

**FACTORS DRIVING CONSUMER PURCHASE DECISION IN SELECTING SMARTPHONE
(Study: Students Of Faculty Of Economics And Business)**

FAKTOR-FAKTOR YANG MENDORONG KEPUTUSAN PEMBELIAN KONSUMEN
DALAM MEMILIH SMARTPHONE
(Studi : Mahasiswa Fakultas Ekonomi dan Bisnis)

by:
Lavenia Soriton¹
Johan Tumiwa²

^{1,2}Faculty of Economics and Business
International Business Administration (IBA) Program
University of Sam Ratulangi Manado

email: ¹soritonlavenia@yahoo.com
²johantumiwa@gmail.com

Abstract: A Smartphone is a mobile phone, generally built on with a mobile operating system that has more advance computing capability and connectivity than a feature phone. People use Smartphone less for the phone calls and more for internet browsing, social media, emails, online shopping, navigation and so many other things. Smartphone are replacing more of gadgets like digital cameras and alarm clocks. And now there has been an increasing in the number of Smartphone users in Manado. This research is aimed to analyze the factors driving buying decision in selecting smartphone for smartphone users using Factor Analysis for data reduction that summarizes the observed factors. The population refers to students of Faculty of Economics and Business with sample size as many as 110 respondents and convenience sampling used to as the sampling technique. The finding resulted there are two new factors formed from seven most dominant out of twenty variables, first factor which is Performance Expectancy divided by five items those are Technology Factors, Usability Features, Perceived Quality, Perceived Ease of Use and Brand Loyalty and second factor which is Personal Factors divided by two items those are Product Sacrifice and Consumer Attitude. The recommendations that can be drawn in this research, is the smartphone company should be able to improve the quality of its product in order to meet the customers need.

Keywords: consumer purchase decision, analysis factor, smartphone

Abstrak: Smartphone adalah ponsel, umumnya dibangun dengan system operasi ponsel yang telah lebih maju kemampuan komputasi dan konektivitas dari fitur telepon. Orang menggunakan smartphone kurang untuk panggilan telepon dan lebih banyak untuk internet browsing, media sosial, email, belanja online, navigasi, dan begitu banyak hal lain. Smartphone menggantikan lebih gadget seperti kamera digital dan jam alarm. Dan sekarang telah ada peningkatan jumlah pengguna smartphone di Manado. Penelitian ini bertujuan untuk menganalisis faktor keputusan pembelian yang mendorong dalam memilih sebuah smartphone untuk pengguna smartphone menggunakan Analisis Faktor data pengurangan yang meringkas faktor-faktor yang diamati. Populasi merujuk kepada mahasiswa Fakultas Ekonomi dan bisnis dengan ukuran sampel responden sebanyak 110 dan teknik pengambilan sampel adalah Convenience Sampling. Temuan menghasilkan dua faktor baru terbentuk yaitu 7 dari 20 faktor yang ada, faktor pertama adalah kinerja yang diharapkan dibagi 5 item, yaitu faktor teknologi, kegunaan fitur, kemudahan penggunaan, dan loyalitas merek dan faktor kedua adalah faktor-faktor pribadi dibagi menjadi dua item, yaitu pengorbanan produk dan sikap konsumen. Rekomendasi yang dapat ditarik dalam penelitian ini, adalah perusahaan smartphone harus mampu meningkatkan kualitas dari produk untuk memenuhi kebutuhan pelanggan.

Kata kunci: keputusan pembelian konsumen, analisis faktor, smartphone

INTRODUCTION

Research Background

Smartphone is one of the communication tools or mobile phone that has a high rate capability that already use the operating system to run programs that exist in it. Even some smartphones today already have functions like a computer in the use of hardware and software. The high number of smartphone products that enter the market now causes the consumers require some considerations for choosing a smartphone.

Indonesia is a country that also feels the rapid technological growth as a means to facilitate the flow of communication and transportation among society to create progress and development among regions evenly. In the field of communications, smartphone is one of the communication tool used by the Indonesian population to be able to communicate with each other or as a tool that can help with daily activities. In the news quoted from the ministry of communication and informatics republic of Indonesia estimates that in 2018 the number of active users of smartphones in Indonesia will be more than 100 million people. It means that smartphone users grow rapidly. It also leads to more rapid competition to create a good quality smartphone to meet the needs of the community.

Many things can affect a person's decision in the purchase process. Purchasing activities, if explored more deeply is just one phase of the overall consumer buying decision process. Manado is a city known for consumptive society. It can be seen from the development of the city of Manado as a center of trade and business. Manado society is a society that keeps pace with the times. In which the smartphone is a communications tool that is widely used to meet every day needs. Smartphone becomes the target of Manado society, not only the elderly but also young people.

Research Objective

To identify the factors that driving consumer purchase decision in selecting Smartphone.

THEORETICAL REVIEW

Theories

Marketing

Kotler and Armstrong (2006:5) defined Marketing is a social and managerial process by which individuals and groups obtain what they need and what through creating and exchanging value with other. In a narrower business context, marketing involves building profitable, value-laden exchange relationship with customers. Marketing as the process by which companies create value for customers and build strong relationships in order to capture value from customers in return. Burn and Bush (2006:4) defined marketing as an organization function, not a group of persons or separate entity within the firm. It is also a set of processes and not a single tactic such as creating and end-aisle display. The processes create, communication, deliver value to customers. Marketing is not trying to sell customer something; rather it is providing customers with something they value. The objective of marketing is to create and manage customer relationships for the benefit of the organization and its stakeholders. By definition above Marketing is based on thinking about the business in terms of customer needs and their satisfaction.

Consumer Behavior

Schiffman and Kanuk (2007:3) defined consumer behavior as the behavior that consumers display in searching for, purchasing, using, evaluating, and disposing of products and services that they expect will satisfy their needs. Consumer behavior focuses on how individuals make decisions to spend their available resources (time, money, and effort) on consumption-related items. That includes what they buy, why they buy it, when they buy it, where they buy it, how often they buy it, how often they use it, how they evaluate that after the purchase, the impact of such evaluations on future purchase, and how they dispose of it.

Consumer behavior is dynamic because the thinking, feeling and actions of individual consumers targeted consumer groups, and society are constantly changing (Peter and Olson, 2004). A consumers' decision to modify, postpone, or avoid a purchase decision is heavily influenced by perceived risk (Bauer, 1967). After purchasing the product, the consumer will experience some level of satisfaction or dissatisfaction. The buyer's satisfaction is a function of the closeness between the buyer's expectations and the product's perceived performance (La Barbera and Mazursky, 1983). Consumer behavior is the process by which individuals search for, select, purchase, use, and dispose of use and services, in satisfaction of their needs and wants.

Consumer Decision Process

There are five stages of the consumer in the buying process according to Kotler and Armstrong (2006:148), i.e. the introduction of the issue, information retrieval, evaluation of alternatives, purchase decisions, and behavior after purchase. Problem Recognition is the process starts when the buyer is aware of the problems or needs. This need is caused due to internal and external stimuli. Information Searching begins when consumers feel any needs that may be met. The experience of the past are remembered again might be able to provide information that helps to make the current selection, before looking for other sources. Evaluating Alternative, the information concerning the choice of brand is processed to make the final decision. That process includes assessment of the nature and characteristics of products, product benefits, confidence in the product and the formation of consumer attitudes towards some choice brands. Purchase Decision, consumer form a tendency among a number of brands in a number of options. Consumers also formed a tendency to buy and lead to the purchase of the most preferred brands. And Conduct After-sales (Post Purchase Behavior), consumers will experience some degree of satisfaction or dissatisfaction.

Consumer Purchase Decision

Purchasing decision is the ultimate goal of every advertiser (Dahlen and Lange, 2007) and the prevalent theoretical model of predicting purchasing behavior is to look at intentions (Warshaw 1980; Soderlund 2001). According to (Blackwell, Miniard, and Engel 2006). Intentions have been defined as the subjective judgments about how we will behave in the future. Consistent with organizational decision theorist (Mintzberg et al., 1976, p. 355), the purchasing decision process has been defined broadly as the set of actions and dynamic factors that begins with the identification of a stimulus for action and ends with the specific commitment to action. Purchasing decision process includes four purchasing phases. Each phase represents a subset of discrete and directly observable tasks defined in the course of field studies in six enterprises. The four phases are similar to the stages of the buying process used by other authors (Kotteaku et al., 1995; Woodside and Samuel, 1981; Xideas and Moschuris, 1998), and include the activities of the version of the purchasing phases suggested by Bellizzi and Belonax (1982). The four purchasing phases and associated tasks are initiation, search, selection, and completion.

Previous Research

Malviya, Saruja, and Takur (2013) A Study on the Factors Influencing Consumer's Purchase Decision towards Smartphones in Indore. The study using the confirmatory factor analysis model concluded that people in Indore are buying Smartphones irrespective of its prices. Other features like brand, social image, technology and durability are playing major role in buying decisions of consumers in Indore. Sata (2013) Factors Affecting Consumer Buying Behavior of Mobile Phone Devices. The study test the effects of six independent variables (price, social influence, durability, brand name, product feature and after sales service) on the decision to buy a mobile phone device. All the six independent variables combined significantly influence the consumers buying decision of mobile phone devices. The leading factor is price followed by product features and durability. Sujata, Yatin, Abhijit, Noopur and Ruchi (2016) Factors Affecting Smartphone Purchase among Indian Youth: A Descriptive Analysis. Five factors were identified which affect the choice of smartphones for young college students namely technology factors, hardware factors, financial factors, basic factors and branding factors.

RESEARCH METHOD

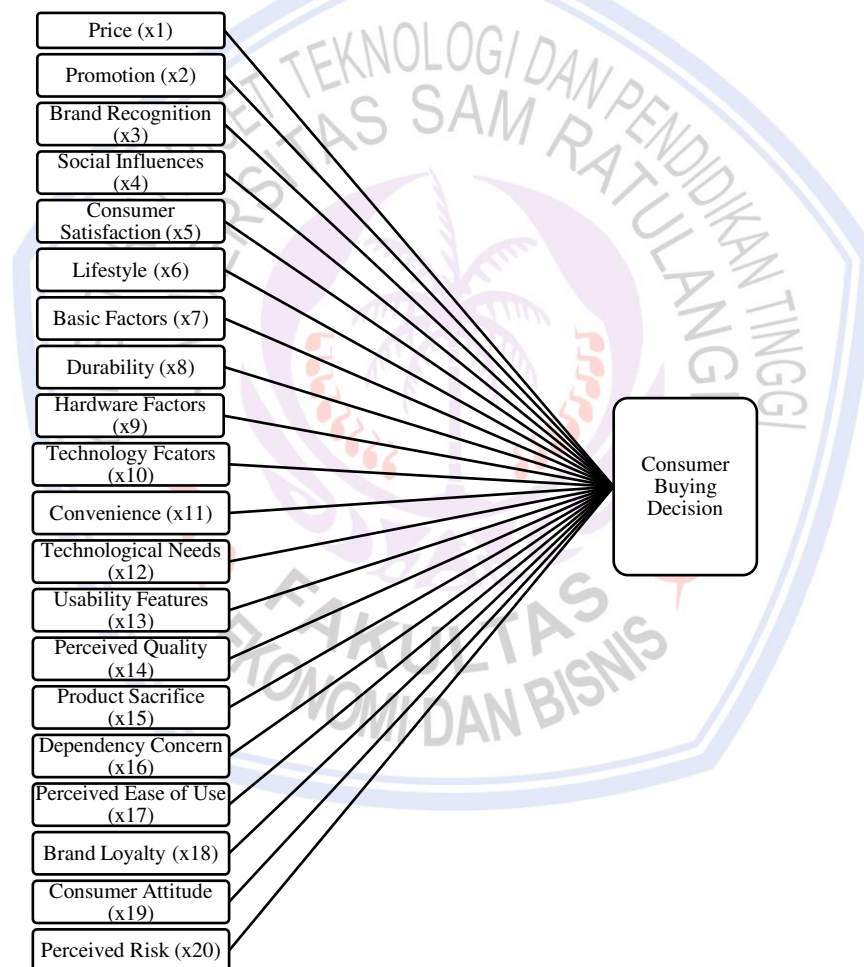
Type of Research

This research uses descriptive and confirmatory types of research where Descriptive research investigates a situation, problem, phenomenon, services or programs, or providing information about the condition of a community that became the object of research and confirmatory research used to verify the factor structure of a set of observed variables.

Place and Time of Research

The study was conducted in Manado City with the period for about two months started from June to July 2016.

Research Procedure



Population and Sample

Population is the entire group or people, events, or things that the researcher desires to investigate (Sekaran and Bougie 2010:443). The population in this research refers to the students of Faculty of Economics and Business. According to Sekaran (2000), a sample is “a part of the population”. The sampling design is convenience sampling that is considered as the best way of getting some basic information quickly and efficient. “Convenience sampling is collecting information from members of population who are conveniently available to provide it.” (Sekaran, 2000).

Data Collection Method

Primary Data

“Primary data is the information obtained first-hand by the researcher on the variables of interest for the specific purpose of the study” (Sekaran and Bougie, 2010). This research gets the primary data from the result of questionnaires. Questionnaires are distributed to respondents, who are the students of Faculty of Economics and Business.

Secondary Data

Secondary data is data collected for some purpose other than the problem at hand. The secondary data is taken from books, journals, and relevant literature from library and internet. These secondary data were used in the background, literature review, theoretical review, research method, and discussion.

Data Analysis Method

Validity Test

The validity test by comparing correlation index in Pearson product moment with significance level of 5% it can be seen valid or not a researcher instrument. If probability of correlation is less than 0.05 (5%) then the research instrument is stated as valid.

Reliability Test

The Reliability test in this research uses Alpha Cronbach. If the alpha is less than 0.6 then it is unreliable. The interpretation of Alpha Cronbach (Sekaran, 2000;311) is: <0.6 indicates unsatisfactory internal consistency or consider that the data is unreliable, 0.7 indicates that the data acceptable, and 0.8 indicates good internal consistency or consider that the data resulted is reliable.

Confirmatory Factor Analysis

This research used the Factor Analysis Method. Confirmatory Factor Analysis is a special form of factor analysis, most commonly used in social research (Kline, 2010). Confirmatory Factor Analysis (CFA) test whether a specified set of constructs influencing responses in a predicted way. This type of factor analysis are based on the Common Factor Model. This model proposes that each observed responses (measure 1 through measure 5) is influenced partially by underlying common factors (factor 1 and factor 2) and partially by underlying unique factors (E1 through E5). The strength of the link between each factor and each measure varies, such that a given factor influences some measures more than others. Factor analysis are performed by examining the pattern of correlations (or covariance) between the observed measures. Measures that are highly correlated (either positively or negatively) are likely influenced by the same factors, while those that are relatively influenced by different factors.

RESULT AND DISCUSSION

Result of Factor Analysis

Confirmatory factor analysis was used to determine how many factors were appropriate and which items belonged together. The steps that were followed for doing factor analysis were four: (1) data collection and generation of the correlation matrix, (2) extraction or initial factor solution, (3) rotation and interpretation, and (4) construction of scales or factor scores to use in further analysis. Factor analysis are performed by examining the pattern of correlations (or covariance) between the observed measures.

KMO and Barlett's Test**Table 1. KMO and Bartlett's Test**

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.857
Bartlett's Test of Sphericity	Approx. Chi-Square	994.387
	Df	190
	Sig.	.000

Source: *Data Processed, 2016*

Table 1 shows that the Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.857 or greater than 0.5 which indicates that the sample is adequate and we may proceed with the factor analysis. The Bartlett's Test of Sphericity or p-value (Sig.) of .000 < 0.05, therefore the factor analysis is valid. The Kaiser-Meyer-Olkin (KMO) and Barlett's Test measure of sampling adequacy was used to examine the appropriateness of factor analysis. The approximate of Chi-square is 994.387 with 190 degrees at 0.05 of significance.

Communalities**Table 2. Communalities (Principal Component Analysis)**

	Initial	Extraction
Technology Factors	1.000	.628
Usability Features	1.000	.671
Perceived Quality	1.000	.632
Product Sacrifice	1.000	.719
Perceived Ease of Use	1.000	.639
Brand Loyalty	1.000	.741
Consumer Attitude	1.000	.783

Extraction Method: Principal Component Analysis.

Source: *Data Processed, 2016*

Table 2 shows that all variable has extraction value greater than 0.5. So, after deleting 13 variables, all the variables can be used for factor extraction. Two components or factors were from and that classification is still random. After the rotation, variables will form components in the table below.

Rotated Component Matrix**Table 3. Rotated Component Matrix**

	Component	
	1	2
Technology Factors	.759	.228
Usability Features	.801	.173
Perceived Quality	.794	.047
Product Sacrifice	.186	.827
Perceived Ease of Use	.784	.154
Brand Loyalty	.823	.250
Consumer Attitude	.017	.885

Source: *Data Processed, 2016*

Table 3 shows the Rotated Component Matrix value for seven variables that divided into two main factors as defined below:

1. Technology Factors
This item include in first factor, because had biggest loading value in this factor (0.759).
2. Usability Features
This item include in first factor, because had biggest loading value in this factor (0.801).
3. Perceived Quality
This item include in first factor, because had biggest loading value in this factor (0.794).
4. Product Sacrifice
This item include in second factor, because had biggest loading value in this factor (0.827).
5. Perceived Ease of Use
This item include in first factor, because had biggest loading value in this factor (0.784).
6. Brand Loyalty
This item include in first factor, because had biggest loading value in this factor (0.823).
7. Consumer Attitude
This item include in second factor, because had biggest loading value in this factor (0.885).

Result of Regression Analysis

The present research attempted to answer research question what are the factors that drive consumer preferences.

Table 4. Regressions Model and Variables

Regression	Dependent variable	Independent variable
First	Performance Expectancy	Technology Factors Usability Features Perceived Quality Perceived Ease of Use Brand Loyalty
Second	Personal Factors	Product Sacrifice Consumer Attitude

Source: Data Processed, 2016

Table 4 shows that from the 7 variables, there are 2 factors that conducted. It support by the result of the values that above 1, only in the first second factors, so the factoring process had stop in the second factor. The first factor named: Performance Expectancy and the second factor named: Personal Factors.

Discussion

From all 7 variables, there are 2 factors conducted. It is caused by the eigen values above 1 only in the first 2 factors that is why the factoring process is ended only in two factors.

A. First factor (Performance Expectancy)

Divided by six items, those are:

1. **Technology Factors.** The development of technology can have an important role in human life. The more advanced technology that exists in the smartphone makes it easier for customers to do their activities.
2. **Usability Features.** Usability in existing features in smartphones can affect the customer to buy. The benefits provided by existing features in smartphones can provide consumer satisfaction.
3. **Perceived Quality.** The quality of the smartphone is determined by the customer. So the company smartphones should be able to maintain or develop product quality in order to be accepted and used by customers.
4. **Perceived Ease of Use.** Ease in use of smartphone can make it easier for someone to perform its activities. So ease given by smartphone can make consumers feel smartphone meets their needs and desires.

- 5. Brand Loyalty.** The existence of a loyal consumer on a specific smartphone brands is very necessary so that the company can survive. If customers have been loyal to a brand then it can increase sales of particular smartphone brands because satisfied buyers can recommend the brand to other people.

This kind of factor is related with the results of research from Hee Seo Lee, Taek Gyeom Kim and Ji Youn Choi (2012) that concluded performance expectancy has relationship with the consumers' purchase decision upon selecting the smartphone. Moore and Benbasat (1991) stated that performance expectancy is the degree of belief by users to get help in improving work performance by using smartphone app service.

B. Second Factor (Personal Factors)

Divided by two items, those are:

- 1. Product Sacrifice.** Customer will sacrifice their money and also other resources such as time, energy, and effort to obtain the product. Consumers are willing to spend money to buy smartphone.
- 2. Consumer Attitude.** Consumer attitude is one of the important factors that will influence the consumer's decision. Consumer attitudes toward a product can vary depending on what the orientation is.

This kind of factor is related with the results of research from Bishal Nagarkoti (2009) that concluded personal factors has relationship with the consumers' purchase decision upon selecting the smartphone.

CONCLUSION AND RECOMMENDATION

Conclusion

Based on the analysis and discussion, there are 2 main factors formed: 1). Performance Expectancy, 2). Personal Factors out of seven variables (Technology Factors, Usability Features, Perceived Quality, Perceived Ease of Use, Brand Loyalty) of Consumer Purchase Decision in selecting smartphone.

Recommendation

This research hoped to be useful both practically and theoretically. Theoretically, this research hoped to give more knowledge to other researchers or students. The usefulness of this research will be used practically by the Smartphone companies. According to the result of this research, there are several recommendations.

1. Companies should always improve the quality in terms of increased technology, in order to make products issued not inferior to products from competitors. Company also has always to have innovations and keep getting better.
2. Company smartphones should be able to improve the quality of its product features and innovation especially the hardware or software and also efforts should be done by the company in increasing brand awareness by adding specific characteristics which can distinguish one brand with another.
3. Perceived Quality, it is very important for the smartphone companies to be able to improve the quality as a whole both in terms of product quality, packaging quality, and marketing. Product development can be done by knowing the attitude of consumers. Consumer attitudes need to be continuously monitored in order to develop the products that are truly fulfilling the desires of the consumer.

REFERENCES

- Bauer R. A., 1967. Consumer Behavior as Risk Taking, in Donald F. Cox (ed.), *Risk Taking and Information Handling in Consumer Behavior* (Boston: Division of Research, Harvard Business School).
- Blackwell R.D., Miniard P.W., & Engel J.F., 2006. *Consumer Behaviour*, 10th Edition. Ohio: South-Western.
- Burns A. C., & Bush, Ronald F., 2006. *Marketing Research*. Prentice-Hill, New Jersey.

- Dahlen M., Lange F., Smith T., 2007. *Marketing Communications: A Brand Narrative Approach*, Wiley, United States.
- Kline, R. B. 2010. *Principles and Practice of Structural Equation Modelling*. 3rd Edition. Springer, New York.
- Kotler, P., & Armstrong, G., 2006. *Principles of Marketing*. Prentice-Hill, New Jersey.
- La Barbera P. A., & Mazursky D., 1983. A Longitudinal Assessment of Consumer Satisfaction/Dissatisfaction: The Dynamic Aspect of the Cognitive Process, *Journal of Marketing Research*. Accessed on May 11st 2016. Pp 393-404.
- Lee, H. S., Kim, T. G., and Choi, J. Y., 2012. A Study on the Factors Affecting Smart Phone Application Acceptance. 3rd International Conference on e-Education, e-Business, e-Management and e-Learning.
- Malviya, S., Saluja, M. S., and Takur, A. S., 2013. A Study on the Factors Influencing Consumer's Purchase Decision towards Smartphones in Indore. Available online at: <http://www.ijarcsms.com/docs/paper/volume1/issue6/v1i6-0003.pdf>. Accessed on May 7th 2016. Pp. 1-8.
- Mintzberg H., Raisinghani D., & Theoret A. 1976. The structure of unstructured decision processes, *Administrative Science Quarterly*, Vol.21 No. 3, Accessed on April 23th 2016. Pp. 246-75.
- Moore, G. C., and Benbasat, I, 1991. Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation. *Information Systems Research*, Vol. 2(3). https://www.researchgate.net/publication/220079599_Development_of_an_Instrument_to_Measure_the_Perceptions_of_Adopting_an_Information_Technology_Innovation. Accessed on March 15th 2016. Pp 192-222.
- Nagarkoti, B. 2009. Factors Influencing Consumer Behavior of Smartphone Users, Degree Thesis International Business (BBA).
- Peter J. P., & Olson J. C., 2004. *Consumer Behavior and Marketing Strategy* 7th. Pp.6.
- Pride., William., & Ferrell O., C., 1993. *Marketing: Concepts and Strategies*. Houston Mifflin Company, Boston.
- Sata, M., 2013. Factors Affecting Consumer Buying Behavior of Mobile Phone Devices. *Mediterranean Journal of Social Sciences MCSEER Publishing, Rome-Italy*. <http://www.mcser.org/journal/index.php/mjss/article/viewFile/1787/1791>. Accessed on May 3rd 2016. Pp 1-10.
- Sekaran, U., 2000. *Research Methods for Business* 4th ed.
- Sekaran, U., & Bougie, R., 2010. *Research Methods for Business*. 6th ed. John Wiley & Sons Ltd: United Kingdom.
- Schiffman., Leon G., & Kanuk., L. L., 2007. *Consumer Behavior*. Pearson Prentice Hall, New Jersey.
- Söderlund M., 2001. Den lojala kunden, Liber Ekonomi, Malmö. Available on: <http://arc.hhs.se/download.aspx?MediumId=520>. Accessed on April 28th 2016. Pp. 76-83.
- Sujata, J., Yatin, J., Abhijit, C., Noopur, S., and Ruchi, D. 2016. Factors Affecting Smartphone Purchase among Indian Youth: A Descriptive Analysis, *Indian Journal of Science and Technology*, Vol 9(15). http://webcache.googleusercontent.com/search?q=cache:Y4xH8BHx_nQJ:www.indjst.org/index.php/indjst/article/download/92117/70368+&cd=2&hl=id&ct=clnk&gl=id. Accessed on April 13rd 2016. Pp 1-10.

- Warshaw P. R., 1980. Predicting Purchase and Other Behaviors from General and Contextually Specific Intentions. *Journal of Marketing Research*, Vol. (17)1 (February). [https://archive.ama.org/archive/ResourceLibrary/JournalofMarketingResearch\(JMR\)/Pages/1980/17/1/5003045.aspx](https://archive.ama.org/archive/ResourceLibrary/JournalofMarketingResearch(JMR)/Pages/1980/17/1/5003045.aspx). Accessed on March 25th, 2016. Pp 26-33.
- Woodside A. G., & Samuel D.M., 1981. Observations of centralized corporate procurement, *Industrial Marketing Management*, Vol. 10 No. 4. https://www.researchgate.net/publication/279432484-Observations_of_Centralized_Corporate_Procurement. Accessed on April 18th 2016. Pp 191-205.
- Xideas E., & Moschuris S., 1998. The influence of product type on the purchasing structure, *European Journal of Marketing*, Vol. 32 No.11/12. <http://www.emeraldinsight.com/doi/abs/10.1108/03090569810243587>. Accessed on April 12th 2016. Pp. 974.

