

# FACTORS INFLUENCING SMART WATCH'S PURCHASING BEHAVIOR OF CHINESE CUSTOMER IN KUNMING CITY, PRC

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## ABSTRACT

Since 2018, smart watches have become increasingly popular in People Republic of China (PRC). In 2019, China's smart watch market experienced a significant growth rate of 55%, reaching 3.2 million units. This phenomenon is evident in many cities in China, including the Kunming city. With the higher competition, studying factors influencing smart watch's purchasing behavior of Chinese customers in the Kunming city, PRC is important. This study collected data from one hundred Kunming customers using a questionnaire. Data was analyzed by using descriptive statistics and testing hypotheses by Chi-square ( $X^2$ -test).

This study found that the majority of customers are male aged between 18 to 35 years old, Graduated with bachelor's degree and with average monthly income of RMB 4501-6000. Results of hypothesis testing revealed that both perceived benefits and lifestyle (AIOs) have influence on smart watch's purchasing behavior of Chinese Customer in Kunming city, PRC, at significant level of 0.05.

**Keywords:** Chinese Consumer in Kunming, Smart Watch, Perceived Benefit, Consumer's Lifestyle, Purchasing Behavior

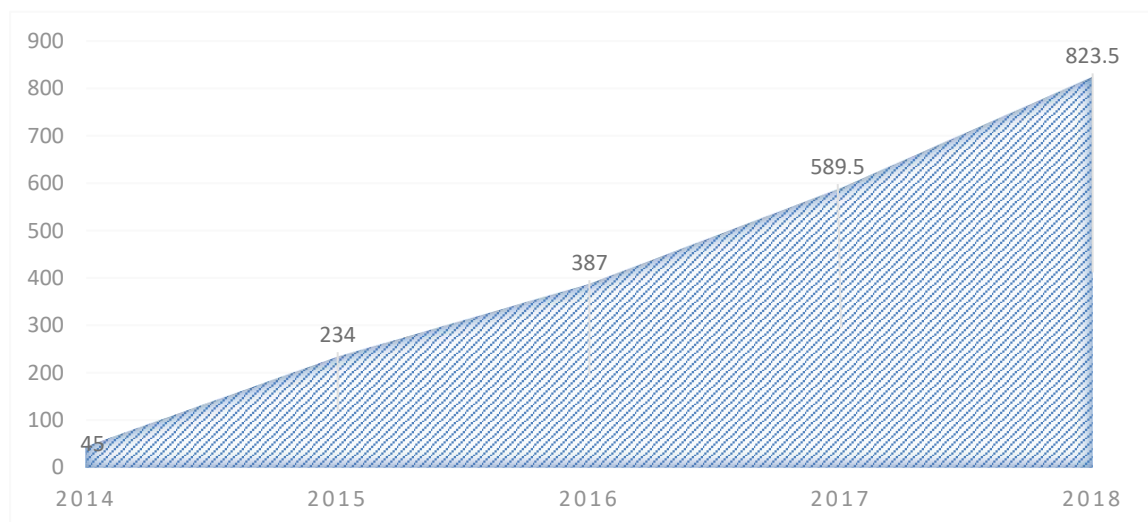
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## Introduction

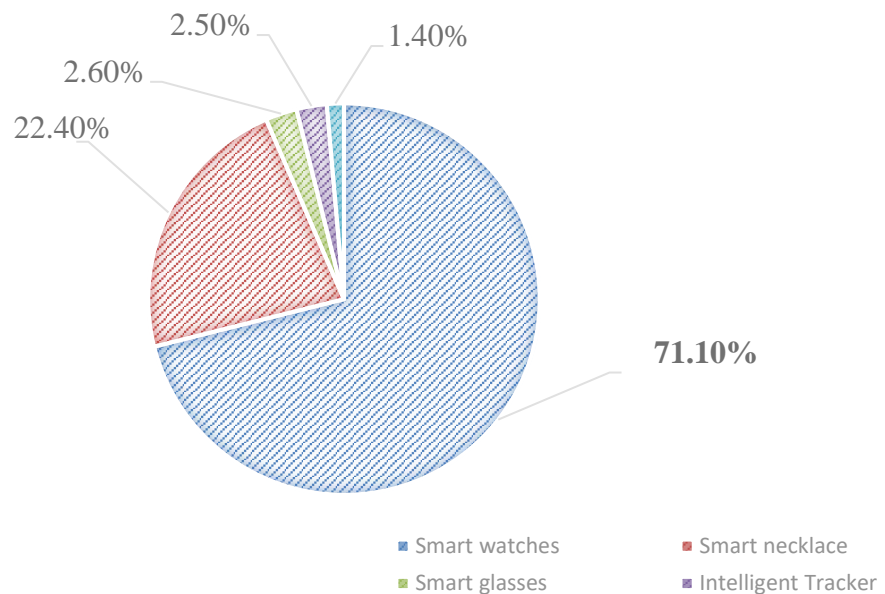
With the upgrade of consumption and the gradual popularization of AI, VR, AR and other technologies, wearable devices have moved from a single function to a multi-function in the past, and are more portable and practical. Smart wearable devices have many developable applications in many fields such as health care, navigation, social networking, business and media, and can bring changes to future life through the application of different scenarios. In recent years, global wearable device shipments have reached 310 million units, an increase of 16.7% over the previous period, and the market size is huge. There was a similar trend appeared in the Chinese market, smart watches market share in China kept increasing from year of 2013, after reaching 234 billion baht in 2015, arrived at number of 589.5 billion baht in 2017. After which, its figure increased further and ended up at 823.5 billion baht in year of 2018 (see Figure 1.1).



**Figure 1. 1:** Smart watches market share in China from 2013 to 2018 (billion baht)

Source: China Industry Information Report (<https://www.chyxx.com/>)

With the increasing popularity of virtual reality (VR) and artificial intelligence technologies, wearable devices have been neglected, the wearable device industry has gradually eased, and smart watches and bracelets have gradually become the mainstream in the wearable field. In the distribution of wearable device product forms, smart watches accounted for 71.10%; followed by smart bracelets, the product form accounted for 22.40%, both of which accounted for more than 93.5% of the number of wearable device product forms.



**Figure 1. 2:** Proportion of Market Structure of Smart Wears in 2018 (percentage)  
 Source: China Industry Information Report (<https://www.chyxx.com/>)

Beginning in the second half of 2018, the Chinese market craze for smart watches has gradually emerged. This wave of craze was triggered by the post-85s crowd who more recognized electronic products. At the end of 2018, Chinese total sales of smart watches (excluding children's smart watches) were 2.05 million units, a year-on-year increase of 63%, and more than 500 smart watch brands. In 2019, China's smart watch market maintained a growth rate of 55%, reaching 3.2 million units. This situation also appeared in Kunming city PRC, citizens are increasingly concerned about the application of smart watches in life.

To draw a conclusion, perceived benefits and lifestyle of customers might affect smart watch's purchasing behavior of Chinese customer in Kunming. Now the market share of traditional watches is constantly being occupied by smart watches. In the next few years, smart watches will also be loved and respected by more users with the development of technology.

This research paper focuses on perceived benefits and consumer's lifestyle on purchasing behavior of customers on smart watches in Kunming city, PRC only. Therefore, this study proposed two hypotheses as follows:

H1: Perceived benefits will have influence on smart watch's purchasing behavior of Kunming Chinese customer.

H2: Consumer's Lifestyle (AIOs) will have effect influence on smart watch's purchasing behavior of Kunming Chinese customer.

## **Investigating constructs**

This study addresses smart watch's purchasing behavior of Chinese customer in Kunming city, PRC. The proposed factors of perceived benefits and consumer's lifestyle (AIOs) were used to examine the relationship with Chinese consumer to purchase smart watch in Kunming city, PRC. The definitions of key terms in this study are described as follows:

**Smart watches**—a form of wearable computing watch which possess functions such as interconnection (NFC, Wifi, Bluetooth, wireless), human-machine interface (voice, somatosensory), sensing (bone sensing, face recognition, geolocation, various types of sensors), functional applications derived from these basic functions include ideas control, somatosensory control, item tracking, medical care, infotainment, sports assistance, etc. For example, Apple iWatch, Huawei GT2, Samsung Gear S3.

**Perceived Benefit**—functional benefits of smart watch such as usefulness and ease of use and emotional benefits such as individual's assessment of the value or efficacy of engaging.

**Consumer's lifestyle (AIOs)** – a patterns of behaviors that measure how individuals live in Kunming city and describe their attitudes and behaviors with respect to smart watches (Hawkins, Best, and Coney 2001).

**Purchasing Behavior** – is defines as citizens in Kunming purchasing behavior based on select elements of the 6W 1H concept: selection of brands, time of purchase, process of decision, purpose of purchase, channel of information, place of purchase and budget expense.

To further understand the relationship between perceived benefits, consumer's lifestyle (AIOs) and purchasing behavior, the following relevant studies have been reviewed. Users with a higher level of perceived values (such as hedonic value and utilitarian value) will be more likely to develop satisfaction and purchase intention (Chunmei Gan and Weijun Wang, 2017). Social scientists and marketers worldwide (Chu and Lee, 1999, 2007) pointed out that the most important information for predicting shopping behavior (online and offline) is a measure of consumer lifestyle, not demographics. In other words, in order to effectively investigate the purchasing behavior of consumers, this survey should understand the lifestyle of consumers.

Kotler (2006) identified consumer behavior as, “the buying behavior of final consumer-individuals and households who buy goods and services for personal consumption.” In addition, modern academic literature says that consumer behavior is “being concerned primarily with human behavior, in naturally occurring settings, subject to marketing influence” (Foxall & Sigurdsson, 2013).

## **Methodology**

The research is a survey research design that uses a self-administrative questionnaire to collect data from respondents. The research adopted quota and convenience sampling method by using online questionnaire to collect data. The

respondents live in Kunming, People's Republic of China. Convenience sampling was used for this study because the respondents are selected to be in the right place at the right time and least time consuming compared to other sampling techniques. Due to the number of population is unknown, the researcher use Taro Yamane table to calculate by the approximately sample size for this study (Poldongnok 2009). The sample size is calculated based on 95% confidence level and 5% sampling error. However, this study collected data from 384 samples due to the limitation in terms of only 4 months study period for the independent study course, the researcher was allowed to collect 384 samples. Due to the limitation, in terms of only 4 months study period for the independent study course, the researcher was allowed to collect 100 samples.

Data has performed normal distribution with  $-1 < \text{Skewness} < 1$  and  $-2 < \text{Kurtosis} < 2$  (Tabachnick & Fidell, 2007). Data was analyzed using descriptive statistic to describe variables by mean, frequency standard deviation and percentage. Chi-Square was used to delimit the relationships between perceived benefits and purchasing behavior of Chinese on smart watches in Kunming, PRC. Chi-Square was also used to find the relationships between consumer's lifestyle (AIOs) and purchasing behavior of Chinese on smart watches in Kunming, PRC at the confidence level of 95% or  $\alpha < 0.05$ .

## **Results and Discussion**

This study collected data from citizens in Kunming city PRC from 15 January–28 May 2019. Those citizens were from 4 districts including Panlong district, Wuhua district, Guandu district and Xishan district. Questionnaires were distributed to 109 respondents and 100 responds were received and all were used in data analysis (although 100 respondents are allowed), resulting the response rate of 91.74% was achieved.

In summary, the majority of respondents were male, aged between 18-35 years old, above educational level of bachelor degree. Most of them are students, freelancer, private employee and state enterprise employee with average monthly income of 4501-6000RMB.

The majority of respondents had considered that perceived benefit has an effect on their decision to purchase smart watches, nearly every respondents were able to perceive the benefits in both functional and emotional terms. Most of them usually think using smart watches is easy for themselves and wearing smart watches improve the happiness of their life.

The majority of respondents had considered that consumer lifestyle (AIOs) has an effect on their decision on purchasing smart watches, they pay more attention to the portability of smart watches and functions of smart watches. Most of consumers prefer to wear a smart watch when they play sports.

From report of purchasing behavior, this study showed that Apple and Huawei were the two most popular brands of smart watch; Most of the respondents would like to purchase a smart watch when the watch market has a new smart watch

launched. Most respondents make decision by themselves and to meet their curiosities when purchasing a smart watch. The majority of the respondents tended to get information about smart watch from internet. Most of respondents tended to buy their own smart watches from online channel such as Lazada and Taobao, there were also almost the same number of respondents willing to buy smart watches in physical stores. However, few respondents were willing to choose communication providers. In terms of budget, respondents were almost evenly distributed in four price ranges including below 1000 RMB, 1001-2000RMB, 2001-3000RMB and more than 3001 RMB, and respondents who accept low and medium prices did have a little more.

This leads to development of conceptual framework of the study and the following hypothesis:

H1\*: Perceived benefits will have influence on smart watch's purchasing behavior of Kunming Chinese customer.

H2\*: Consumer's Lifestyle (AIOs) will have influence on smart watch's purchasing behavior of Kunming Chinese customer.

Note:\* Partial support at significant level of 0.05.

**Table 1** Result of Hypothesis 1: Relationship between Perceived Benefits and smart watch's Purchasing Behavior of Kunming Chinese customer

<b>Purchasing Behavior</b>	<b>R<sup>2</sup></b>	<b>Sig</b>
Selection of Brands	0.056	0.583
Time of Purchase	-0.084	0.406
Participation of Decision	0.074	0.462
Purpose of Purchase	-0.329	0.001*
Channel of Information	0.008	0.913
Place of Purchase	-0.084	0.406
Budget Expense	0.244	0.015*

Table 1 Showed that Perceived Benefits were found having particular significant relationship with purpose of purchase and budget expense, but selection of brands, time of purchase, participation of decision, channel of information and place of purchase. (P< 0.05)

**Table 2** Result of Hypothesis 2: Relationship between Consumer's Lifestyle (AIOs) and smart watch's Purchasing Behavior of Kunming Chinese customer

<b>Purchasing Behavior</b>	<b>R<sup>2</sup></b>	<b>Sig</b>
Selection of Brands	0.006	0.955
Time of Purchase	-0.052	0.608
Participation of Decision	0.082	0.416
Purpose of Purchase	-0.399	0.001*
Channel of Information	-0.012	0.864
Place of Purchase	-0.070	0.491
Budget Expense	0.206	0.040*

Table 2 Showed that Consumer's lifestyle (AIOs) was found having particular significant relationship with purpose of purchase and budget expense but selection of brands, time of purchase, participation of decision, channel of information and place of purchase ( $P < 0.05$ )

#### **Perceived Benefits and Purchasing Behavior (Purpose of Purchase)**

The study was found that perceived benefits were found having a partial significant relationship with purpose of purchase for smart watches ( $R = -0.399$ ,  $P < 0.05$ ). Respondents who were able to feel those benefits tended to purchase a smart watch for meeting the daily needs such as an access to health information, improvement on task completing, increasing efficiency of activities e.g. sports, strengthening time management as well as for meeting their emotional needs such as enjoyment, sense of security, sense of relaxation, sense of happiness. On the other hand, most respondents were able to recognize ease to use tended to try new version of smart watch without promotion in market.

#### **Perceived Benefits and Purchasing Behavior (Budget Expense)**

The founding showed perceived benefits were found having a partial significant relationship with budget of expense on smart watches ( $R = 0.244$ ,  $P < 0.05$ ). Sense of relaxation was influence budget expense of respondents, the founding suggested that more than 43.8% respondents who were willing to pay more than 3001 RMB to purchase a smart watch when they feel relaxed by using a smart watch.

#### **Consumer's Lifestyle (AIOs) and Purchasing Behavior (Purpose of Purchase)**

Researcher found that consumer's lifestyle (AIOs) was found having a partial significant relationship with purpose of purchase ( $R = -0.399$ ,  $P < 0.05$ ). Most respondents who preferred to wear a smart watch in scene of work, study, shopping, social interaction and leisure time owned their smart watch for fulfill needs. However, respondents who had no ideal about what scene they would like to wear a smart watch always buy it for meeting their own curiosities. Citizens who thought smart watches will contribute to social image, educational success and improve their health condition tended to purchase a smart watch for fulfill needs.

### **Consumer's Lifestyle (AIOs) and Purchasing Behavior (Budget Expense)**

The founding showed that consumer's lifestyle (AIOs) was found having a partial significant relationship with budget of expense on smart watches ( $R=0.206$ ,  $P<0.05$ ). Respondents who paid attention to design style, function, brand and government statistical investigation were more likely to purchase smart watches with high price (more than 3001 RMB).

### **Implications of the Study**

1. Based on the study, the majority of the respondents were male, aged between 18 to 35 years old, graduated with bachelor's degree and with average monthly income of RMB 4501-6000. This results showed that Kunming's citizens from 4 districts are young to mid age population with bachelor's degree and medium income. Thus, to gain more customers from this region is to target young and mid age population who graduated with bachelor's degree.

2. The research suggested that customer's purchase purpose is driven not only functional perceived benefits but also emotional benefits such as enjoyment, sense of security, sense of relaxation, sense of happiness. Thus, to extend market share in smart watch is to create needs in both aspects of functional and emotional in Kunming.

3. The study showed that curiosity is a factor to promote customer's purchasing behavior due to the fact that most respondents tended to purchase a smart watch just because they were curious and want to try. In addition, nearly every respondents were waiting for new products launched in the market. Thus, to keep occupying a certain market share is to continuously differentiate products for smart watch industry in Kunming.

4. The research showed that the majority of respondents get the information from internet. Thus, internet information channel and online purchase channel are the key to running a IMC campaign in Kunming.

5. The study indicated that respondents could accept high price when a smart watch's value is obvious, especially with value of relaxation, design style, function, brand and government investigation. On the other hand, the cheapest one in smart watch market was also competitive, research showed that respondents tended to choose a smart watch with a price advantage when they are not particularly aware of perceived benefits of smart watches and they own lifestyle. Thus, high price with comprehensive functionality and low price with product diversity could be a reference of price strategy for market manager in Kunming.

6. According to the study, wearing a smart watch in some life scenes such as work, study, shopping, social interaction and leisure time would be a market demand. Besides that, improving social image, educational success and management of health condition have positive influence on purchase behavior. Thus, product promotion of smart watch could start from the life, social, education and medical care of citizens in Kunming.



To draw a conclusion, this study might benefit smart watch market, local smart watch companies as well as people related to smart watch industries in Kunming city. They can be served as guidelines to improve their marketing strategies to better capture the rapid changes in the smart watch market in Kunming city PRC.

### **Limitations and Recommendation for Future Study**

There are few limitations in which the researcher encountered throughout the processes of research conduction. The limitation of the study still leaves room for future study in the following areas:

1. This study collected data from 100 respondents in only 4 districts including Panlong district, Wuhua district, Guandu district and Xishan district. In order to have better and more reliable result, the data collection for future studies should cover all 7 districts with larger sample size from each district.

2. Future studies may identify particular demand, different perceived benefits and more diverse lifestyle on smart watch from larger sample size in order to seek the deeper factors affecting customer's decision on particular aspects. It will be good for local organization to develop its marketing strategies.

3. Future studies may explore others factors influencing purchasing behavior of Kunming's citizens such as Marketing Mix and another information channel such as live broadcast.

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