

Research of Demand for smart phones based on customer segments Preference

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[Abstract] The data of 2012 annual meeting of China's Internet industry shows that, in 2012, the number of the Smartphone has reached 224 million, becomes the world's largest producer of Smartphone. In the same year, in China, the number of mobile Internet users grew rapidly. Therefore, to understand the different customer segments in the choice of Smartphone plays an important and positive role for handset manufacturers of Smartphone plan. This article will use conjoint analysis techniques, through the national consumer survey on Smartphone preferences, identifies different market segments values, to obtain the ranking of the importance of different attributes in different market segments, and then raises the design and development proposals for the overall market and market segments of smart phones.

Keywords: market segmentation; Smartphone; conjoint analysis; attribute assessment; develop suggestion

Part 1 Background of Research

The data of 2012 annual meeting of China's Internet industry shows that, in 2012, the number of the Smartphone has reached 224 million[1], becomes the world's largest producer of Smartphone. In the same year, in China, the number of mobile Internet users, the application level, universal terminal market size etc. shows a rapid growth.

According to the forecast of the relevant agencies in China, the future of the Smartphone market will be further expanded, manufacturers and operators of smart phones will increase investment efforts, customer demand for Smartphone will be further inspired. The outbreak of the customer, not only brings huge benefits for the Smartphone manufacturers, but also reduces the threshold to promote the mobile Internet applications in the future.

Development of mobile Internet, indirectly promotes the Smartphone. Advent of Smartphone fundamentally changed the way people live, and the demand for traditional communication tools. More and more people who use mobile phones are no longer satisfied with the appearance, basic calls, and text messaging capabilities, they began to pursue powerful mobile operating system and CPU speed. Smartphone has become almost indispensable basic configuration in the 21st century.

At the moment, more and more consumers' targets have been positioned on the Smartphone. Compared with traditional feature phones, with its more portable and more intelligent features, in the entertainment, business, newsletter and other applications and services, Smartphone can be better meet consumer demand for mobile Internet experience. Meanwhile, data from a survey showed that 52% of customers buy the phone in the next year budget of more than 2,000 yuan, so the high-level Smartphone occupies an important position in the overall Smartphone market.

To obtain the key factor in mobile purchasing process in different market segments, plays an important and positive role for handset manufacturers making Smartphone plan.

Part 2 Research Methods and Research Implementation

In order to achieve a segmentation of customer preferences and avoid the problem of past research which result in that consumer often prefer higher quality and lower prices, this

study will use the conjoint analysis methods. Firstly, the author set seven main factors which influence consumers to buy mobile phones, including: brand, price, screen, keyboard, operating system, network standard, CPU. And each attribute were divided into levels, such as the content of the following table. Then use CBC technical to computer the importance of attributes and the utilities of levels, finally uses latentclass to do the market segmentation.

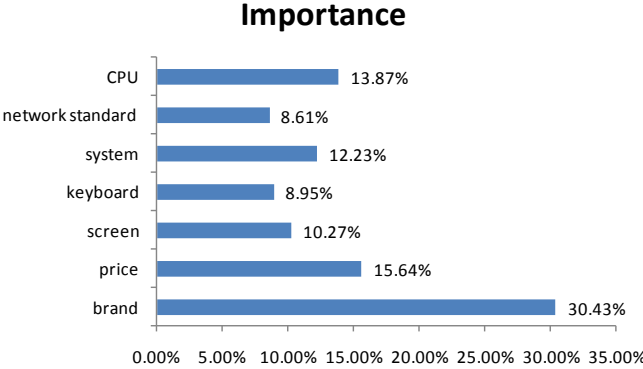
Table 1 attributes and levels

attribute	Level
Brand	Apple, Samsung, HTC, Nokia, Motorola, Sony, Huawei, Lenovo, ZTE, OPPO, Meizu, Millet
Price	2000-2499、2500-2999、3000-3499、3500-3999、4000-4499、4500-4999、5000-5499、5500-6000
Screen	3.5-3.7 inch、4.0-4.5 inch、5.3-5.5 inch、6 inch、7 inch、dual screen 3 inch、dual screen 3.5 inch
Keyboard	Full keyboard, Numeric Keyboard, Touch Keyboard, Full keyboard + Touch Keyboard, Numeric Keyboard + Touch Keyboard, Touch Keyboard+ Remote control
Operating System	Android, IOS, Symbian, windowsphone、windowmobile、WP7/WP8
Network standard	Single-mode, Single-mode dual-card, Dual-mode single-standby, Dual-mode dual-standby, whole network
CPU	Single core 1-2G, Single core 2-3G, Single core 3-4G、dual core, three core、four core, six core, eight core

This study based on web survey methods, the survey executed in March 2013, issued in the whole of China (excluding Hong Kong, Macao and Taiwan), with the recovery of 947 valid questionnaires.

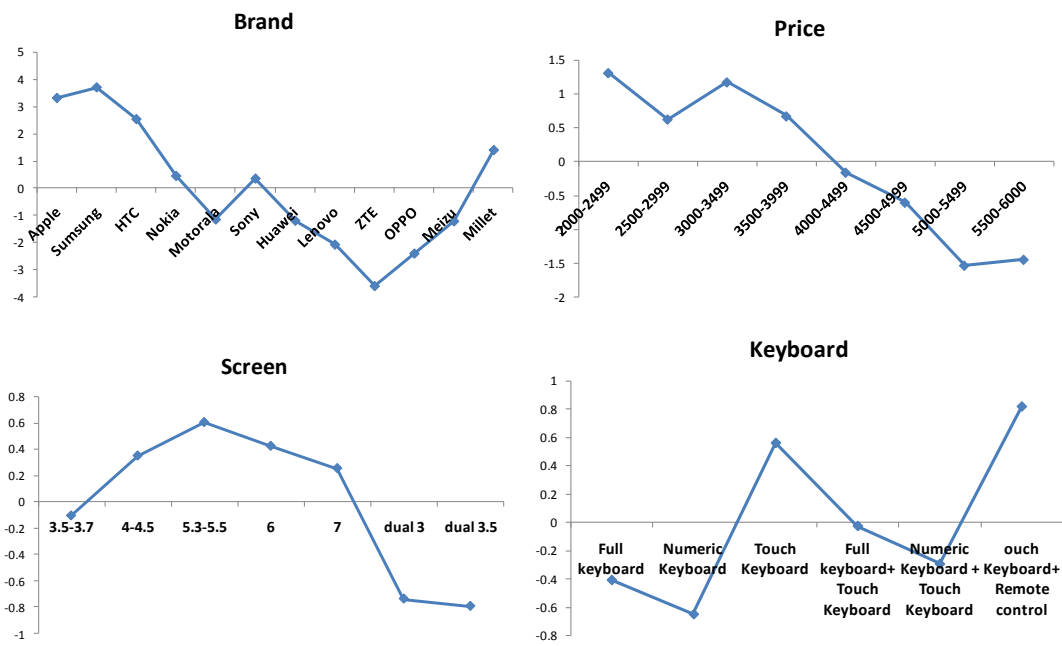
Part 3 Overall conclusions

Survey data shows that, brand is the most important factor in the evaluation of the phone, followed by the price, CPU, system, screen, keyboard, and finally the network standard.



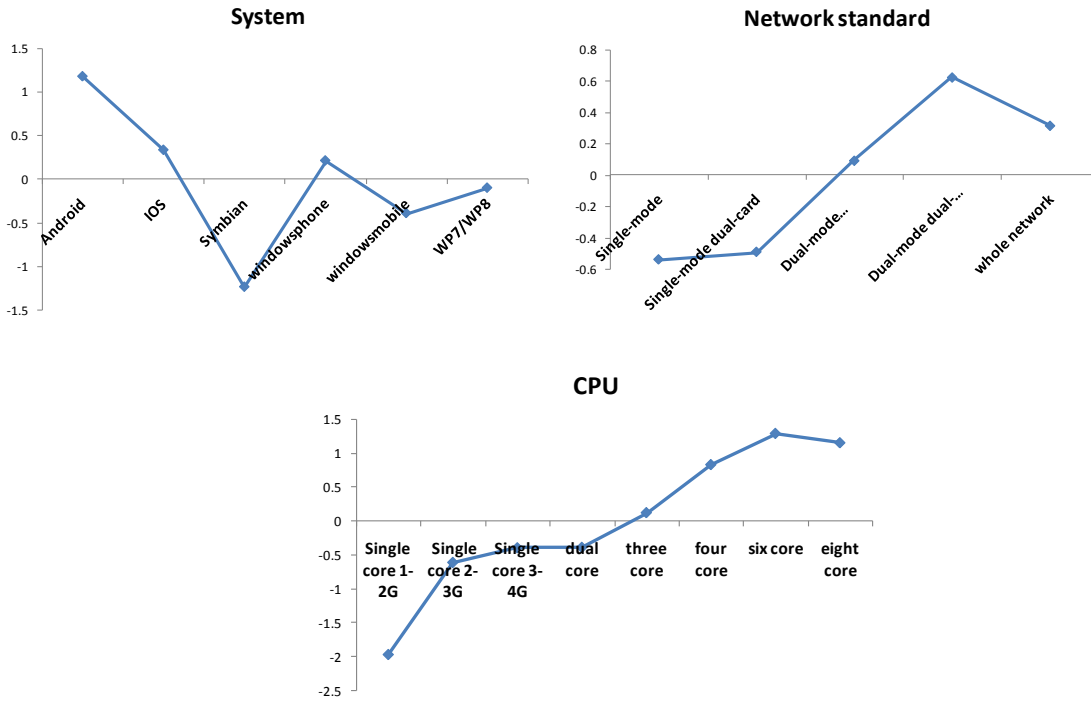
Graph 1 Analysis of the importance of each attribute of Smartphone

For brand, Samsung is the most popular, followed by Apple and HTC; relatively speaking, ZTE, OPPO and Lenovo get lowest consumer preferences. In terms of price, most consumers tend to buy 2000-2499 yuan mobile phone, followed by the 3000-3499 yuan, with the increase in prices, consumer preferences become lower and lower. For the screen needs, consumers prefer 5.3-5.5 inch screen most, while folding dual 3-inch and dual 3.5-inch are the most unwelcome. For the choice of keyboard, consumers are more favored to touch screen and touch keyboard + remote control, the general popularity of the rest is just the same.



Graph 2 levels of brand, price, screen and keyboard

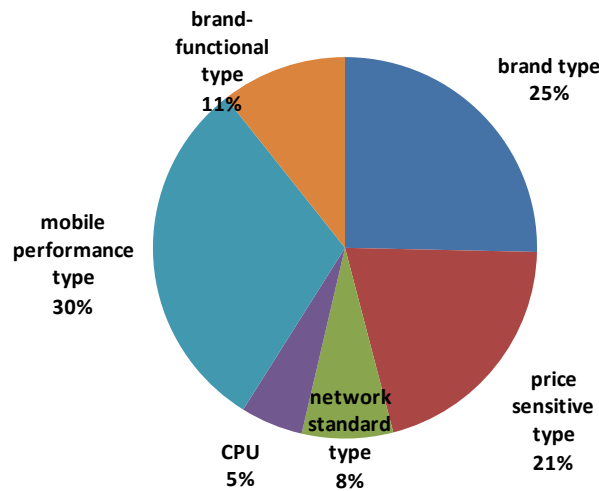
In the choice of the operating system, the level of Android scored highest, followed by IOS and windowsphone system, and the most unpopular is Symbian, utility value is negative. For network standard, the most popular is dual-mode dual-standby, followed by the whole network, but dual-mode single standby, single-mode and single-standby are unwelcome. ☒ For the CPU speed, six-core, eight-core are the most popular, and with the reduction in the number of CPU cores, the utility value of consumer preferences becomes lower and lower.



Graph 3 levels of system, network standard and CPU

Part 4 the character of five Market segments

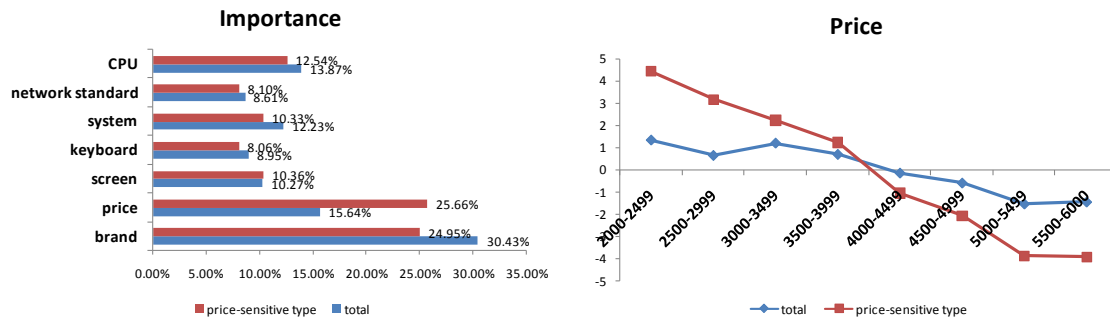
According to the different needs in different customer groups, the author uses conjoint analysis techniques and latent class skills to segment on consumer preferences, and then divides the population into six categories. The proportion of the different groups is: mobile performance type, accounting for 30%; brand type accounted for 25% of the population; price-sensitive type accounted for 21%; brand-functional type accounted for 11%; network standard type accounted for 8%; technology CPU type accounted for 5%.



Graph 4 The proportion of the different groups

1、description and demand characteristics of Price-sensitive type customer

This type of people are most sensitive to price, when they select Smartphone, they will focus much on price, the importance of price is accounting for 25.66% (importance of the price in the general population, only 15.64%).



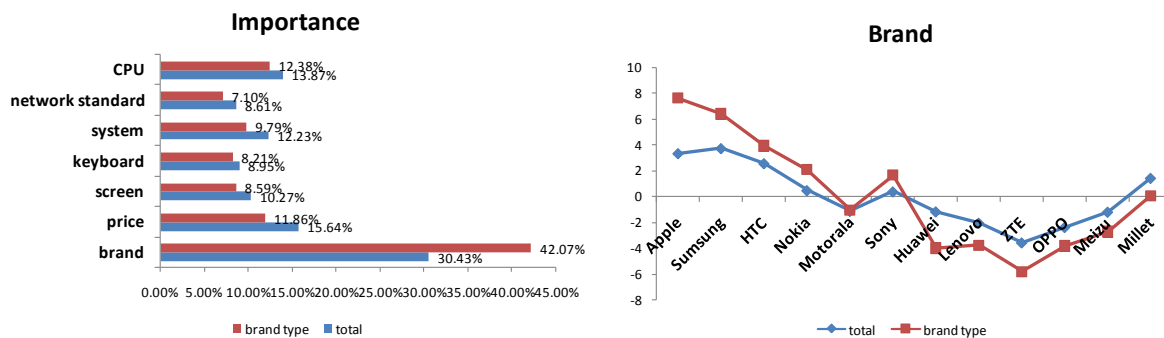
Graph 5 the utilities of attributes and levels of price of Price-sensitive type customer

Demand for the price level, this type of people is more sensitive for price than the general population large, which they prefer 2000-2499 yuan grades, indicating that this part of the customer only pursue for low prices.

The personal monthly income of the majority is between 3000 ~ 4000 yuan, while the proportion of mobile communications spending between 100-150 is relatively high, and the proportion in working in the company is significantly higher than the general staff. Therefore, because of the common Economic strength, they are more sensitive to price.

2、description and demand characteristics of brand type customer

This type of people focus more on mobile phone brands, the proportion of the importance of brand in this population is as high as 42.07%, while the overall population is just only 30.43 percent, and the importance of other attributes are not so obviously different.



Graph6 the utilities of attributes and levels of brand of brand type customer

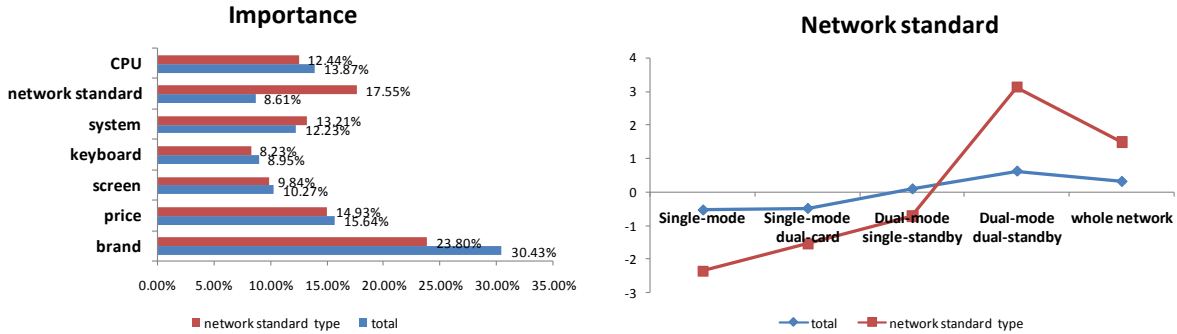
Relative to the general population, they like a high-quality brand much, and the aversion

to the low-quality brands is obvious. They do not prefer the lowest price level best, but great interest in intermediate stage of price, indicating that some customers are willing to pay more for the high-class brand.

This type of customer maybe female, and the family income of most of them is more than 8000 yuan per month, and the proportion of individual income above 10000 yuan is significantly higher than the general population, which shows the economic power of them. Their mobile communications spending is between 100-300 yuan, indicating that these people are willing to spend more in communication.

3、 description and demand characteristics of network standard type customer

Network standard is the most important attribute for these type of customer, the importance accounting for 17.55%, while the proportion of the general population of the importance of the network system is only 8.61%.

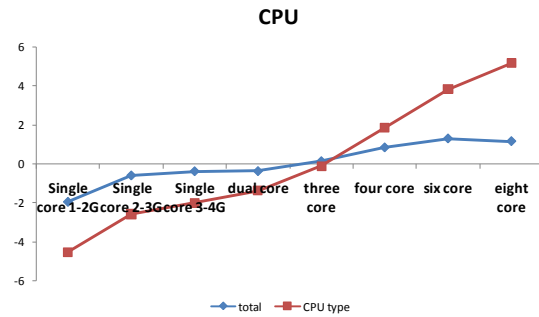
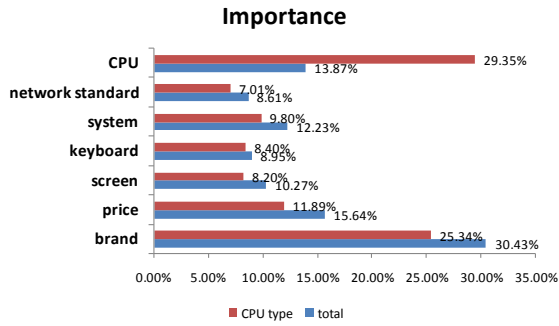


Graph 7 the utilities of attributes and levels of network standard of network standard type customer

In the network standard, the difference between the general population is not so obvious, but the network standard type crowd was presented with a special preference to dual-mode dual-standby and whole network-wide standard, and shows disgust for dual-mode single-standby, single-mode and single-mode dual card. These customers are mainly male,; personal monthly income is relatively high, more than 6,000 yuan, Mobile communications spending more concentrated between 100 to 300 yuan. So this type of the customer has the economic strength, but concerns on the performance of the network standard.

4、 description and demand characteristics of CPU type customer

This type of people are more concerned on CPU speed, the importance of CPU reaches 29.35% (overall population is 13.87%).



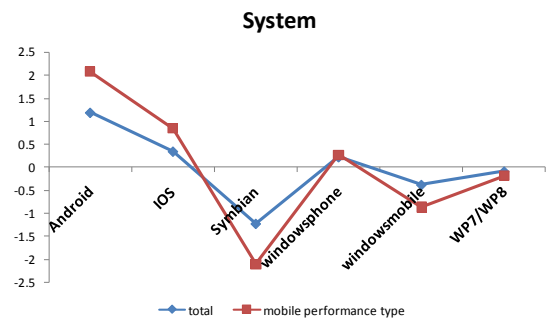
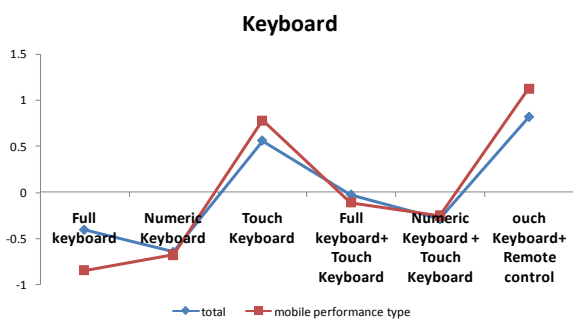
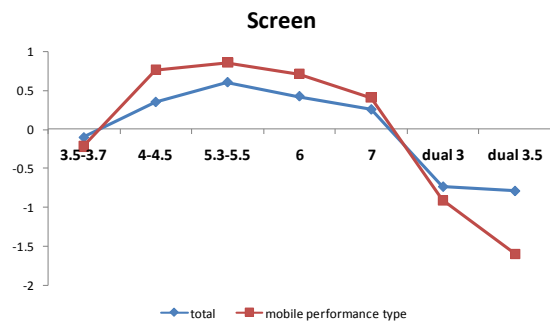
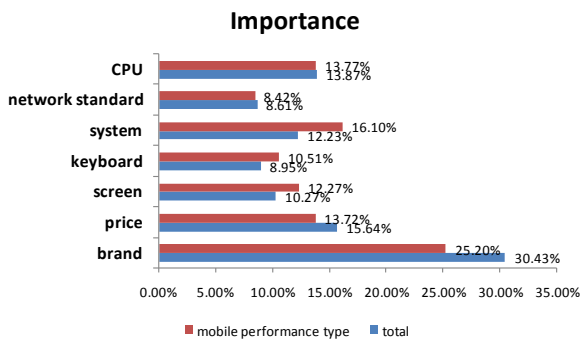
Graph 8 the utilities of attributes and levels of CPU of CPU type customer

For the CPU speed, the technical people prefer above three core CPU much more than the general population, CPU type customers like eight-core CPU most, CPU parameters has greatest impact on their choosing Smartphone.

They live in high-income and wealthy families, but their disposable income is not high, and mobile communications expenses is between 50 to 79 yuan. Such customers are relatively young, but the desire for technology, especially the CPU speed in Smartphone is sincere.

5、description and demand characteristics of mobile performance type customer

They focus on the system, the keyboard and the screen, indicating that such customers will choose the Smartphone based on their performance. Their considerations on system reach 16 percent, higher than the overall.



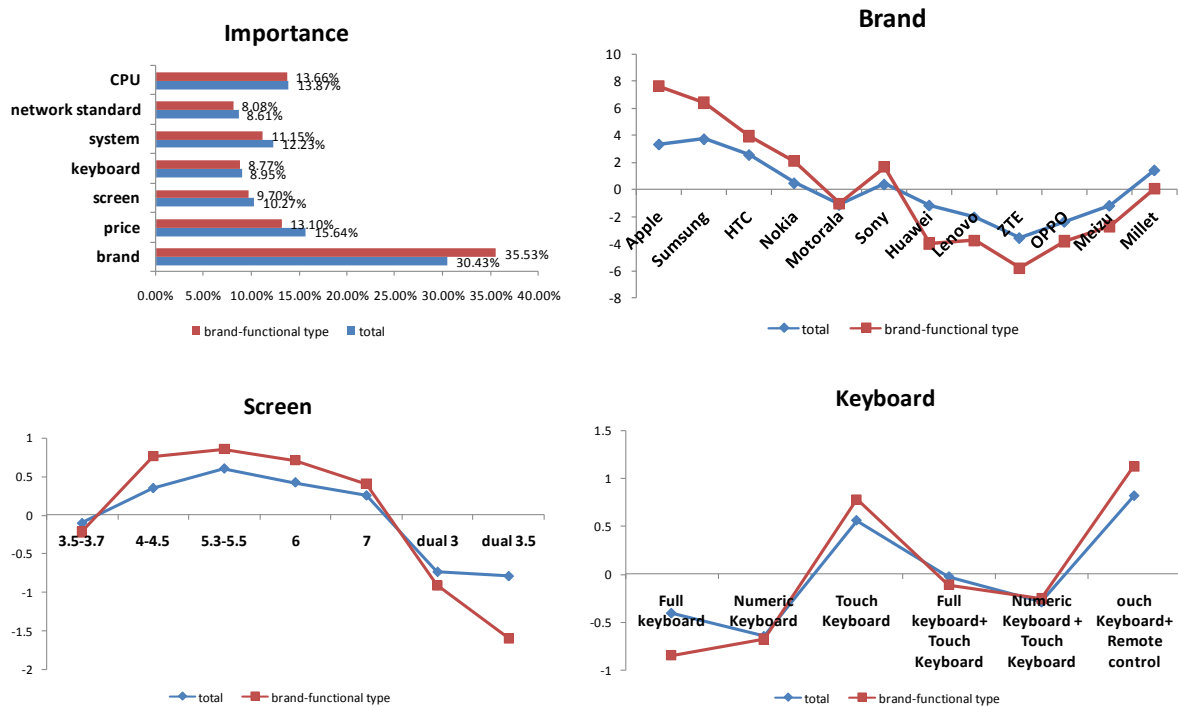
Graph 9 the utilities of attributes and levels of mobile performance type customer

For screen levels, such people like 4-6 inch screen, at the same time, they prefer touch keyboard or touch keyboard + external remote control, for the system, their preference for Android is much higher than other systems.

The character of this type of people is: male, cultural knowledge level is not high, mobile communications spending between 50 to 79 yuan, not high phone communication costs. It is precise that because they are not so familiar to the technology, they are more focus on overall performance of phones, not just one aspect of them.

6、description and demand characteristics of brand-functional type customer

Compared with brand type customer, this group also focuses on brand, but the difference is, in addition to the brand, they will also consider the phone's screen, keyboard and other factors, it can be concluded that they consider both the mobile phone brands and performance.



Graph 10 the utilities of attributes and levels of brand-functional type customer

For the brand levels, such people prefer Samsung brand, in addition to domestic Millet phone also favored; In terms of price, this group prefer the price more than 4000 yuan; compares to the screen level, such people are more inclined to 7-inch screen.

The character of this group is: female, low degree, family income above normal in the range of 5001 ~ 6000 yuan, but there are some customers' personal monthly income is between 8,001 to 10,000 yuan.

Part 5 Research Implications

Currently there are many Smartphone manufacturers, but the companies which are strong are countable. Insight into the characteristics and needs of six groups, is helpful to the Smartphone manufacturers to do the business for their own advantages and disadvantages, design products, and make marketing work.

First, make phone brand planning and construction, to create a good brand image.

From the sub-population categories, brands and brand functional type of customers accounting for more than 36% of customers overall, and the brand is the most important factor consumers consider when buying a Smartphone, it is recommended that mobile phone manufacturers make brand planning, establishment brand equity, to help occupy more market share. Create high-class brands, such as Samsung, to both occupy the leading position to gain market share, and conducive to the brand extension down, expanding product lines.

Second, concern on the quality and cost-effective mobile phone, raise consumer awareness.

Due to the current mobile phone market homogeneity, companies want to get a bigger market share in the mid-range Smartphone market, in addition to improving cost-effective, it also needs to consider the bid items. Pay more attention to product quality bid that businesses and products to consumers in addition to the feeling of quality assurance, as well as the man-like thoughts and character. Smartphone is already more than just a communication tool. More and more people have mobile phones as their own life and work partner, from getting to sleep all the time all day long without it. So, people are now not only focus on the use of mobile phones to bring their own convenience, but also on the emotional needs of taste and character. Quality does not stand for expensive, luxury synonymous, good quality mobile phones will make people feel comfortable, enjoyable. This requires a better insight into our business goals and values of the pursuit to buy quality group.

Third, according to the strength of enterprises, targets on the right market in order to survive and develop in the Smartphone market.

The study divided the six categories of the population, the small mobile phone manufacturers, it can be based on its own strength, select 1-2 market segments as a starting

point, making phone to meet their needs, to achieve the basic goal of survival, and then to gradually expand and achieve corporate growth.

References

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