# 중국스마트폰 시장에서 브랜드태도와 고객충성도에 미치는 요인에 관한 연구

An Empirical Study on Factors Influencing Brand Attitude and Customer Loyalty in China's Smartphone Market

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## 요약

중국 스마트폰 시장은 2010년 이후 지속적인 성장을 하고 있으며 2014년도 기준으로 스마트폰 이용자는 약 5억 2천만명에 이르고 있다. 따라서 많은 스마트폰 관련 기업들은 자신들의 고객을 관리하기 위하여 많은 노력을 기울이고 있다. 따라서 본 연구는 스마트폰 고객충성도에 영향을 미치는 브랜드 태도가 무엇인지를 중국 스마트폰 시장을 통해 알아보고자 한다. 이에 12개 가설을 이용하여 중국에서 삼성 스마트폰을 이용하는 사용자들을 대상으로 조사를 하였다. 그 결과 브랜드 충성도와 지각된 제품 품질이 고객충성도에 긍정적인 영향을 준다는 결과를 도출하였다.

■ 중심어: | 브랜드 이미지 | 고객충성도 | 인과관계분석 | 브랜드 태도 |

#### **Abstract**

The China smartphone market saw continuous growth since 2010, with total smartphone users up to 5,190 million by the end of 2014. For marketers, it seems some careful consideration will be required when it comes to deciding on how to capture loyal customers to bring profit for a company. Thus, this study aims to develop a model to investigate the factors influencing customer loyalty through brand attitude in China's smartphone market. Twelve research hypotheses derived from this model are validated using a field survey of Sumsung smartphone users in China. The results indicate that customer loyalty is jointly influenced by brand loyalty and perceived product quality. At the same time, critical mass and perceived product quality has a significant influence on brand image.

■ keyword: | Brand Image | Customer Loyalty | Structural Equation Model | Brand Attitude |

## I. Introduction

Ever since the launch of Sumsung smartphone in Chinese mobile market in 2009, the smartphone market has witnessed a rapid development with fierce competition among mobile phone producers and telecommunication carriers. By 2014, the total number of smartphone users has reached 5,190 million in

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China. Up till now, Sumsung has been selected as the first brand choice of smartphone in China.

The rapid growth of Sumsung's product in China's smartphone market brings us to think out the reasons that users choose to use its products and be loval customers for future usage. Considering that 20% of the loyal customer will bring 80% of the total profit to a company, customer loyalty should be given priority for concern. Since the early 1990s, with the launch of mobile phones, there has been a remarkable development both in their product sophistication and their rapid and widespread adoption. With more than three billion subscribers around the world, the extent of mobile phone diffusion in emerging markets has been increasingly larger than that in developed countries. [18] found that in the case of smartphones, these devices provide not just functional benefits obtained from product quality but also enhance enjoyment and provide ways to signal social status. Social benefits in using smartphones are seen as an important positioning for communities that desire attention and differentiation from others who define their self-worth from possession of these devices. Several studies have been conducted to attempt to customer understand loyalty of mobile services[15][28]. Most of these studies emphasize that customer loyalty and analysis of factors affecting it are important for the success of mobile phones. Nevertheless, the aforementioned studies were conducted in countries other than China, and studied mobile phones other than smartphones. Since foreign markets have different levels of market development and distinct consumer behavior, those previous studies may provide limited application to China's smartphone market. As a big developing country, China's smartphones market has some uniqueness.

The principal focus of this study is on evaluating the loyalty for Sumsung smartphone in China's smartphone sector. The specific aim of this study is to investigate how brand support from customers can be secured and how brand attitudes can be raised by product quality and social influence in order to generate a high degree of customer loyalty among Chinese smartphone users.

## II. Theoretical background and framework

## 1. Theoretical background

#### 1.1 Critical Mass

The 'critical mass' is defined as the minimal number of adopters of an interactive innovation for further rate of adoption be the to self-sustaining[12][10]. It is widely recognized that critical mass[20] of users is established in order for growth to continue in industries that display strong initial direct or indirect network effects[32]. In telecommunication products that display strong initial direct network effects, the critical mass of users is needed for users to receive sufficient value from the use of products such as telephones, mobile phones, or social networking services. Without such critical mass, users will not receive sufficient value[20].

#### 1.2 Perceived Product Quality

The product quality has appeared to be important issue since the quality management became a field of expertise in the early 20th century[14]. Consumers use a variety of cues to infer the quality of products. In general, these cues refer to specific features or attributes of a good or service as perceived by consumers[26]. Whereas goods and services can comprise any number of attributes, consumers typically infer quality from only one or a few of these attributes[35].

Many definitions of product quality in the literature

have been repeatedly reviewed over time, consistently exhibiting a variety of definitional perspectives or approaches[8][9][14]. [36]define product quality as a key attribute that customers use to evaluate products. From a manufacturing perspective, for instance, product quality has been defined as conformance to specifications, while the user-based approach has defined product quality as the fit between the characteristics of a product and the customer's needs[24].

Each of the different perspectives on product quality focuses on a different aspect of this multifaceted concept.

[8][9]identified eight dimensions as the basic elements of product quality:

 performance, features, reliability, conformance, durability, serviceability, esthetics, perceived quality.

## 1.3 Brand Attitude

Brands play a major role in today's competitive environment and are key resources sustaining competitive advantage[25]. Brand attitude is the highest level of brand association and it frequently forms the basis of consumer behavior[22]. [16] defined brand attitude as the consistent tendency of appropriate or inappropriate behavior in response to a particular brand.

[7] proposed a relation between perceived quality of parent brand and consumers' attitude. [2] also suggested that the perceived brand quality provides the reasons to buy and it affects the user's attitude toward brand.

## 1.4 Brand Image

Today, firms invest substantial resources to develop names with a favorable image. Among other advantages, a positive image facilitates business expansion through brand image. Thus, product introductions with the same brand name are able to leverage the brand image, brand awareness and, on the whole, brand equity obtained in the established markets[31]. Associating an existing brand to a new entity such as a geographical name, a person or, as in this case, a product may affect the existing brand's image associations. The effect can be positive, thus increasing the memory and strengths of such associations[27].

Brand image is often seen as a mechanism of assuring trustworthy behavior of a firm. In business and service markets, the company's name is often the brand name across a range of product classes. Under such circumstances, the brand image acts as the umbrella brand for these product categories[3]. The associations customers have about the image of a retailer affect the value of what they purchase from that retailer[34].

### 1.5 Brand loyalty

It is widely considered that loyalty is one of the ways with which the consumer expresses his/her satisfaction with the performance of the product or service received[17]. Brand loyalty represents behavior of repeated non-random purchase displayed over time by a unit of decision that can choose between different brand alternatives, and, which is the result of psychological processes and social processes that result in a commitment to a given brand[4].

[29] defined brand loyalty as "a deeply held commitment to re-buy or re-patronize a preferred product/service consistently in the future, thereby causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behavior."

#### 1.6 Customer loyalty

The focal point of many firms' marketing activities is customer loyalty to their products. Customer loyalty is generated from the process of revisit or repurchase, and the loyal customers would positively evaluate the service and products.

Customer loyalty is a customer's intention or predisposition to repurchase from the same firm again. In the context of mobile phone, customer loyalty is usually conceptualized as coactive (behavioral intention) loyalty.

#### 1.7 Continuance Intention

Continuance intention has become an important subject in this research area. Continuance intention describes the user's decision to continue to use a specific product that he or she has already been using [11]. Continuance intention may be defined as continued usage of product by users, where a continuance decision follows an initial acceptance decision [1]. Continuance intention has been understood based on the expectancy-confirmation model (ECM). In this model, users' continuance intention is decided by their satisfaction with product usage and perceived usefulness of continued usage.

Other researchers have extended the ECM by incorporating new factors. In the existing ECM-related studies, factors influencing users' continuance intention have been suggested from two perspectives. First, we see several cognitive factors dominating the studies: perceived usefulness, perceived quality, perceived usability, subjective norm, subjective task value, loyalty, and others. Second, a few studies have supported the affective perspective relating to continuance intention in the ECM[5]. Even though this perspective has received less attention than the cognitive factors, some affective factors such as perceived enjoyment, pleasure, and arousal have recently been proposed as major predictors of corresponding research models such as the ECM[21]. However, these factors are relatively temporary and change easily according to the context; they may not be adequate to explain continuance intention behavior fully, especially behavior that lasts for a longer time.

#### 1.8 WOM

Word-of-mouth(WOM) is the most important informal means of communication between consumers. It is defined as "the informal communication directed at other consumers about ownership, or characteristics of particular goods and services and/or their sellers" [30].

WOM can be either positive or negative (Buttle, 1997). According to [13], "positive WOM occurs when good news testimonials and endorsements desired by the company are uttered" and "negative WOM is the mirror image". Negative WOM is also considered to be one of the forms of customer complaining behavior. Thus, WOM is a two-edged sword: whereas eliciting positive WOM is a way of gaining success through an image building effect, negative WOM is damaging for the company due to an image killing effect (even more so because negative WOM is weighted more heavily by consumers than positive comments [23].

## 2. Research Model

The hypotheses discussed below are logically adapted from literature review in marketing research. The core concept of the study suggests that perceived product quality and critical mass are key antecedents in influencing customers' brand attitude, which in turn, bring customer loyalty. Following hypotheses are suggested:

First, brand attitude consists mainly of brand image

and brand loyalty. Brand image is an important dimension to customers and is chiefly used to affirm the differences between products and services provided by a seller or corporation and its competitor(s). Corporate brand image results from customers' assessment, ideas, and concepts of the brand, thus becoming a manifestation of both the brand's characteristics and the customers' awareness. Therefore, if customers have better image awareness of a company's products, then they will also hold a better brand image evaluation for its products. As for brand loyalty, [29] believes that, although marketing strategies and changes in the environment can have an effect on customers' purchasing patterns, customers who are loyal to a brand are not affected at all. In fact, they will continue to repeatedly purchase the products of their favorite brands in the future. The image awareness of the company or customers' lovalty towards the brand can either be influenced by an individual's perception on his experience of using the product or services, or originated from the social influence, i.e. critical mass, to see how the important others are behaving towards the product or service. Thus, we suggest the following hypotheses:

- H1-1 Critical mass has a significant positive effect on brand image.
- H1-2 Critical mass has a significant positive effect on brand loyalty.
- H2-1 Perceived product quality has a significant positive effect on brand image.
- H2-2 Perceived product quality has a significant positive effect on brand loyalty.

Second, social influence and perceived quality is also revealed to have a significant influence on individual's behavior. Thus, we suggest that:

H3-1 Critical mass has a significant positive effect on continuous intention.

- H3-2 Critical mass has a significant positive effect on WOM.
- H4-1 Perceived product quality has a significant positive effect on continuous intention.
- H4-2 Perceived product quality has a significant positive effect on WOM.

Thirdly, [29]believes that customer loyalty is probably the result of satisfaction and brand attitude. The study by [19]suggests that customer loyalty is basically affected by brand attitude and emphasizes its effective management. Thus, according to the literature surveyed above, the following hypotheses are proposed:

- H5-1 Brand image has a significant positive effect on continuous intention.
- H5-2 Brand image has a significant positive effect on WOM.
- H5-3 Brand loyalty has a significant positive effect on continuous intention.
- H5-4 Brand loyalty has a significant positive effect on WOM

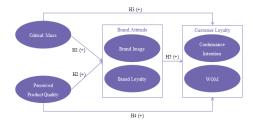


Fig 1. Research Model

## 3. Research Method

## 3.1 Measurement

A questionnaire survey is made to target the Sumsung smartphone users in China. All items on questionnaire are referred to previous studies. Moreover, this study was mainly focused on Chinese users, so the English version of questionnaire was firstly translated into Chinese version by two

language experts. To confirm the reliability of this translated questionnaire, 30 Sumsung smartphone users were involved to answer both English and Chinese version questionnaire and the results indicated the translation was adequate. Moreover, those Sumsung smartphone users provide valuable suggestions for modifying improper items that might cause misleading results.

#### 3.2 Sample

After the questionnaire was confirmed to be suitable, a formal questionnaire survey was carried by convenience data collection. After a month's survey, a total number of 287 responses were collected and 277 valid ones were kept. And other 10 invalid ones were excluded. Then, valid data was used for further analysis to test the model and hypotheses by using structured equation modeling. SPSS and AMOS are used in analysis procedure.

Table 1. Correlation and Square Roots of Average Variance Extracted

Measure	Items	Frequency	Percent
Gender	male	177	63.9
Gender	female	100	36.1
Age	10s	16	5.8
	20s	248	89.5
	30s	13	4.7
Occupation	Undergraduate	41	14.8
	Graduate	78	28.2
	Professionals	117	42.3
	Employees	39	14.1
	Others	2	0.7

#### III. Results

## 1. Measurement model

Confirmatory Factor Analysis(CFA) is usually used to assess the number of factors and the loadings of variables. In this study, the confirmatory factor analysis was firstly carried through by computing

two validities of the constructed model: convergent validity and discriminant validity. Convergent validity is the degree to which an operation is similar to (converges on) other operations that it theoretically should also be similar to. Convergent validity is usually used to ensure all scales within a same construct are meaning the same question, and the second discriminant validity is used to ensure different constructs are measuring different aspects. Convergent validity is measured by composite reliability(recommended value > 0.7) and average variance extracted(recommended value > 0.5).

Discriminant validity describes the degree to which the variable is not similar to other variables that it theoretically should not be similar to. Discriminant validity is usually measured by comparing the correlation between one construct and other constructs with its own average variance extracted.

#### 2. SEM

Once this research model is verified and proved to be reliable, an equation model was built in AMOS to test hypotheses using linear regression weight. The result of this test is shown in [Table 2].

## **IV.** Discussion

As we hypothesized, 'critical mass' and 'perceived product quality' significantly affect brand attitude of Sumsung smartphone, both on 'brand image' and 'brand loyalty'. Specifically, perceived product quality is found to have the greatest effect on all of brand attitude components, which implies that impression in Chinese customer's mind and loyalty to Sumsung brand will be most significantly influenced by the high product quality of Sumsung .Among the effects of 'critical mass' and 'perceived product quality' on

'customer loyalty', our findings show that only perceived product quality have positive significant effect on customer loyalty through WOM, while other relationships are found to have no significant effects.

Table 2, Result of Structural Equation Modeling

Hypothe	Path		Main Model		Dooult	
ses			Estimate	Р	Result	
H1-1	СМ	->	IMG	0.267	***	Accepted
H1-2	СМ	->	LOY	0.135	0.037	Accepted
H2-1	QUA	->	IMG	0.601	***	Accepted
H2-2	QUA	->	LOY	0.601	***	Accepted
H3-1	CM	->	CINT	-0.005	0.94	Rejected
H3-2	CM	->	WOM	-0.016	0.811	Rejected
H4-1	QUA	->	CINT	0.067	0.535	Rejected
H4-2	QUA	->	WOM	0.392	***	Accepted
H5-1	IMG	->	CINT	0.146	0.118	Rejected
H5-2	IMG	->	WOM	0.036	0.7	Rejected
H5-3	LOY	->	CINT	0.601	***	Accepted
H5-4	LOY	->	WOM	0.456	***	Accepted

It means that perceived product quality is an important factor for customer loyalty. Thus, improving the perceived quality of product is an effective tool to maintain customer loyalty by spreading positive WOM.

Our results show that 'brand image' have no significant effects on the 'customer loyalty'. It implies that the impression in the consumers' mind do not influence the users' intention to continue using the Sumsung smartphone. The possible reason is that the brand of smartphone among Chinese users is not so important; thus, the image of Sumsung as Sumsung smartphone has no significant differences with other brands.

Brand loyalty positively influences 'customer loyalty' of Sumsung smartphone on both 'continuance intention' and 'WOM'. On the magnitude of significance, brand loyalty has the greatest effect to continuance intention. Brand loyalty has less effect to WOM for building customer loyalty. That's to say, when the consistency of purchasing the same brand of Sumsung is maintained, they will be more loyal

toward WOM and continuance intention because Sumsung smartphone's users perceive brand loyalty more highly than brand image mainly.

## V. Conclusion

This study attempts to investigate the factors affecting brand attitude and customer loyalty of Sumsung smartphone in China. We studied the effects of critical mass and product quality on brand attitude, and also the effects of critical mass and product quality on customer loyalty. We believe that this research allows us to gain insights into China's Sumsung smartphone service marketing strategies.

Despite the contribution, this study also suffers from the following limitations. The target product selected in this research is Sumsung smartphone; it may be difficult for us to generalize the model across a wide set of products except for the antecedents of perceived product quality and critical mass, no other external variables were examined in this research; future work might investigate other social and psychological factors(e.g., perceived personal innovativeness, and others.) to explain users behavior in greater detail. The cross-sectional research here allows us to explain customer loyalty. However, a longitudinal research is an open question for future work.

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