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## CONSUMER PERCEPTION AND PREFERENCE FOR SMART PHONE: A STUDY ON BHUBANESWAR MARKET

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### ABSTRACT

*Smart phones have become a part and partial of human life. With increasing disposable income, availability of variety of brands of smart phones to choose from, today the consumer has many choices. This paper focuses on the factors affecting consumer decision while buying a smart phone. The factors we consider here in this paper are battery life & capacity, fast charging, good quality display, high RAM & ROM, and high resolution. From this study it has been found that 84 respondents preferred medium size phones. Most of the respondents i.e; 57 preferred high storage capacity of RAM and ROM followed by high resolution camera. Brands like Apple, Samsung and Oneplus are perceived significantly different from brands like Vivo, Oppo, Xiaomi and IQOO. Whereas Realme and Google Pixel are not perceived significantly different from other brands.*

**KEYWORDS:** *Smart Phone, Consumer Perception, Anova, Brands.*

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### INTRODUCTION:

Today, technology plays a vital role in our modern life. Different technical gadgets have made human life easier. One of them is smart phone. 70 percent of the world population today have at least one smart phone. Smartphone industry has been booming since 1983. Since then, there have been many large mobile phone companies stepping their foot into the industry. Western Smartphone makers, like Apple and Google, are increasingly looking east for growth, giving countries like India significant influence over the sorts of features they build into their phones.

The behavior of consumers towards smart phones is increasingly a focus of marketing research. In particular, consumer behavior in the smart phone industry, from adoption motivation to post-usage behavior has become a major focus of research in the field of marketing. The results of the research confirm that the regulatory focus has an influence on consumer behavior towards smart

phone purchase decision by affecting their perception, motivation, and lifestyle. India is one of the fastest growing economies in the world and the smart phone industry in India is also growing very fast. For consumers' smart phones have become essential parts of personal and business life. There is a continuous increase in disposable income; there has been a major shift in the attitude and aspirations of the consumers.

Evolution of smart phones has got greater benefits such as accessing internet, checking mail, UPI payments, etc. Now-a-days smart phones are available with many features. While buying a smart phone a consumer looks for these features such as good quality camera, battery life & capacity, fast charging, good quality display, high RAM & ROM, high resolution, etc. Hence, in this paper we focus on the perception of consumers towards different brands of smart phones based on the above factors.

The rest of the paper is organized in the following way. Section 2 reviews the relevant literature. Section 3 discusses objectives of the research, Section 4 describes the sample, data and research methods. Section 5 presents the empirical results and analysis, and finally, Section 6 summarizes and concludes the paper.

## Literature Review:

**Arlene Harris, Martin Cooper (2019)** have opined that People would rather consume fewer calories than give up their smartphones. People who leave their phones at home will go get them, but they are so crazy that they will not bother to go without their wallet.

**Grzegorz Szyjewskia, Luiza Fabisiak (2018)** have deduced that it seems simple to use a mobile phone, especially to younger generations. For them, it comes naturally to use Google Maps to locate a destination, Spotify or Tidal to listen to music, and Facebook, Twitter, etc. to acquire daily updates. Like previous generations, they can't envisage a world without cell phones [3] or a roof over their heads. That is because they have never known a world without a mobile internet connection.

**Tao Zhang 1, Pei-Luen Patrick Rau 2, Jia Zhou 2 (2014)** have inferred that customers' initial impressions of various product characteristics are based on their perceptions, especially when they lack the time and resources to thoroughly explore a new product. Consumer assessments of whether the product will meet their needs are strongly correlated with how consumers perceive the product's features.

**MohdAzam Osman, Abdullah Zawawi Talib, Zainal Abiding Samusi, Tan Shiang-yen and Abdullah sani Alwi, (2012)** have revealed that selling price is not the most important element that influences a consumer's decision to buy a smartphone; instead, customers place more value on design, connectivity, and performance than they do on price.

**V P Padma, Dr T Kannan (2022)** have found out that the most crucial aspects in a buying selection are the product's characteristics, such as the camera, battery life, and processing speed. Additional product attributes, price, peer group, and brand image are the main deciding factors when purchasing a smartphone.

**Wilska, T.-A (2003)** have found in their research that technology fervour and trend consciousness were more common in men and were associated with impulsive consumption and

"hard" values. Use of a frugal cell phone was not associated with gender but rather with environmental awareness and frugal consumption in general.

**BishalNagarkoti (2009)** has inferred in his research that every single shopper uses a cell phone to simplify their lives and to embrace the digital age by connecting everything to the internet. Customers consider features/credits like brand image, practical features, applications, battery life, operating system, camera's goal, pixels, storage capacity, consistency and pricing while buying mobile phones.

**Objective:**

This study's goal is to learn more about smart phone users' perception about different brands of smart phone. The objectives are mentioned below:

1. To know about consumers perception with respect to size, feature, screen type, battery capacity, importance, display of smart phones.
2. To know whether consumer perceive different brands equally.

**Methodology:**

The study is conducted in Bhubaneswar by taking a sample size of 127. Data were collected from the respondents online through a structured questionnaire. ANOVA with Bonferroni post hoc test, graphs and charts are used to analyse the data. SPSS and Excel tools are used for the analysis. Consumer ratings on a scale of 1 to 5 is collected from all respondents regarding different brands of smart phones. An ANOVA is carried out to see whether respondents mean rating for different brands are same or different. Bonferroni post hoc test is used to see which brands are significantly different from other brands.

**Analysis and Interpretation:**

Chart 1 indicates the number of male and female respondents participated in the survey. As it is seen that there are 84 male and 43 female who have responded to the questionnaire.

Chart 1

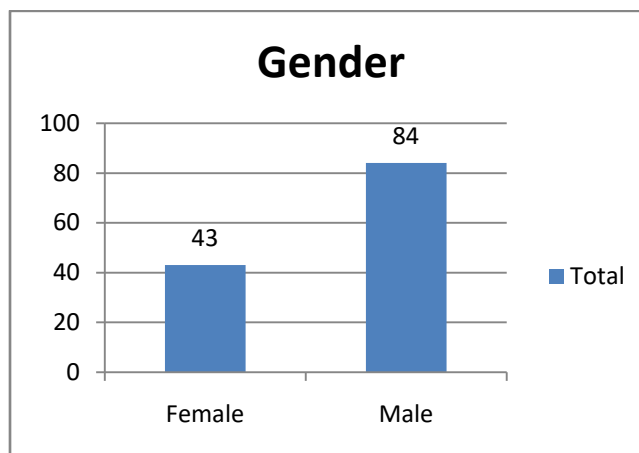


Chart 2 depicts the size of smart phones preferred by the respondents. 84 respondents preferred medium size phones, 30 respondents preferred large size phones, 7 respondents preferred foldable phones and 6 respondents preferred small phones.

Chart 2

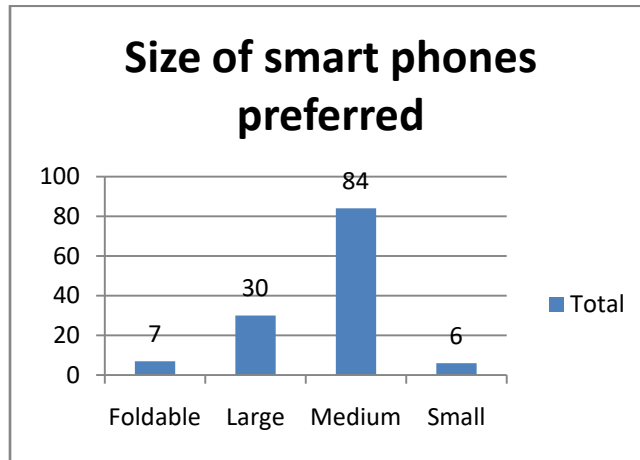


Chart 3 represents smart phone features that respondents preferred. Most of the respondents i.e; 57 preferred high storage capacity of RAM and ROM followed by high resolution camera.

Chart 3

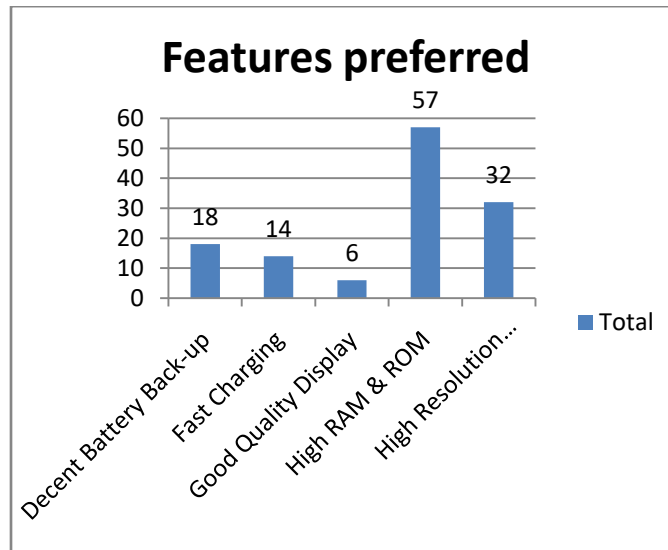


Chart 4 depicts importance of smart phone. It is seen that 52 respondents said that smart phone is important for them for its main functions such as making calls, sending sms etc. followed by 49 respondents opined that it is important for its camera, listening songs, recorder etc.

Chart 4

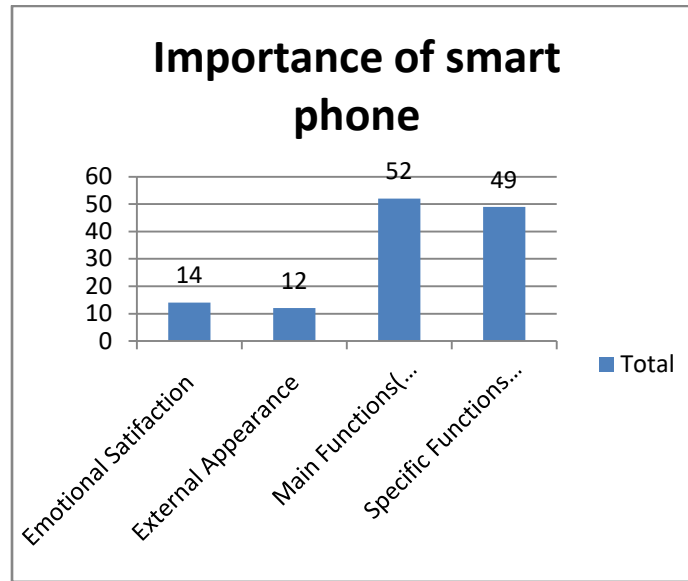


Chart 5 indicates about time spent by the respondents on their smart phones. 50 respondents spent a maximum of more than 5hrs on their phones. Minimum time spent is 1 to 2hrs by 15 respondents.

Chart 5

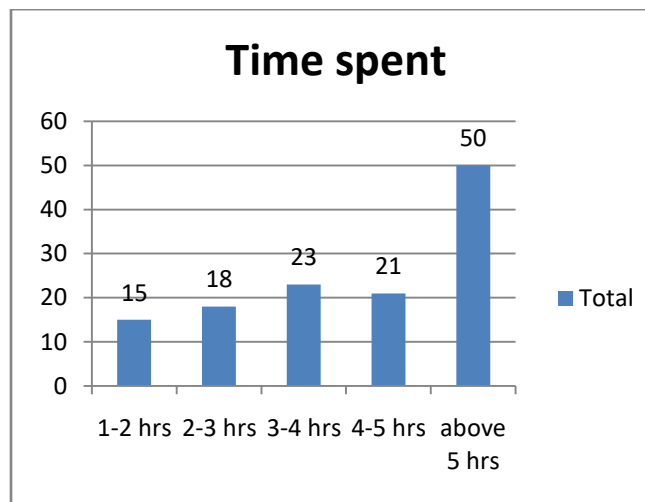


Chart 6 represents about preferred display of a smart phone. It is seen that super amoled display is preferred by 64 respondents.

Chart 6

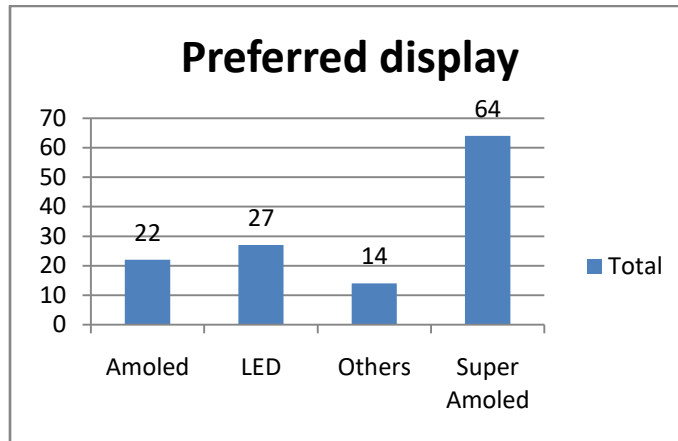
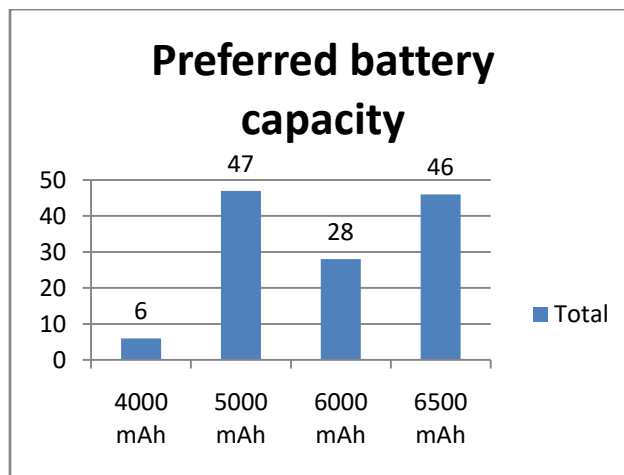


Chart 7 identifies preferred battery capacity by the respondents. It is seen that a maximum of 47 respondents preferred 5000mAh followed by 46 respondents preferred 6500mAh battery.

Chart 7



ANOVA and Bonferroni correction output is shown below. From table 1 descriptive of all the brands of smart phones can be seen. Mean ratings for Apple, Samsung and Oneplus are maximum whereas Oppo, IQOO, Vivo and Xiaomi are minimum.

TABLE 1- DESCRIPTIVES

Rating					95% Confidence Interval for Mean			
	N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
Apple	127	3.6142	1.52777	.13557	3.3459	3.8825	1.00	5.00
Realme	127	3.2047	1.26201	.11199	2.9831	3.4263	1.00	5.00
Oneplus	127	3.5984	1.34672	.11950	3.3619	3.8349	1.00	5.00
Vivo	127	3.0000	1.39158	.12348	2.7556	3.2444	1.00	5.00
Oppo	127	2.9370	1.34959	.11976	2.7000	3.1740	1.00	5.00

Xiaomi	127	3.0315	1.40824	.12496	2.7842	3.2788	1.00	5.00
IQOO	127	2.9528	1.40779	.12492	2.7055	3.2000	1.00	5.00
GooglePixel	127	3.3543	1.42833	.12674	3.1035	3.6052	1.00	5.00
Samsung	127	3.7165	1.39669	.12394	3.4713	3.9618	1.00	5.00
Total	1143	3.2677	1.41857	.04196	3.1854	3.3500	1.00	5.00

H0: There is no significant difference between the mean ratings towards different brands

H1: There is a significant difference between the mean ratings towards different brands

Output ANOVA can be seen from table 2. It is seen that the significance value is 0.000 that indicates the null hypothesis is rejected and it can be concluded that there is a significant difference between the mean ratings towards different brand.

**TABLE 2 - ANOVA**

Rating	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	98.850	8	12.356	6.371	.000
Within Groups	2199.228	1134	1.939		
Total	2298.079	1142			

As it has been proved that mean ratings provided by the respondents towards different brands are significantly different, we can now see which brand or brands are significantly different from other. For that we have used a Bonferroni post hoc test. There is a multiple comparison made between different brands that can be seen in Table 3. From this output table we can see that:

- Apple, Samsung and Oneplus as brands are perceived significantly different from brands like Vivo, Oppo, Xiaomi and IQOO.
- Realme and Google Pixel are not perceived significantly different from other brands.

**TABLE 3 - MULTIPLE COMPARISONS**

Rating Bonferroni	(I) Brand	(J) Brand	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
	Apple	Realme	.40945	.17476	.695	-.1506	.9695
		Oneplus	.01575	.17476	1.000	-.5443	.5758
		Vivo	.61417*	.17476	.016	.0541	1.1743
		Oppo	.67717*	.17476	.004	.1171	1.2372
		Xiaomi	.58268*	.17476	.032	.0226	1.1428

	IQOO	.66142*	.17476	.006	.1013	1.2215
	GooglePixel	.25984	.17476	1.000	-.3002	.8199
	Samsung	-.10236	.17476	1.000	-.6624	.4577
Realme	Apple	-.40945	.17476	.695	-.9695	.1506
	Oneplus	-.39370	.17476	.881	-.9538	.1664
	Vivo	.20472	.17476	1.000	-.3554	.7648
	Oppo	.26772	.17476	1.000	-.2924	.8278
	Xiaomi	.17323	.17476	1.000	-.3869	.7333
	IQOO	.25197	.17476	1.000	-.3081	.8121
	GooglePixel	-.14961	.17476	1.000	-.7097	.4105
	Samsung	-.51181	.17476	.125	-1.0719	.0483
Oneplus	Apple	-.01575	.17476	1.000	-.5758	.5443
	Realme	.39370	.17476	.881	-.1664	.9538
	Vivo	.59843*	.17476	.023	.0383	1.1585
	Oppo	.66142*	.17476	.006	.1013	1.2215
	Xiaomi	.56693*	.17476	.044	.0068	1.1270
	IQOO	.64567*	.17476	.008	.0856	1.2058
	GooglePixel	.24409	.17476	1.000	-.3160	.8042
	Samsung	-.11811	.17476	1.000	-.6782	.4420
Vivo	Apple	-.61417*	.17476	.016	-1.1743	-.0541
	Realme	-.20472	.17476	1.000	-.7648	.3554
	Oneplus	-.59843*	.17476	.023	-1.1585	-.0383
	Oppo	.06299	.17476	1.000	-.4971	.6231
	Xiaomi	-.03150	.17476	1.000	-.5916	.5286
	IQOO	.04724	.17476	1.000	-.5128	.6073
	GooglePixel	-.35433	.17476	1.000	-.9144	.2058
	Samsung	-.71654*	.17476	.002	-1.2766	-.1565
Oppo	Apple	-.67717*	.17476	.004	-1.2372	-.1171
	Realme	-.26772	.17476	1.000	-.8278	.2924
	Oneplus	-.66142*	.17476	.006	-1.2215	-.1013
	Vivo	-.06299	.17476	1.000	-.6231	.4971
	Xiaomi	-.09449	.17476	1.000	-.6546	.4656
	IQOO	-.01575	.17476	1.000	-.5758	.5443
	GooglePixel	-.41732	.17476	.616	-.9774	.1428
	Samsung	-.77953*	.17476	.000	-1.3396	-.2194
Xiaomi	Apple	-.58268*	.17476	.032	-1.1428	-.0226

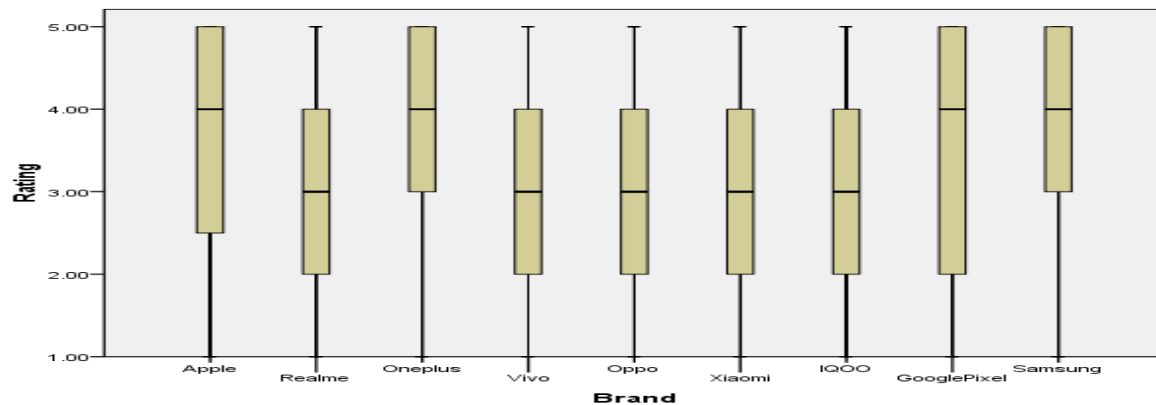


	Realme	-.17323	.17476	1.000	-.7333	.3869
	Oneplus	-.56693*	.17476	.044	-1.1270	-.0068
	Vivo	.03150	.17476	1.000	-.5286	.5916
	Oppo	.09449	.17476	1.000	-.4656	.6546
	IQOO	.07874	.17476	1.000	-.4813	.6388
	GooglePixel	-.32283	.17476	1.000	-.8829	.2372
	Samsung	-.68504*	.17476	.003	-1.2451	-.1250
IQOO	Apple	-.66142*	.17476	.006	-1.2215	-.1013
	Realme	-.25197	.17476	1.000	-.8121	.3081
	Oneplus	-.64567*	.17476	.008	-1.2058	-.0856
	Vivo	-.04724	.17476	1.000	-.6073	.5128
	Oppo	.01575	.17476	1.000	-.5443	.5758
	Xiaomi	-.07874	.17476	1.000	-.6388	.4813
	GooglePixel	-.40157	.17476	.783	-.9617	.1585
	Samsung	-.76378*	.17476	.000	-1.3239	-.2037
GooglePixel	Apple	-.25984	.17476	1.000	-.8199	.3002
	Realme	.14961	.17476	1.000	-.4105	.7097
	Oneplus	-.24409	.17476	1.000	-.8042	.3160
	Vivo	.35433	.17476	1.000	-.2058	.9144
	Oppo	.41732	.17476	.616	-.1428	.9774
	Xiaomi	.32283	.17476	1.000	-.2372	.8829
	IQOO	.40157	.17476	.783	-.1585	.9617
	Samsung	-.36220	.17476	1.000	-.9223	.1979
Samsung	Apple	.10236	.17476	1.000	-.4577	.6624
	Realme	.51181	.17476	.125	-.0483	1.0719
	Oneplus	.11811	.17476	1.000	-.4420	.6782
	Vivo	.71654*	.17476	.002	.1565	1.2766
	Oppo	.77953*	.17476	.000	.2194	1.3396
	Xiaomi	.68504*	.17476	.003	.1250	1.2451
	IQOO	.76378*	.17476	.000	.2037	1.3239
	GooglePixel	.36220	.17476	1.000	-.1979	.9223

\*. The mean difference is significant at the 0.05 level.

Chart 8 is a box plot that depicts the mean ratings provided by the respondents towards different brands. It is seen that 4 brands i.e; Apple, Samsung, Oneplus and Googlepixel have same mean ratings whereas Realme, Vivo, Oppo, Xiaomi and IQOO have same mean ratings.

Chart 8



### CONCLUSION:

From this study it has been found that 84 respondents preferred medium size phones. Most of the respondents i.e; 57 preferred high storage capacity of RAM and ROM followed by high resolution camera. It is seen that 52 respondents said that smart phone is important for them for its main functions such as making calls, sending sms etc. followed by 49 respondents opined that it is important for its camera, listening songs, recorder etc. 50 respondents spent a maximum of more than 5hrs on their phones. Minimum time spent is 1 to 2hrs by 15 respondents. It is seen that super amoled display is preferred by 64 respondents. A maximum of 47 respondents preferred 5000mAh followed by 46 respondents preferred 6500mAh battery. From the analysis it has been proved that mean ratings provided by the respondents towards different brands are significantly different. Brands like Apple, Samsung and Oneplus are perceived significantly different from brands like Vivo, Oppo, Xiaomi and IQOO. Whereas Realme and Google Pixel are not perceived significantly different from other brands.

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