Factors Affecting Smartphone Demand in Indonesia

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This study aims to analyze the factors that affect mobile phone demand in Indonesia. The variables that are expected to affect the demand for smartphones is the price of the smartphone, product features, brand name, and social influences. The study method used is an explanatory survey with data collecting techniques of interviews and questionnaires distributed to 200 respondents who have made a purchase of smartphone product in Bandung, West Java, Indonesia. The characteristics of respondents include gender, level of education, income level, and brand of smartphone used. The collected data was analysed using Structural Equation Modelling. The results show that smartphone demand in Indonesia is 68.3 percent influenced by product features and social influences, while the remaining 31.7 percent is influenced by price and brand name. This finding implies that consumers in Indonesia who are choosing a smartphone place less consideration in price and brand,. This condition demonstrates implications for the smartphone manufacturers who should pay attention to the completeness of product features.

Introduction

One technology-based product that is growing rapidly is a smartphone that has been equipped with full features. Smartphone products have features that are almost identical to each other. The large number of smartphone products that are marketed makes it easy for consumers to choose or determine the brand of smartphone products to be purchased in accordance with their needs and budget. The popularity and functions offered in the smartphone lead to an increase in smartphone demand (Park and Chen, 2007). High market demand makes the smartphone a lifestyle that has a high purchasing power interest to consumers. Thus, every company must understand the consumer behaviour in this target market because the survival

of the company as an organization that tries to meet the needs and desires of consumers is very dependent on consumer behaviour.

Smartphone demand growth in Indonesia has increased significantly (Kelly, 2009). The digital marketing research institute, E-marketer, estimates that by 2018 the number of active users of smartphones in Indonesia will be more than 100 million. This number will place Indonesia as the country with the fourth largest smartphone active users in the world after China, India, and America. Internet penetration in Indonesia, according to internetlivestats, in 2014 was 17.1 percent. Internet penetration in Indonesia is less thank other Southeast Asian countries, such as Vietnam (48.3 percent), Philippines (39.7 percent), Malaysia (67.5 percent), and Singapore (82 percent).

The intense competition among the smartphone brands demands that the companies innovate in various forms to create a competitive advantage for their respective company's products. Complete facilities and features, good after-sales service (warranty, service, spare parts), competitive price (cheap) are features offered by smartphone manufacturers to consumers. Ultimately, consumers themselves will decide or choose the product or brand of smartphone that they will purchase. It is certainly interesting to investigate what factors consumers consider when choosing or buying a brand of smartphone. This condition has an impact on smartphone demand which ultimately impacts the manufacturers who can use this information to understand and meet the needs of the consumer of smartphone products.

Previous research has been conducted by Suki and Suki (2013), Lay-Yee et al. (2013), Chow et al. (2012), and Ting et al. (2011). They have tried to create an inventory of the factors that affect smartphone demand in different parts of the world. These factors include brand, convenience, dependency, price, productivity, social influence, and social needs. Chow, et al. (2011) analysed the determinants of smartphone demand in the theoretical conceptual order. Factors identified by this concept were price, brand, feature, and social.

This study aims to identify and analyse the factors that affect smartphone demand in Indonesia. This study is expected to provide managerial implications for smartphone companies in innovating new products and services in each new product they release.

The Development of Smartphones in Indonesia

The results of a survey conducted by the Association of Internet Network Providers Indonesia (APJII) indicate that more than half of Indonesia's population is now connected to the internet. The survey, conducted throughout 2016, found that 132.7 million Indonesians were connected to the internet. The total population of Indonesia itself equates to approximately 256.2 million people. This indicates a 51.8 percent increase compared to the number of

internet users in 2014. Surveys conducted by the APJII in 2014 showed that there were only 88 million internet users. Survey data also reveals that the average internet accessor in Indonesia uses a handheld device with 67.2 million people, or 50.7 percent accessing the internet via handheld devices and computers, 63.1 million people, or 47.6 percent access from smartphone. Additionally, 2.2 million people or 1.7 percent access only from computers. Based on location, most internet users are still on Java Island, with 86.3 million people or 65 percent of the total internet user this year are on Java Island. The rest is spread to several provinces including 20.7 million or 15.7 percent in Sumatra, 8.4 million or 6.3 percent in Sulawesi, 7.6 million or 5.8 percent in Kalimantan, 6.1 million or 4.7 percent in Bali and NTB, and 3.3 million or 2.5 percent in Maluku and Papua (Fachryto and Achyar, 2018).

Indonesia has a chance to grow significantly very fast. The greatest need now is the support of the government so that the Indonesian digital industry can overcome the backwardness by other countries. Internet penetration should be upgraded quickly. This should not only be focused on Java, but also spread in other areas in Indonesia. The government should also pave the way and provide incentives for the digital industry to grow and gain access to funding. Mobile phone users (mobile phones) in Indonesia in August 2017 reached 371.4 million users, or 142 percent of the total population of 262 million people. This means that on average, each resident uses 1.4 cell phones because one person sometimes uses 2-3 mobile phone cards. Urban Indonesia reached 55 percent of the total population. Compared to the position in January 2016, Indonesian mobile phone users increased 14 percent. As for the penetration, the active social media use increased 34 percent, and the penetration of active mobile social media users increased 39 percent (Lai et al., 2015).

The smartphone presence changes the lifestyle of many people. At present, smartphones are not used to make calls and send text messages only, but are used for various other purposes. Smartphones meet many of our needs such as ordering food, chatting with friends or groups, buying tickets, using internet banking, social status updates, job searching, playing games, and even video editing. In Indonesia, netizens spend a lot of time on mobile apps rather than mobile web browser. Approximately 82% of netizens in Indonesia access mobile web, while 9% each access the mobile web and through a desktop. Netizens want to practically make their smartphone as the ultimate weapon to solve many problems in his life. More than 70% of netizens only use smartphones to access information. This percentage is higher than other countries such as Mexico, Spain, China, and even the US.

The netizen population in Indonesia that access the internet only through smartphones, mostly comes from a young age group. The age range for this group is 15-17 years only, with 80% accessing the internet only through smartphones, the rest through the desktop or a

combination of both. While 75% of the age of 18-24 years and 79% of the age of 25-34 also have the same habit (Sukotjo, 2014).

WhatsApp is the most commonly accessed mobile application by netizens in Indonesia. After WhatsApp, there is a majority of BBM used by netizens aged 18-24 years. Facebook, LINE, and YouTube become the next mobile application option. The presence of YouTube is a phenomenon of its own and is proof that the video content into its era. Many applications can be said to have video content today, until the term vlog began to be widely used. Banking customers are now spoiled with various mobile features from banks ranging from transfers and check balances, to buying pulses and electricity (Noonan and Piatt, 2015). Indonesia also has the highest percentage of confidence in smartphones for banking activities, higher than China, UK, and US (Malaquias and Hwang, 2016). Furthermore, the ads are now also very friendly for the mobile versions with some direct advertising being aimed at the user's personal account. For example, just like mobile native advertising where users who are accessing information from the media, will see the native ads that exist in the media. Budget advertising for a brand is now separated two, between conventional advertising and digital advertising. Some brands that have a target audience of young people began to make the portion of digital advertising larger than conventional advertising to ensure the effectiveness of advertising and messages (Friesen and Lowe, 2012).

Methods

Data and Variable

The data used in this study is primary data, with the population being all consumers who have made purchases of smartphone products in Bandung, West Java, Indonesia. The method of determining purposive sampling was used. The characteristics or requirements of samples in this research are consumers who buy and use smartphone products for at least six months. The number of participants in the research sample was 200 respondents.

Characteristics of respondents include type of gender, level of education, income level, and brand of smartphone used. Judging from the sex, smartphone users dominated 68.5 percent, while 31.5 percent of smartphone users were women. Respondents' education in general is at Diploma and undergraduate level (78.4 percent). Only 21.6 percent have a secondary school education. The average income of respondents in general ranged from 2 to 5 million rupiah (80 percent), with only a few earning above 5 million. The brand of smartphones used by respondents included Samsung, Oppo, iPhone, Lenovo, Vivo, and Advan.

The independent variable is the demand of smartphones, while the dependent variable is the factors that influence the demand. These variables are identified in terms of price, future, brand image, and social influences.

a) Demand:

Demand can be defined as the ability of a person to pay a certain arga for a particular product (Sexton, 2007). Consumer demand for a product is determined by consumer characteristics including brand, price, quality, and innovation (Leo et al., 2005). Therefore, it is important to study the factors that influence consumer decisions on smartphone purchases. The variables studied in this research include product features, brand name, price, and social influence.

b) Product Features:

Product features are product attributes that match the level of consumer satisfaction, needs and desires through product assessment, use, and utilization of products (Kotler and Armstrong, 2007). In such modern technological times, consumers are aware that different features will bring different levels of satisfaction from smartphones. In this the era, phone comes with wireless connectivity, a built-in Web browser, application installation, full programming capabilities, file management systems, multimedia presentation and capture, high resolution displays, storage, and location and motion sensors (Oulasvirta et al., 2011). In addition, the operating system and camera are the most popular features of smartphone users, each operating system has a unique personality and background (Chang and Chen, 2005). The consumers choose products based on attributes that create specific benefits that produce specific results which support personal values (Wickliffe and Pysarchik, 2001). Products with attributes whose constituent factors are selected are based on the importance of integration. Consumers use attributes to make comparisons between competitive brands and marketers to use attributes in advertising to influence consumer substitution evaluations with significant product attribute attributes (Puth et al., 1999).

c) Price:

Price has an important role in the consumer's decision to buy a good (Nagle and Holden, 2002). Price is one of the factors that consumers consider when buying goods (Smith and Carsky, 1996). Price has a positive relationship with consumer behaviour because the price sets the brand image in the eyes of the consumer (Aaker and Keller, 1990). Prices are generally related to product quality. Consumers tend to interpret higher prices with higher quality, and low prices are considered low quality indications (Rao and Monroe, 1988).

d) Brand Name:

Brand is one of the important tools in increasing product sales in the market (Dodds et al., 1991). Brand represents a name, term, symbol, design, or a combination of both intended for identify goods and services from a seller or a group of sellers and distinguish them from

competitors (Khasawneh and Hasouneh, 2010). One of the main goals of a brand name is to provide information about the quality of a product (Rao and Ruekert, 1994). If the consumer views a particular brand, it means the company has a competitive advantage (Pappu et al., 2005).

e) Social Influences:

Social influence is an influence of someone in changing feelings, attitudes, thoughts, and behaviour intentionally or indirectly (Webster and Rashotte, 2010). This is caused by interactions with each other. Social influences include the influence of media, parents, and peers (Nelson and McLeod, 2005). Social brass is associated with consumers in making the decision to buy (Mourali et al., 2005). People tend to be more easily influenced by other people's words (Kelman, 1961). According Rashotte (2003), social influence is very persuasive for individuals, especially when there are a large number of individuals who have certain thoughts, attitudes, feelings, or behaviors. The likelihood that an individual will adopt certain thoughts, attitudes, feelings, and behaviors as well.

The method used in this study is an explanatory survey with data collection techniques based on questionnaires and interviews of 200 respondents. The questions that featured on the questionnaire consisted of 22 items consisting of three parts, namely: a) questions including information relating to respondents including backgrounds such as gender, race, age, educational background. Five points likert scale (5 = strongly agree, 4 = agree, 3 = disagree non disagree, 2 = disagree and 1 = strongly disagree), b) the measurement of five variables, product features, brand name, price, social influence, and demand of smartphones, and c) an open question that tries to give some additional comments from the respondents. Before releasing the survey, the researchers conducted a pilot test to improve the questions in the survey. Questionnaires were given to 50 students from a pool of targeted respondents. Out of this total, 41 questionnaires were collected and used for trials. The respondents were asked to answer the later questions to check if the respondent can understand all the questions. Feedback was collected and some questions that were considered vague by the respondent were then submitted before the final data collection.

The data that has been collected is then analysed by using SEM. The SEM method has the advantage of being able to perform two analyses simultaneously (testing the relationships of unobserved concepts and the relationships therein and calculating the measurement error in the estimation process). The research framework and identification of latent variables and indicators can be seen on Figure 1.

Figure 1. Model of Smartphone Demand in Indonesia
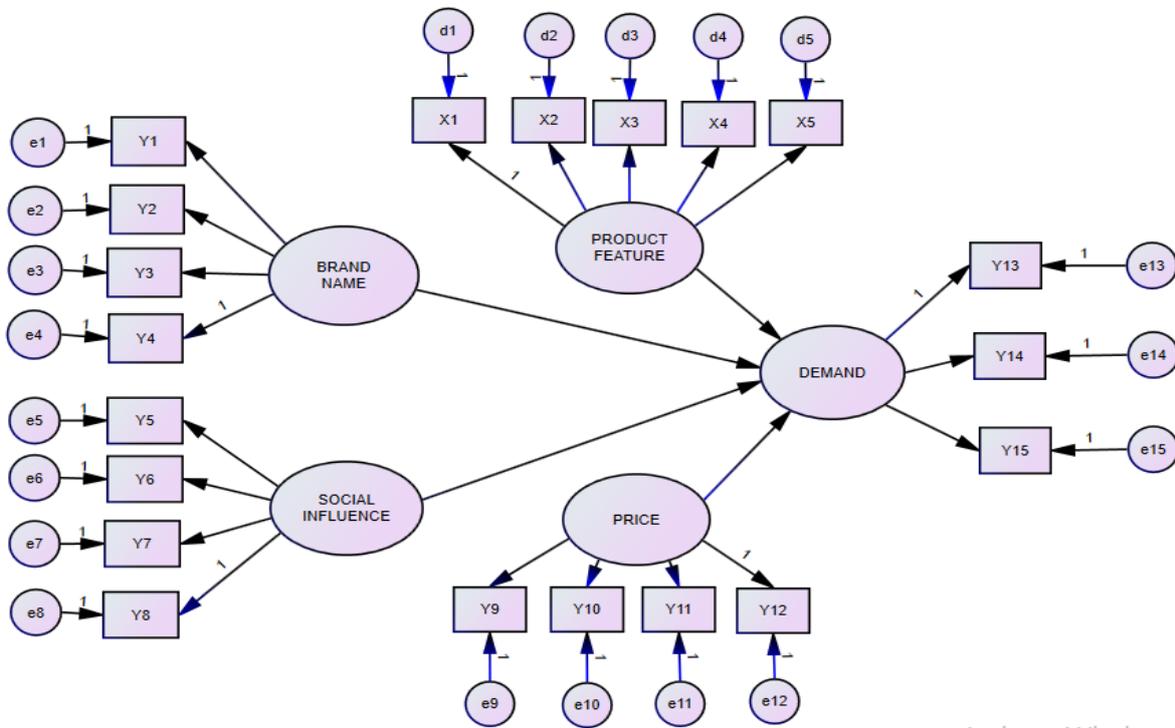
The hypothesis proposed in this study is as follows:

H1: There is a connection between Smartphone product features and demand
H2: There is a relationship between brand name and Smartphone demand
H3: There is a connection between price and smartphones demand
H4: There is a relationship between social influence and Smartphone demand

Results and Discussion

The overall model fit test is performed to evaluate generally the Goodness of Fit between data and models. Fit model overalls results can be seen on Table 1.

Table 1: Overall Model Fit

Size of Goodness of Fit	Test Resultz	Critical Value	Conculsion
Cmin/df	2,6645	≤ 2.00	No fit
P-value	0,0000	≥ 0.05	No fit
RMSEA	0,0057	≤ 0.08	Fit
CFI	0,9616	≥ 0.90	Fit
TLI	0,9334	≥ 0.90	Fit
GFI	0,9067	≥ 0.90	Fit
AGFI	0,8413	≥ 0.90	No fit

Table 1 shows that not all Goodness of Fit measures fit the standard, but overall the model is already fit. The GFI above 0.90, RMSEA below 0.08, CFI and TLI above 0.90 thus can be interpreted model on fit condition. As seen in table 2, the structural model parameter test show that all hypothesis proposed significantly (p-value 0.05) are acceptable.

Table 2: Estimation and Structural Model Parameter Test

Hypotesis			Estimate Standardized	S.E.	C.R.	P	Test Result
Demand	<---	Brand Image	.3921	.1923	4.1439	***	Ho rejected
Demand	<---	Product Future	-.3514	.2220	5.0999	***	Ho rejected
Demand	<---	Price	-.1016	.2077	6.1281	***	Ho rejected
Demand	<---	Social Influences	.9100	.1512	3.7926	***	Ho rejected

A total of 78.22% of variations in smartphone demand can be explained together by Brand Image, Product Future, Price, and Social Influences. The remaining 21.78% is the influence of other variables not described in the model. As shown in Table 3, from the estimation of the R^2 coefficient indicates that the proposed smartphone demand model has been effective in explaining the phenomenon under study ($R^2 = 50\%$). However, there are still other variables that need to be explored to explain the phenomenon of variations in smartphone demand.

Table 3: Estimation Structural Equation Model Demand Smartphone

Model	Structural Model	R^2
Demand of Smartphone	Demand of smartphone = 0.3921 Brand + 0.3514 PF + 0.1016 Price + 0.9100 SF+z1	0.7822

SEM results show that between smartphone demand and smartphone prices, there is a positive relationship. This is contrary to the demand theory that states the relationship between the price and the quantity of the requested item is negative. This result is very much in line with the theory, but presents a reality when students enter social status into the kind of smartphones they use. This indicates that the decline in smartphone prices in university

students does not guarantee an increase in student interest to buy a smartphone. Brand image shows a positive correlation to mobile phone demand. This is consistent with the theory that brands are directly related to demand.

Considering the design and features of smartphones, six features include operating system, e-mail client, social media connectivity, back-up, addresses and so on, keyboard, and size / weight are related to smartphone demand. However, it was found that the above features are not significant in determining smartphone demand. These results were found to be consistent with previous studies such as Karjaluoto et al. (2005) and Mack and Sharples (2009). It is very important that when considering the purchase of mobile phones by consumers is the design and features of smartphones.

Social influence, as an external factor, affects consumers in the purchase of smartphone products includes the recommendation of salespeople (salesperson), recommendation of friends, and the recommendations of employees of the company concerned. One other factor that can influence buying decisions is sales people. Sales management is often seen as part of marketing management that is important in supporting the success of a company. The performance of the sales force contributes greatly to the company, because the salesperson is a party that plays an important role as a liaison between the company and the consumer. The quality of the sales force and performance is a key issue in salesperson management, and should be a priority of concern for sales managers (Mohd Suki, 2013).

The ability of employees is a major asset in the company. Consumer needs for high-performing employees will lead to satisfied and loyal customers (Owen et al., 2001). Good knowledge and skills, will be a basic competency in internal companies as well as good outside imagery. Another important factor in making consumer purchasing decisions is the attitude and motivation of employees. Moments of confidence will occur when there is contact between employees and consumers. Attitude is very important and it can be applied in various forms, such as employee performance, voice in speech, body language, facial expressions, and speech while the motivation of employees is needed to realize the delivery of messages offered. An employee's ability, according to Kotler (2012), is the process of employee selection, training, and motivation, which later can be used as a differentiation company in fulfilling customer requirement. which is exorcised. All actors taking part in the presentation of a product or service will affect the buyer's perception. Included in this element are corporate and consumer personnel.

Conclusions

Based on the previous findings, it is important for the management of smartphone product manufacturers to make these four factors the basis for the development of the company's

products and services. The ability of producers to meet the wishes of the consume will respond positively in the form of consumer choice in choosing the smartphone product concerned (certain). In addition, manufacturers or marketers should create different smartphone products (variations, features, and specifications) with specific advantages devoted to different consumer segments.

Several things can be done including improving the quality of smartphone products that are focused on improving the facilities and features available in smartphones. In addition, reliable products will provide more value for a brand of smartphone. Ways that this can be achieved include by instilling higher and innovative technology on smartphone products made, the use of more quality raw materials, making smartphone products with design options and more varied prices. In addition to paying attention to the product quality factor, the selection of consumers in a brand of smartphone products is also determined by the influence of external factors such as the ability of sales people.

Based on this research, it is important for marketers to use salespeople who have good skills in the field of information technology to be able to provide more details about the brand of smartphone products sold. Sales promotions in the form of advertising and other stimuli can also be used to encourage consumers to choose a brand of specific smartphone products. It is important to enhance the brand image of smartphone products in order to brand smartphone products to deliver more value such as the symbolic benefits of consumer use on a particular smartphone product brand.

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