preferred less as compared to the other brands.

**Q6. Samsung**



**Exhibit 4.5:** Product wise preference for Samsung

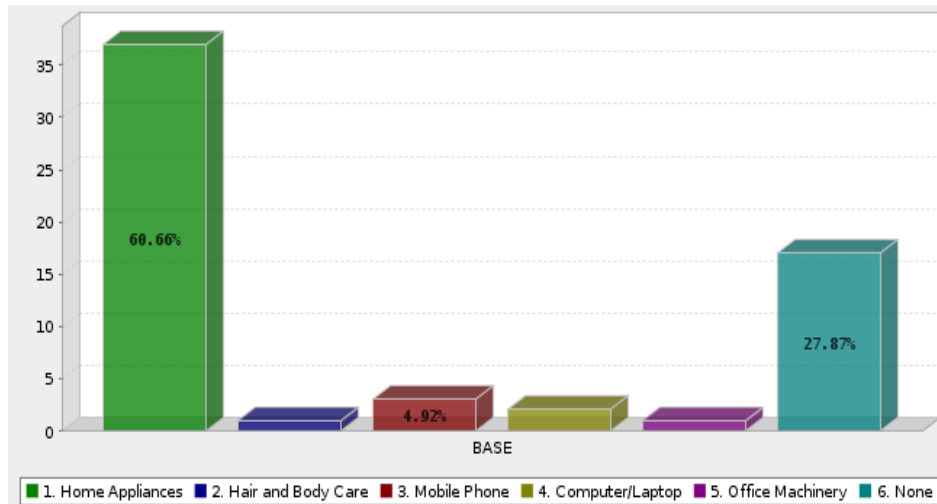
	Answer	Count	Percent	
1.	Home Appliances	111	48.05%	
2.	Hair and Body Care	9	3.90%	
3.	Mobile Phone	81	35.06%	
4.	Computer/Laptop	9	3.90%	
5.	Office Machinery	3	1.30%	
6.	None	18	7.79%	
	Total	231	100%	
Mean : 2.299		Confidence Interval @ 95% : [1.961 - 2.637]		Standard Deviation : 1.514
				Standard Error : 0.172

**Table 4.5:** Product wise preference for Samsung

The exhibit 4.5 represents the product wise preference for Samsung. It can be seen that Home appliances are the most purchased item from Samsung. Out of all the people that prefer Samsung, 48% say they go to Samsung for home appliances. After home appliances, Samsung is preferred for its mobile phones. 35.06% of the respondents who prefer Samsung over other brands say they prefer Samsung for its mobile phones. Samsung computers and laptop aren't a big hit among the customers.

Same applies for hair and body care products from Samsung. Only 3.9% respondents say they'd prefer Samsung for hair and body care products. Only 1.30% of the respondents who go to Samsung say they purchase office machinery from Samsung. 7.79% of the respondents say they do not prefer Samsung at all. This means a brand that is as good as Samsung and is among the most preferred brands, might also have some people who do not choose it over others.

**Q7. LG**



**Exhibit 4.6: Product wise preference for LG**

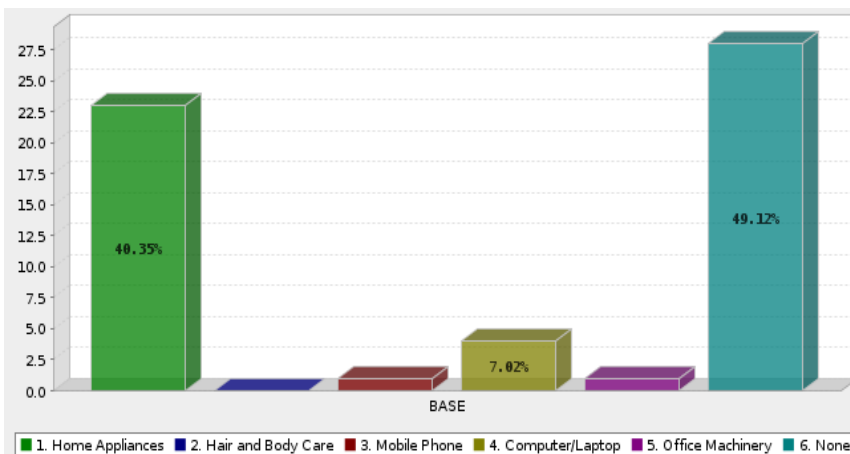
	Answer	Count	Percent	
1.	Home Appliances	111	60.66%	
2.	Hair and Body Care	3	1.64%	
3.	Mobile Phone	9	4.92%	
4.	Computer/Laptop	6	3.28%	
5.	Office Machinery	3	1.64%	
6.	None	51	27.87%	
	Total	183	100%	
Mean : 2.672		Confidence Interval @ 95% : [2.110 - 3.235]		Standard Deviation : 2.241
				Standard Error : 0.287

**Table 4.6: Product wise preference for LG**

The exhibit 4.6 shows the product wise preference for LG. Of all the respondents, 60.66% say they prefer LG for home appliances. As can be seen in the exhibit and the table 4.6, it is only the home appliances that LG is preferred for. The other

segments are not at all preferred by the consumers. 27.87% of the respondents say that they do not prefer LG at all. This shows that a proportion of the consumers only go to LG for home appliances and no other segment is preferred at all

**Q8. Videocon**



**Exhibit 4.7: Product wise preference for Videocon**



	Answer	Count	Percent	
1.	Home Appliances	69	40.35%	
2.	Hair and Body Care	0	0.00%	
3.	Mobile Phone	3	1.75%	
4.	Computer/Laptop	12	7.02%	
5.	Office Machinery	3	1.75%	
6.	None	84	49.12%	
	Total	171	100%	
Mean : 3.772		Confidence Interval @ 95% : [3.153 - 4.391]		Standard Deviation : 2.383
				Standard Error : 0.316

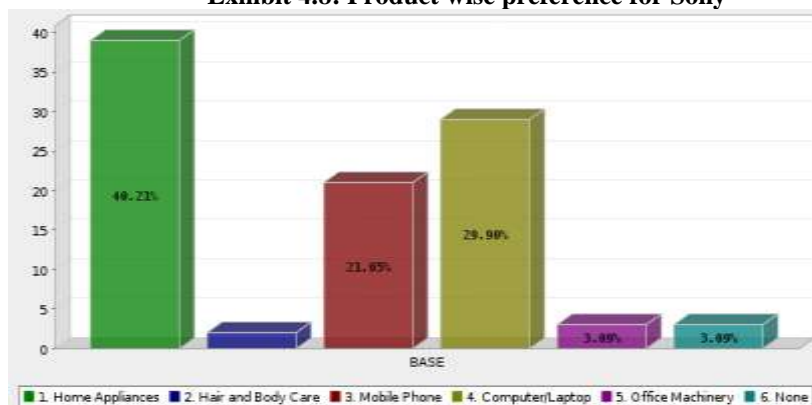
**Table 4.7:** Product wise preference for Videocon

As can be seen in exhibit 4.7, only 40.35% of the respondents go to Videocon for home appliances. This number is also very less as compared to Samsung as seen in exhibit 4.5. What is surprising is that the number of people who prefer Videocon is less than the number of people who do

not prefer Videocon at all. This somehow tells that Videocon is not a preferred brand and it is possible that it is not considered to be a reputed brand in the market.

**Q9. Sony**

**Exhibit 4.8: Product wise preference for Sony**



	Answer	Count	Percent	
1.	Home Appliances	117	40.21%	
2.	Hair and Body Care	6	2.06%	
3.	Mobile Phone	63	21.65%	
4.	Computer/Laptop	87	29.90%	
5.	Office Machinery	9	3.09%	
6.	None	9	3.09%	
	Total	291	100%	
Mean : 2.629		Confidence Interval @ 95% : [2.333 - 2.925]		Standard Deviation : 1.488
				Standard Error : 0.151

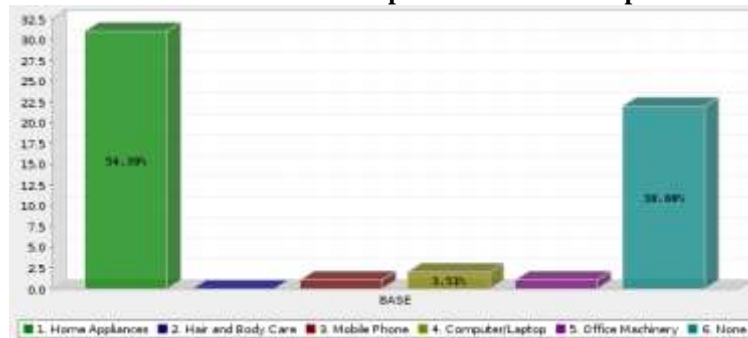
**Table 4.8:** Product wise preference for Sony

The exhibit 4.8 and table 4.8 represent the product wise preference for Sony. 40.21% of the respondents who go to Sony prefer home appliances from the brand. The number is quite good. 29.90% of the people prefer Sony for its computer or laptops. This tells that apart from providing good quality

home appliances, Sony also provides good computers. Another 21.65% go for mobile phones from Sony. This is not a very big number but a reasonable one. Only 3.09% people say they do not go to Sony at all. Seeing the entire result, Sony comes out to be the most preferred brand.

**Q10. Whirlpool**

**Exhibit 4.9: Product wise preference for Whirlpool**



	Answer	Count	Percent	
1.	Home Appliances	93	54.39%	
2.	Hair and Body Care	0	0.00%	
3.	Mobile Phone	3	1.75%	
4.	Computer/Laptop	6	3.51%	
5.	Office Machinery	3	1.75%	
6.	None	66	38.60%	
	Total	171	100%	

Mean : 3.140	Confidence Interval @ 95% : [2.513 - 3.768]	Standard Deviation : 2.416	Standard Error : 0.320
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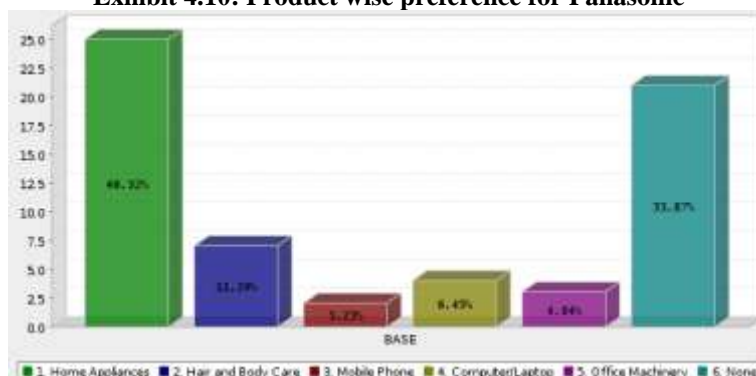
**Table 4.9: Product wise preference for Whirlpool**

As can be seen in the exhibit 4.9, of all the respondents, the people who prefer Whirlpool, 54.39% go to Whirlpool for home appliances. The other segments of Whirlpool are very rarely touched. The people who do not go to whirlpool are 38.60% of

the respondents. This indicates that people either go to Whirlpool for home appliances or they do not go for it at all.

**Q10. Panasonic**

**Exhibit 4.10: Product wise preference for Panasonic**



	Answer	Count	Percent	
1.	Home Appliances	75	40.32%	
2.	Hair and Body Care	21	11.29%	
3.	Mobile Phone	6	3.23%	
4.	Computer/Laptop	12	6.45%	
5.	Office Machinery	9	4.84%	
6.	None	63	33.87%	
	Total	186	100%	

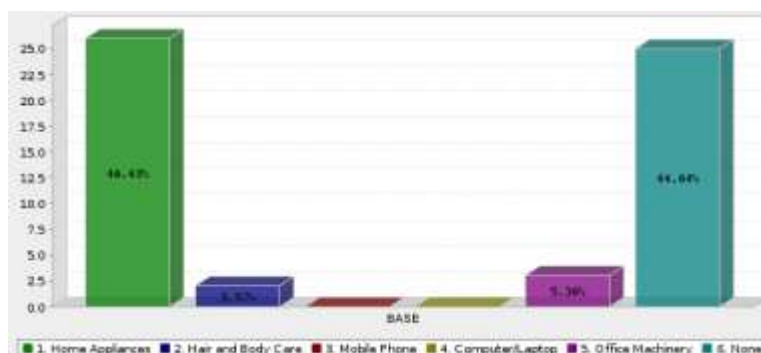
Mean : 3.258	Confidence Interval @ 95% : [2.699 - 3.817]	Standard Deviation : 2.247	Standard Error : 0.285
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**Table 4.10:** Product wise preference for Panasonic

The exhibit 4.10 shows the preference pattern for Panasonic. 40.32% of the total respondents prefer Panasonic for its home appliances. Another 11.29% go for its hair and body care accessories. 33.87% people say they do not go for Panasonic at all. The results show something

important and that is the preference towards the hair and body care products from Panasonic. Not a large number, but it shows the significant presence of Panasonic in the segment. Not many people would prefer Panasonic, but it can be inferred that home appliances are a good bet from Panasonic.

**Q11. IFB**



**Exhibit 4.11:** Product wise preference for IFB

	Answer	Count	Percent	
1.	Home Appliances	78	46.43%	
2.	Hair and Body Care	6	3.57%	
3.	Mobile Phone	0	0.00%	
4.	Computer/Laptop	0	0.00%	
5.	Office Machinery	9	5.36%	
6.	None	75	44.64%	
	Total	400	100%	

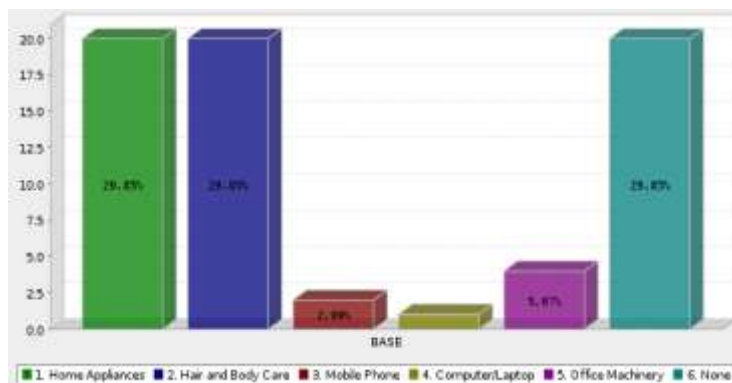
Mean : 3.482	Confidence Interval @ 95% : [2.841 - 4.124]	Standard Deviation : 2.449	Standard Error : 0.327
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**Table 4.11:** Product wise preference for IFB

The exhibit 4.11 presents the preference for IFB products. 46.43% people go to IFB for its home appliances. No other segment from IFB is really

present in the market as can be seen from the results in the exhibit 4.11. 44.64% people say they do not go to IFB at all.

**Q12. Philips**



**Exhibit 4.12:** Product wise preference for Philips

	Answer	Count	Percent	
1.	Home Appliances	60	29.85%	
2.	Hair and Body Care	60	29.85%	
3.	Mobile Phone	6	2.99%	
4.	Computer/Laptop	3	1.49%	
5.	Office Machinery	12	5.97%	
6.	None	60	29.85%	
	Total	201	100%	
Mean : <b>3.134</b>		Confidence Interval @ 95% : <b>[2.627 - 3.641]</b>		Standard Error : <b>0.259</b>
				Standard Deviation : <b>2.117</b>

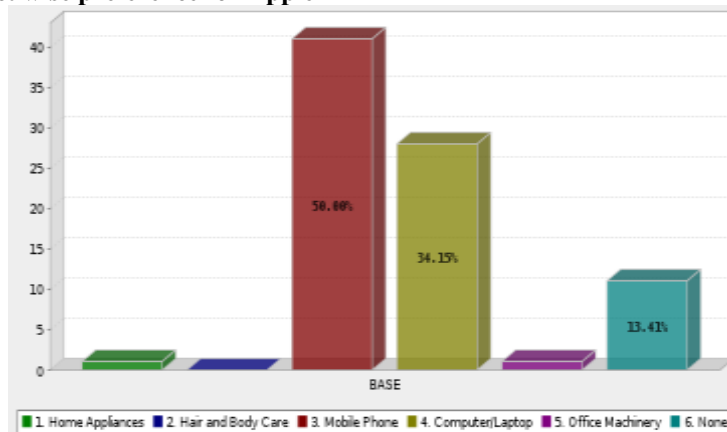
**Table 4.12:** Product wise preference for Philips

The Exhibit 4.12 presents the data for Philips. Of all the respondents, 29.85% go to Philips for its home appliances. Another 29.85% go for its hair and body care products. This shows how Philips has a good share of market in case of hair and body

care products. Office machinery is also purchased by a very small number. 29.85% of the respondents say they do not go for products from Philips at all.

**Q13. Apple**

**Exhibit 4.13: Product wise preference for Apple**



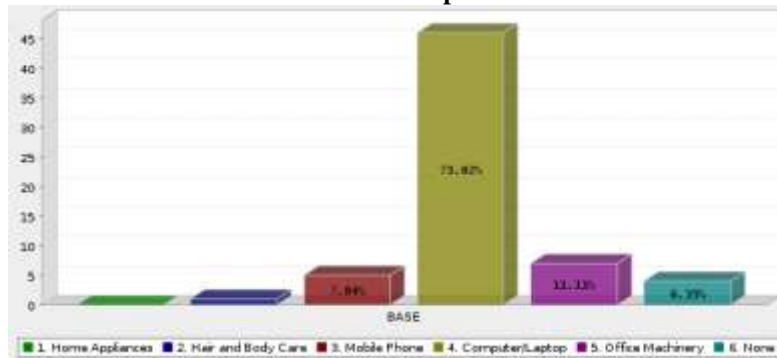
	Answer	Count	Percent	
1.	Home Appliances	3	1.22%	
2.	Hair and Body Care	0	0.00%	
3.	Mobile Phone	123	50.00%	
4.	Computer/Laptop	84	34.15%	
5.	Office Machinery	3	1.22%	
6.	None	33	13.41%	
	Total	246	100%	
Mean : <b>3.744</b>		Confidence Interval @ 95% : <b>[3.516 - 3.972]</b>		Standard Error : <b>0.116</b>
				Standard Deviation : <b>1.052</b>

**Table 4.13:** Product wise preference for Apple

The exhibit 4.13 presents the consumer preference pattern for Apple. 50% of the respondents go Apple for its mobile phones. Since Apple is majorly known for its mobile phones and laptops, the major part of its market is from the two products. Some people do not prefer Apple at all.

**Q14. Dell**

**Exhibit 4.14: Product wise preference for Dell**



	Answer	Count	Percent	
1.	Home Appliances	0	0.00%	
2.	Hair and Body Care	3	1.59%	
3.	Mobile Phone	15	7.94%	
4.	Computer/Laptop	138	73.02%	
5.	Office Machinery	21	11.11%	
6.	None	12	6.35%	
	Total	189	100%	

Mean : <b>4.127</b>	Confidence Interval @ 95% : <b>[3.952 - 4.302]</b>	Standard Deviation : <b>0.707</b>	Standard Error : <b>0.089</b>
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**Table 4.14: Product wise preference for Dell**

As can be seen in the Exhibit 4.14, people go to Dell for its computers and laptops. This is the major segment that Dell has a market share in, with 73.02% respondents going to Dell for computers. 11.11% people purchase office machinery from Dell.

Only 6.35% people say they do not go to Dell at all. This somehow indicates that Dell has a good reputation in the market when it comes to its computers and laptops.

**Q5. The major reason for your preference towards a technologically innovated brand is:**

	Answer	Count	Percent	
1.	Reliable products	39	23.21%	
2.	Value for money	33	19.64%	
3.	Good quality products	69	41.07%	
4.	Good after sale services	0	0.00%	
5.	Latest technology	24	14.29%	
6.	Other	3	1.79%	
	Total	400	100%	

Mean : <b>2.679</b>	Confidence Interval @ 95% : <b>[2.329 - 3.029]</b>	Standard Deviation : <b>1.336</b>	Standard Error : <b>0.179</b>
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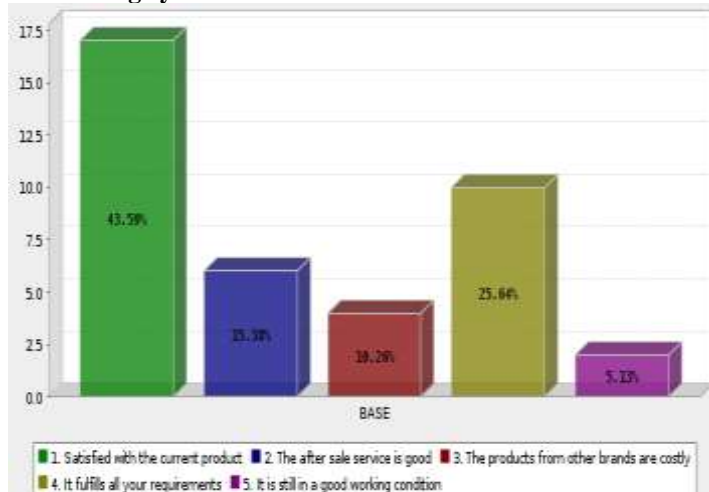
**Table 4.15: Major reason for preference towards a brand**

The exhibit 4.15 presents the reason that makes a consumer prefer a particular brand. It can be seen that a major portion of the consumers prefer a

brand because of its good quality products. Another 23.21% say they prefer a brand because it provides them products that are reliable. 19.64% percent say

they prefer a brand because it provides them value for money. Only 14.29% consumers say they prefer a brand because of the latest technology it provides. Good after sale services is not a reason at all.

**Q6. Do you feel the need to change your brand because of the innovations it has brought to the market?**



**Exhibit 4.16: Need to change the brand**

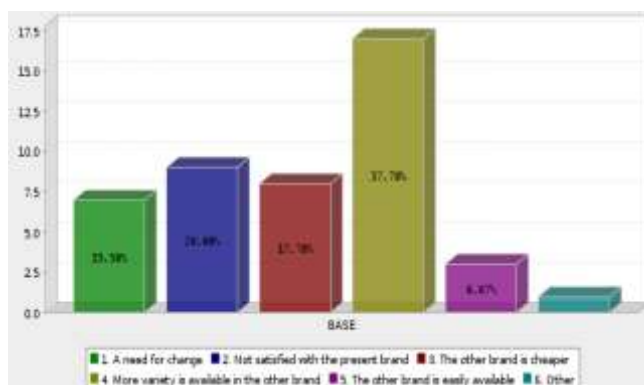
	Answer	Count	Percent	
1.	Yes	39	23.21%	
2.	No	63	37.50%	
3.	Depends on what the other brand has to offer	66	39.29%	
	Total	400	100%	
Mean : 2.161		Confidence Interval @ 95% : [1.956 - 2.365]		Standard Error : 0.104
				Standard Deviation : 0.781

**Table 4.16: Need to change the brand**

**Exhibit 4.17: The one factor that makes the consumer retain their old brand**

	Answer	Count	Percent	
1.	Satisfied with the current product	51	43.59%	
2.	The after sale service is good	18	15.38%	
3.	The products from other brands are costly	12	10.26%	
4.	It fulfills all your requirements	30	25.64%	
5.	It is still in a good working condition	6	5.13%	
	Total	117	100%	
Mean : 2.333		Confidence Interval @ 95% : [1.893 - 2.773]		Standard Error : 0.224
				Standard Deviation : 1.402

**Table 4.17: The one factor that makes the consumer retain their old brand**



**Q8. If needed to change, what is the most important innovative factor that will make you change your brand?**

**Exhibit 4.18: The one factor that makes the consumer change their old brand**

	Answer	Count	Percent	
1.	A need for change	21	15.56%	
2.	Not satisfied with the present brand	27	20.00%	
3.	The other brand is cheaper	24	17.78%	
4.	More variety is available in the other brand	51	37.78%	
5.	The other brand is easily available	9	6.67%	
6.	Other	3	2.22%	
	Total	135	100%	
Mean :	Confidence Interval @ 95% :		Standard Deviation :	Standard Error :
<b>3.067</b>	<b>[2.686 - 3.448]</b>		<b>1.304</b>	<b>0.194</b>

**Table 4.18: The one factor that makes the consumer change their old brand**

The exhibit 4.18 represents the factors that make a consumer change their current brand that they are using. 37.78% consumers say they wish to change their brand because more variety is available in the other brand. 20% say they wish to change their brand

because they are not satisfied with the present brand they are using. Other major reasons are the need for change and the availability of the other brand at a cheaper price. Easy availability of the other brand is also a reason for changing the brand.

**Q9. How important is it according to you for brands to bring new and innovative products after a certain time?**

	Answer	Count	Percent	
1.	Not at all important	12	7.14%	
2.	Least important	9	5.36%	
3.	Neutral	24	14.29%	
4.	Important	66	39.29%	
5.	Very important	57	33.93%	
	Total	400	100%	
Mean :	Confidence Interval @ 95% :		Standard Deviation :	Standard Error :
<b>3.875</b>	<b>[3.571 - 4.179]</b>		<b>1.161</b>	<b>0.155</b>

**Table 4.19: Importance of new and innovative products by brands**

The exhibit 4.19 presents how important is it for brands to bring in new and innovative products from time to time. 39.29% of the respondents say it is important to bring new products. 33.93% say it is

very important. 14.29% of the respondents find it undecided about it. 7.14% say it is not at all important. 5.36% say it is slightly important. This means that the majority wants new products.

**Q10. The reason why new and innovative products must be launched continuously for your adoption to them is:**

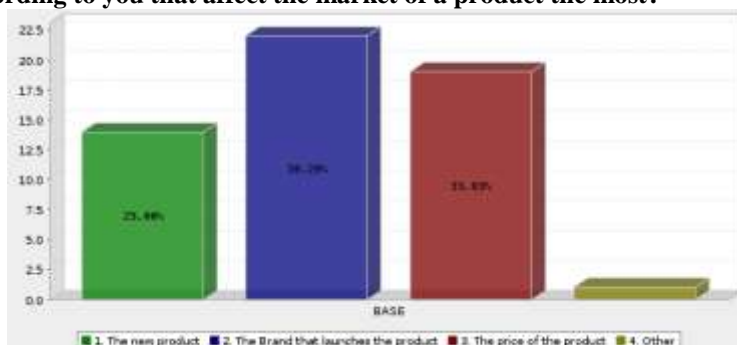
	Answer	Count	Percent	
1.	Old technology must be replaced	30	17.86%	
2.	Old products stop serving the purpose after some time	39	23.21%	
3.	The trends keep on changing continuously	27	16.07%	
4.	A new product will have better features	72	42.86%	
5.	Other	0	0.00%	
	Total	400	100%	
Mean : <b>2.839</b>		Confidence Interval @ 95% : <b>[2.532 - 3.146]</b>		Standard Error : <b>0.157</b>
		Standard Deviation : <b>1.172</b>		

**Table 4.20:** Why new and innovative products must be launched

The Exhibit 4.20 represents the reasons why new and innovative products must be launched by the brands in the market. 42.86% people say that new and innovative products must be launched because a new product will have better features. 23.21% say that old products stop serving their purpose after some time. 17.86% of the respondents say that old technology must be replaced from time to time. 16.07% say that trends change continuously. The result clearly tells that people believe that a new product is going to have new and better features and so they do not mind switching their brand. People are willing to switch to a new brand not just because they wish to change their product, but because they feel that it is important for new technology to come into

the market and also a better product must come. The exhibit shows the factor that makes a consumer retain their old brand. There are a number of factors that might influence the consumer into not changing their brand or the electronic product. Whatever makes them retain their current brand is the most important factor that is studied here. 43.59% consumers retain their current brand because they are satisfied with the current product. 25.64% say that it fulfils all their requirements. 15.38% consumers say they find the after sale service good so they won't change their brand. 10.26% say that they find the products from other brands costly. 5.13% won't change their brand because the product is still in a good working condition.

**Q12. What is it according to you that affect the market of a product the most?**



**Exhibit 4.22:** The factor that affects the market of the existing product the most



	Answer	Count	Percent	
1.	The new product	42	25.00%	
2.	The Brand that launches the product	66	39.29%	
3.	The price of the product	57	33.93%	
4.	Other	3	1.79%	
	Total	400	100%	
Mean :	Confidence Interval @ 95% :		Standard Deviation :	Standard Error :
2.125	[1.913 - 2.337]		0.810	0.108

**Table 4.22:** The factor that affects the market of the existing product the most

The exhibit 4.22 explains what factor is it that affects the market of an existing product the most. 39.29% of the respondents feel that it is the Brand that launches the new product that has the most effect on the existing market. 33.93% people believe that it is the price of the product that affects the market the most. A new product that is priced lower than its competitors might have a snatch of the market share of the existing products. 25% people believe that the new product in itself affects the market.

## V. CONCLUSION

The interpretations about the data come from all the graphs and the analysis of the graphs. To interpret the data, it is important to understand the data carefully. A small error in the understanding may cause a large error in the results. From all the data collected, interpretations are made in many ways. The various interpretations lead to structured findings. After all the analysis a precise interpretation is necessary or the entire study may be useless. The interpreted results are used to find conclusion which include the completion of the objectives of the study. The interpretation of a study must abide by the objectives of the study. If there is any point of difference between the interpretations and the objectives of the study; there is a possibility that either of the two is incorrect. If the objectives of the study are not clear, the interpretations will differ from the expected results. This leads to inappropriate conclusions.

- Of all the 400 respondents, 71.43% were males and 28.57% were females. This can be inferred that males are more inclined towards electronic products.
- Since the data is collected majorly from students, the income is not very high. 44.64% people fall into the category of income below 15000 a month. This means that they do purchase electronics, but might think about the amount of money to be spent on it.

- Maximum respondents are from the age group 24-29 years. 18-23 is the other age group with a good number of respondents. This can be inferred from the results that the age group of 24-29 is quite tech savvy and keeps their electronic products updated.
- Sony comes out to be the most preferred brand. It is preferred for its home appliances as well as laptops. This can also be stated that Sony keeps its customers satisfied in terms of good quality products and technology. This is why the consumers prefer to go for Sony.
- Apple has been the most preferred when it comes to mobile phones. This again might be related to the fact that Apple has been the most innovative mobile phone provider.
- The willingness to purchase a product just based on its new features and latest technology is found out to be high. Approximately 86% of the respondents say they will purchase a product because of its latest technology.
- The maximum number of people purchased a mobile phone in such a case, it can be inferred that they are satisfied with its performance. 12% of the people who purchased a product say they are not satisfied with its performance.
- Mobile phone is the most purchased item based on the latest technology. 68.63% people purchased a mobile phone because it has the latest technology and new features. 21.57% people purchased a computer. This indicates that mobile phone market is the most affected by the latest technology.
- 85.71% of the respondents say they will purchase a product because of the latest technology that it offers. 14.29% say that they will not go for such a purchase.
- 39.29% of the respondents feel that it is the Brand that launches the new product that has the most effect on the existing market. 33.93% people believe that it is the price of the product that affects the market the most. A new product that is priced lower than its competitors might

have a snatch of the market share of the existing products. 25% people believe that the new product in itself affects the market.

- 60.71% of the respondents feel that a new product affects the existing market and the products. 16.07% say that it does not affect the market. 23.21% say that it affects the market to an extent. The extent depends on what is the product and what does it offer to the market.
- 42.86% people say that new and innovative products must be launched because a new product will have better features. 23.21% say that old products stop serving their purpose after some time. 17.86% of the respondents say that old technology must be replaced from time to time. 16.07% say that trends change continuously. The result clearly tells that people believe that a new product is going to have new and better features and so they do not mind switching their brand.
- People are willing to switch to a new brand not just because they wish to change their product, but because they feel that it is important for new technology to come into the market and also a better product must come.
- 39.29% of the respondents say it is important to bring new products. 33.93% say it is very important. 14.29% of the respondents find it undecided about it. 7.14% say it is not at all important. 5.36% say it is slightly important. This means that the majority wants new products.
- The need of the consumers to change their brand. This shows whether or not the consumers are

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willing to change their existing brand. 23.21% respondents say they are willing to change their current brand. 37.50% consumers say they are not willing to change their brand. The maximum respondents say they will decide whether to change their brand or not based on what the other brand has to offer. 39.29% say their decision is based on the product that is offered by the other brand. This indicates that people do not change their brands easily. They consider the product and measure the options before making any shifts of brands.

- The reason that makes a consumer prefer a particular brand. It can be seen that a major portion of the consumers prefer a brand because of its good quality products. Another 23.21% say they prefer a brand because it provides them products that are reliable. 19.64% percent say they prefer a brand because it provides them value for money. Only 14.29% consumers say they prefer a brand because of the latest technology it provides. Good after sale services is not a reason at all.
- People go to Dell for its computers and laptops. This is the major segment that Dell has a market share in, with 73.02% respondents going to Dell for computers. 11.11% people purchase office machinery from Dell. Only 6.35% people say they do not go to Dell at all. This somehow indicates that Dell has a good reputation in the market when it comes to its computers and laptops.

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