

Consumer Behaviour in the Smartphone Market in Vietnam

Alexander Wollenberg and Truong Tang Thuong

Abstract—This paper discusses the factors involved in deciding on a particular type and brand of smartphone in Ho Chi Minh City, Vietnam’s largest city. As the 3rd-largest economy in ASEAN, Vietnam may provide a useful insight for marketing experts and producers of smartphones of consumer behaviour in emerging markets. First, the study uses demographic factors and independent variables of Advertising, Perceived Quality, Word of Mouth, and Price and their impact on Brand Perception and the resulting strength of brand perception on the purchasing decision (dependent variable). Second, the study also connects each independent variable directly to the Purchasing Decision and thus compares the importance of each independent variable individually on the purchasing decision to frame the relative importance of brand perception.

Index Terms—Consumer behaviour, brand perception, brand equity, smartphones, emerging markets, Vietnam.

I. INTRODUCTION

The study presents the overviews of the trend of marketing and consumer behaviour in Ho Chi Minh City, Vietnam’s economic centre, by using the market for smartphones as a case study.

The study investigates the variables that affect brand perception influencing the customer purchasing decision in smartphone industry. It will specifically concentrate on the smartphone market in Ho Chi Minh City in Vietnam.

A. Research Background

In recent years, the global smartphone industry has been increasing rapidly, reaching about nine million units in 2013 in Vietnam, representing a growth rate of 29 % from 2012. This number contributes to a rise of total smartphones of 6.9 % from 2012 and reaching 1.7 billion units for the total of smartphones in the world [1]. The speed of growth is expected to continue increasing rapidly from 2013 to 2017 and the number of smartphone shipments in that period of time is estimated to grow from 1 billion from 2014 to nearly 1.4 billion devices in 2017 (Fig. 1).

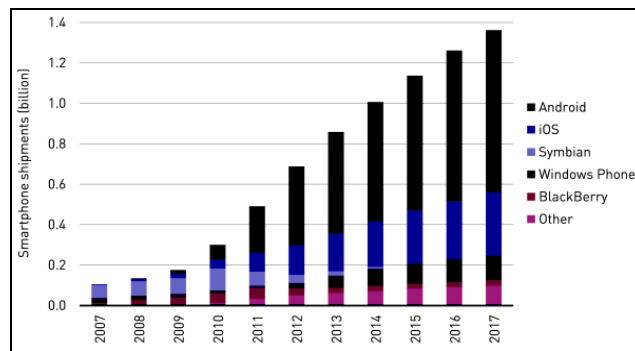


Fig. 1. Smartphone shipments from 2007 to 2017 [Source: Analysis Mason’s Smartphone Forecast, 2013].

In Vietnam, the third-most populous country in Southeast Asia with a population of over 90 million, that amounts to more than 130 million mobile phones [2]. According to Google report in the end of second quarter in 2013, there are 17 million smartphones in Vietnam, a 20 percent penetration rate [3]. This is a country hungry for connection, communication and was the world’s second fastest growing iOS and Android smartphone and table market between January 2012 and January 2013 at 266 percent [4]. This information is illustrated in Fig. 2 as below:

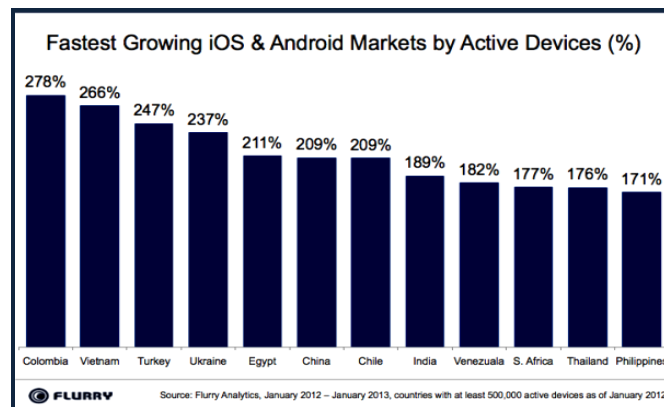


Fig. 2. Fastest growing iOS and Android markets by active devices from January 2012 to January 2013.

According to global telecom researcher IDC, the smartphone market in Ho Chi Minh City posted annual growth of nearly 100 per cent in recent years and expects stronger rates in the future. Competition in the smartphone market is increasing stronger and stronger. In 2012, as reported by market researching companies, Ho Chi Minh City was estimated to consume about 350 thousand the smartphones monthly and 92 percent of the products are from big firms such as Apple, Samsung, HTC, LG, Sony, Nokia, BlackBerry and Philips, while the domestic brands contributed 8 percent [5].

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B. Objectives of the Study

- To point out key variables that influence brand perception and customer buying decisions in the smartphone industry.
- To evaluate the impact of brand perception on customer’s choice in smartphone industry.
- To suggest the key factors for smartphone makers to improve their brand perception and sales in Ho Chi Minh City market.

C. Research Questions

The research questions which are conducted to be addressed as following

- What are the main variables that affect brand perception in the smartphone industry?
- How do these factors influence customer purchasing decision?
- How does brand perception impact customer’s choice?

D. Hypotheses

9 hypotheses have been developed:

H1: Advertising has impact on brand perception

H2: Perceived quality affects brand perception

H3: Price has effect on brand perception

H4: Word of mouth has influence on brand perception

H5: There is influence of advertising on customer buying decision

H6: Perceived quality has influence on customer purchasing decision

H7: Brand perception impacts customer’s choice

H8: Price has effect on customer buying decision

H9: Word of mouth affects customer purchasing decision

II. CONCEPTUAL DEVELOPMENT

A. Brand and Brand Perception

Brand perception is a term used to describe how consumers really perceive or experience a particular brand of products. Perception can be known as reality, so brand perception can be seen as real customer’s views base on what the firm promises [6].

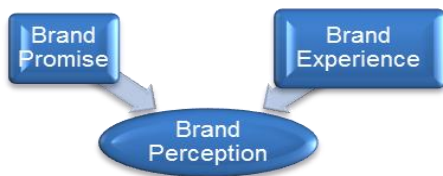


Fig. 3. Relation of brand promise, brand experience, and brand perception.

B. Advertising

Reference [7] advocated the view that when a consumer considers the alternatives, advertising will play a key role on his decision. He additionally emphasized that when all other variables of alternatives are equal, advertising has a strong influence on customer’s choice, especially in low-involvement product categories. [8] demonstrated that advertising delivers information to allow customers to make a better selection, and concluded that advertising has significantly increased information diffusion of new products

and increased relative consumer welfare compared to absence of advertising. [7] also indicates that advertising had a positive impact on customer choice. [8] stated that advertising was a substantial determinant of retail sales.

C. Perceived Quality

According to [9], perceived quality can help consumers to reduce their perception of risk. It also makes the customers satisfied which will encourage them to repurchase the product that causes loyalty [10]. Furthermore, [11] suggested that perceived quality can influence brand image directly or indirectly through the constructs of perceived value or brand attitude. It can also lead to dominant market share [12]. Perceived quality will directly affect buying decisions and brand loyalty, especially, when a consumer is not motivated or able to conduct a detailed analysis [13].

D. Word of Mouth

Word of mouth has an influence on customer’s knowledge, the way they do, and their feelings [14]. Moreover, word of mouth was claimed by [15] to have a strong effect on customers. Hence word of mouth can bring up the attentiveness of consumer in making safe the decision to try the new item more efficient than advertisements. To convert unfavorable or neutral perceptions to positive attitudes, word of mouth could be nine times as effectively as advertising. Thus it is considered that individual opinions are more trustworthy than other sources [16]. This is the reason why consumer has tendency to trust the words from relatives or friends before making purchasing decision. [17] remarked that consumers seek advice from their friends. Favorable word of mouth can increase the customer base.

E. Price

According to [18], when a customer considers buying a product of an unfamiliar brand, price is important. Once brand credibility is confirmed, the judgment on price will decline [19]. This view is also supported by [20], and he concluded that reference prices impact significantly customer’s brand choice. This is because of poor knowledge of consumers about brands.

F. Research Framework

Four main factors have strong impact on brand perception including advertising, perceived quality, price, and word of mouth. The following model illustrates these conceptually.

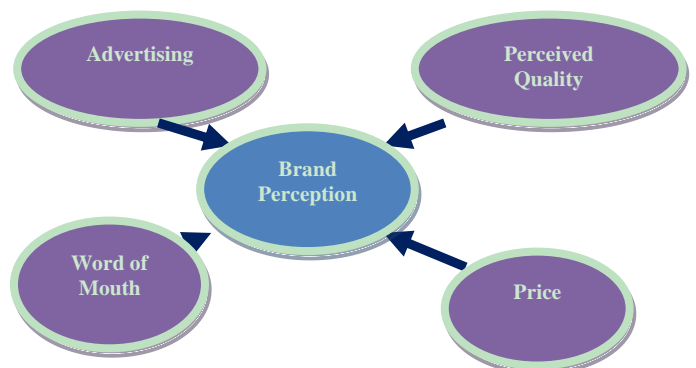


Fig. 4a. The 4 variables that impact brand perception. Source: Authors’ elaboration based on research.

In addition, five variables other variables influence customer purchasing decision in terms of advertising, perceived quality, brand perception, price, and word of mouth. Accordingly, the framework of this research is illustrated below:



Fig. 4b. Research framework of this research. Source: Authors' own elaboration.

G. Measurements

A questionnaire was used to measure brand perception, buying intention, and behavior of customer based on main four factors that affect brand perception. The respondents firstly were asked for their demographic information in terms of age, gender, marital status, education qualification and income level. They then have to answer questions to measure their brand perception and purchasing decision about four variables. This research uses a six-point Likert scale comprising strongly disagree, disagree, somewhat disagree, somewhat agree, agree, and strongly agree to measure more detail the answers of participants and researcher does not expect to receive much the neutral point in the results.

III. DATA ANALYSIS AND FINDINGS

A. Descriptive Statistics

The respondents were asked to rate the importance of five factors which involve them in buying a smartphone. The results from a Likert Scale in which shown as 5 points were used (1=unimportant; 5=very important).

As can be seen in Table I, all five factors are generally over 3 point which means moderate important. Except "Quality" factor which rated minimum at 3 point, and maximum at 5 point, the rest of them were selected from 1 to 5 point. Therefore, "Quality" factor have the highest mean at 4.59 point which over important range. Similarly, "Price" is also measured at 4.06 point. The next are "Brand" and "Word of Mouth" with 3.93 and 3.75 point respectively, while "Advertising" was rated at smallest point of 3.18.

B. Statistic of Levels of Agreement

This part will analyze the answers of respondents based on part 2 of questionnaire which measured the level of agreement as 1, 2, 3, 4, 5, 6 point equaled strongly disagree, disagree, somewhat disagree, somewhat agree, agree, and strongly

agree respectively.

TABLE I: DESCRIPTIVE STATISTIC OF FIVE FACTORS OF RESPONDENTS

Descriptive Statistics					
Factors	N	Minimum	Maximum	Mean	Std. Deviation
Advertising	170	1	5	3.18	1.139
Quality	170	3	5	4.59	.561
Word of Mouth	170	1	5	3.75	.813
Price	170	1	5	4.06	.834
Brand	170	1	5	3.93	.894
Valid N (listwise)	170				

C. Reliability Test

According to [21], Cronbach's alpha is a primary for interpretations of results and it is used to measure the degree of consistency of the variables. Hence, Cronbach's alpha method was selected to use in this research.

TABLE II: RESULTS OF RELIABILITY ANALYSIS

Variables	No. of Items	Cronbach's Alpha (α)	Remarks
Advertising	4	0.836	> 0.6
Perceived Quality	4	0.820	> 0.6
Price	4	0.843	> 0.6
Word of Mouth	4	0.915	> 0.6
Brand Perception	2	0.883	> 0.6

Table II indicates Cronbach's alpha score of each variable found in the questionnaire. A reliability score or alpha that above 0.6 is sufficient for any research at its early stage [11], [22]. Therefore, all collected data of this research is reliable and valid as all the variables have achieved above 0.6 of Cronbach's alpha score.

D. Results of Survey and Correlation Analysis

A Pearson correlation coefficient is an analysis technique to measure the association two interval variables when both are measured on a series of objects. The table below illustrates the correlations between independent variables and dependent variables.

Note:

- AD: Advertising
- BP: Brand Perception
- PQ: Perceived Quality
- PR: Price

WM: Word of Mouth

CPD: Customer Purchasing Decision

The results of Pearson correlation coefficient (r) range from -1 to 1 depending on the correlation strength of two variables. The value of r and assessment of correlation will be shown below:

$0 > r > -1$: Negative correlation

$r = 0$: No correlation

$1 > r > 0$: Positive correlation

TABLE III: RESULTS OF PEARSON CORRELATION ANALYSIS

Hypothesis	EFFECTS	Mean	Pearson Correlation Coefficient (r)	N	Remarks
H1	AD \Rightarrow BP	4.21	0.633	170	Accepted
H2	PQ \Rightarrow BP	4.89	0.676	170	Accepted
H3	PR \Rightarrow BP	4.54	0.599	170	Accepted
H4	WM \Rightarrow BP	4.36	0.804	170	Accepted
H5	AD \Rightarrow CPD	3.84	0.625	170	Accepted
H6	PQ \Rightarrow CPD	5.26	0.587	170	Accepted
H7	BP \Rightarrow CPD	4.66	0.797	170	Accepted
H8	PR \Rightarrow CPD	4.41	0.813	170	Accepted
H9	WM \Rightarrow CPD	4.23	0.783	170	Accepted

Based on the results of Table IV above, all Pearson correlation coefficients (r) from H1 to H9 are between 0.5 and 0.9. Therefore, all correlations are significant positive. In other words, two questions of each hypothesis are substantial correlation.

IV. SUMMARIES

A. Summary of Analysis

The questionnaire was designed to measure the opinion of smartphone consumers that relate to brand perception and customer purchasing decision in Ho Chi Minh City. The results of hypotheses testing are summarized below:

TABLE IV: HYPOTHESES TESTING RESULT

Number	Hypothesis	Result
H1	Advertising has impact on brand perception	Supported
H2	Perceived quality affects brand perception	Supported
H3	Price has effect on brand perception	Supported
H4	Word of mouth has influence on brand perception	Supported
H5	There is influence of advertising on customer buying decision	Supported
H6	Perceived quality has influence on customer purchasing decision	Supported
H7	Brand perception impacts customer's choice	Supported
H8	Price has effect on customer buying decision	Supported
H9	Word of mouth affects customer purchasing decision	Supported

B. Summary of Analysis

The questionnaire was designed to measure the opinion of

smart-phone consumers that relate to brand perception and customer purchasing decision in Ho Chi Minh market. The frequencies statistic of consumers' opinions is summarized as following in Fig. 4:

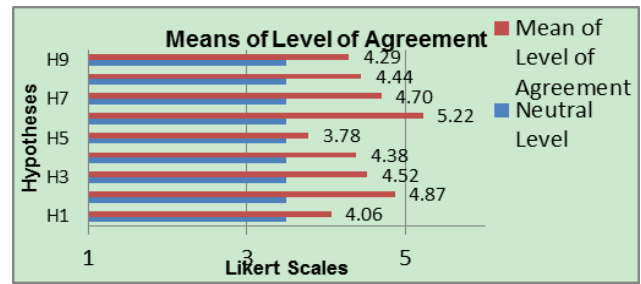


Fig. 4. The Means of level of agreement from respondents.

As can be seen in Fig. 1, the means of level of agreement from all respondents are more than the neutral level (3.5 point). Therefore all are positive and accepted. In addition, this result is tested by the reliability method and correlation technique. The nine hypotheses were therefore accepted.

C. Summary of Findings

The results of the main questions in the second part of the questionnaire show that:

- Advertising has slight impact on brand perception in smartphone market in Ho Chi Minh City (Hypothesis 1).
- Perceived quality affects substantially to respondents' brand perception (Hypothesis 2).
- Price factor has significant influence on brand perception in smartphone market (Hypothesis 3).
- There is a significant effect of word of mouth on brand perception in smartphone market in Ho Chi Minh City (Hypothesis 4).
- Advertising impact partially customer buying decision (Hypothesis 5).
- Perceived quality affects dramatically customer purchasing decision in smartphone market (Hypothesis 6).
- There is a substantial influence of brand perception on customer choice in smartphone market in Ho Chi Minh City (Hypothesis 7).
- Price factor has strong impact on customer purchasing decision in smartphone market (Hypothesis 8).
- Word of mouth influences significantly customer buying decision in smartphone market in Ho Chi Minh City (Hypothesis 9).
- In reliability test, the Cronbach's alpha scores of 5 variables are greater 0.6. It means that all collected data of the research is reliable and valid.
- In correlation analysis, Pearson correlation coefficient scores of 9 hypotheses are between 0 and 1. It proves that all correlations are significant and positive.

REFERENCES

[1] Future Consulting. (November 2013). Smart-phone market continues to see the rapid growth. *Ceatec*. [Online]. 51. Available: http://www.ceatec.com/report_analysis/en/ra_131118_1.html

[2] M. J. Delgado, "Ingredient branding: A case study on the emergence of the mobile processor category," MA Thesis, San Diego State University, 2012.

- [3] K. Hong. (2013). Smartphone Sales Surge 61% in Southeast Asia, Android Dominates with 72% Share. *Thenextweb*. [Online]. Available: <http://thenextweb.com/asia/2013/12/02/report-smartphone-sales-surge-61-in-southeast-asia-android-dominates-with-72-share/#!sRWy6>
- [4] Flurry Report. (2013). China knocks off U.S. to become world's top smart device market. *Flurry*. [Online]. Available: <http://blog.flurry.com/bid/94352/China-Knocks-Off-U-S-to-Become-World-s-Top-Smart-Device-Market>
- [5] L. Nguyen, "Vietnam ICT market 2011–2016 overview and forecast," *ICD Global*, Ho Chi Minh Express, 2012.
- [6] B. Traver. (24 May 2013). Brand perception, what influences your brand's reputation? *BluFish Consulting*. [Online]. Available: <http://blog.blufishconsulting.com/brand-perception-what-influences-your-brands-reputation/>
- [7] M. Sutherland and K. S. Alice, "Advertising and the mind of customer," *Advertising Educational Foundation*, 2000.
- [8] Barroso, "Advertising and consumer awareness of a new product," *Job Market Paper*, 2007.
- [9] D. J. Bernard and A. Mathios, *Factors Affecting Consumer Choice and Willingness to Pay for Milk Attributes*, Rhode Island: American Agricultural Economics Association, 2005.
- [10] H. G. Grabowski, "The effects of advertising on intraindustry shifts in demand," *Exploration in Economic Research*, vol. 4, no. 5, pp. 81-107, 1977.
- [11] H. Uggla, *Organisation av Varumärken*, Malmo: Liber Ekonomi, 2001.
- [12] P. Kotler, G. Armstrong, J. Saunders, and V. Wong, *Principle of Marketing*, 2nd ed., Upper Saddle River: Prentice Hall, Inc., 1999.
- [13] M. Y. Lin and L.H. Chang, "Determinants of habitual behavior for national leading brands in China," *Journal of Product and Brand Management*, vol. 12, no. 2, pp.94-107, 2003.
- [14] D. A. Aaker and A. L. Biel, *Brand Equity and Advertising: Advertising's Role in Building Strong Brands*, New York: Lawrence Erlbaum Associates, Inc., 2009.
- [15] P. Stobart, *Brand Power*, London: MacMillan, 1994.
- [16] S. Vantamay. (2007). Understanding of perceived product quality: Reviews and recommendations. [Online]. Available: http://www.bu.ac.th/knowledgecenter/epaper/jan_june2007/Somphol.pdf
- [17] A. Francis, "Word of mouth: understanding and managing referral marketing," *Journal of Strategic Marketing*, pp. 241-254, 1998.
- [18] S. H. Britt, *Consumer Behavioral Sciences*, New York: John Wiley Cadotte, 1966.
- [19] K. B. Murray, "A test of services marketing theory: Consumer information acquisition activities," *Journal of Marketing*, vol. 55, pp. 10-25, 1991.
- [20] Z. S. Ghorban and H. Tahernejad, "A study on effect of brand credibility on word of mouth: With reference to internet service providers in Malaysia," *Journal of Marketing*, vol. 4, no. 1, p. 26, 2012.
- [21] R. Dhar and S. M. Nowlis, "To buy or not to buy: Response mode effect on customer choice," *Journal of Marketing Research*, pp. 423-432, 2010.
- [22] T. Erdem, J. Swait, and J. Louviere, "The impact of brand credibility on consumer price sensitivity," *International Journal of Research in Marketing*, 2001.
- [23] L. Chernatony, *From Brand Vision to Brand Evaluation*, 3rd ed., Oxford: Elsevier Ltd., 2010.



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