

## The willingness to pay and the attributes preferences on hotel choice decisions

### ความเต็มใจที่จะจ่ายเงินและคุณลักษณะที่เป็นที่ชื่นชอบของการตัดสินใจเลือกเข้าพักในโรงแรม

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#### Abstract

The fast-growing number of small and medium size hotels in Thailand leads to a fierce competition in hotel industry. Old strategies such as price cutting may be obsolete. Business should identify niche customers by targeting the right market and employ some limited resources with corresponding strategies. Thus, this paper aims to examine the preferred attributes on hotel choice decisions for Thai baby boomer travelers. Researchers applied the conjoint analysis technique to explore how qualified respondents perceive the relative importance of cleanliness, monetary value, sleep quality, location, facilities, and amenities quality in the selection of small and medium hotels under the operation of Small and Medium Enterprises (SMEs) entrepreneurs. Despite the complication in collecting the samples of the technique, an innovative board game is created correspondingly to simplify the process and to visually mimic the trade-off situation in a process of consumer's evaluation. The findings suggest that application of the most preference profile card: (1) Clean bedding, (2) Free Breakfast, (3) Adjustable temperature, (4) Green surroundings, and (5) Fast-heated water heaters should be put in priority in regard to the willingness to pay. There are 3 groups of respondents: (1) Female Traveling with family (2) Male Traveling with family (3) Female

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Traveling with friends. In the next research SMEs hotel entrepreneurs targeting baby boomer travelers could adjust the attributes to the outcomes accordingly in order to be competitive.

**Keywords:** 1. Conjoint Analysis 2. Willingness to pay 3. Segmentation 4. Baby Boomers 5. Board game 6. Hotel Business 7. SMEs

## 1. Introduction

A hotel industry is an industry significantly related to various industries in the country such as tourist industry, transportation industry, or even the food and beverage industry (Palinfar, 2017). The survey found that in Thailand, there are hotels nationwide-- 12,465 hotels approximately in total. The number of hotel rooms is 481,529 rooms and the number of people staying in hotels, resorts and guest houses in 2016 is 117.8 million. Moreover, the problems and obstacles from the competitiveness in the business have increased as well (NSO, 2016). Based on this data, it is likely that tourism will be promoted, but what is inevitable is the competitiveness of the hotel businesses as it can be noted by the rise of hotel business operators. As a result, the growth of hotels in other important provinces is likely to be higher. This has caused an intense competition in the medium and small hotel businesses which promote their economical room rates and exotic new experience for the businessman guests. Although the growth of small and medium hotels in small and medium Enterprises (SMEs) varies depending on the number of tourists, the majority of the guests focus on the worthiness of their traveling budget spent on the hotels instead of the lowest price and the experience. Big hotel business enterprises realize this opportunity and decide to be a competitor as well in the same market, which results in dramatically high competition in room rates and service pricing and the room rates up-pricing is difficult. Furthermore, the increase in illegal hotels and other substitute resting places is rising continuously. This creates high supply in hotel rooms, which is not compatible with the demand in the market. As a result, the small hotel businesses will face more serious problems and challenges which are potentially inevitable if they still compete with pricing as usual. Small hotel businesses revert to focus on serving a particular group of customers to stay out of their comfort zone. High competition in this business and intimidating competitors force small hotel enterprises to urgently provide appropriate renovation of their business administration and marketing. One of the strategies to handle the dramatically high competition is to focus on niche market in order to do business with deeply and truly customers understanding (Porter, M. E., 1980). This research aims to study the attribute preference on hotels creating the willingness to pay among the baby

boomers and segmentation. Results from this study will shed the light to real estate and hotel developers the development or the design of the hotels which serve the need of the baby boomers.

## 2. Literature Review

### 2.1 Willingness to pay (WTP)

Willingness to pay (WTP) refers to the need of consumers. When consumers want to buy products or services and their demand in those products or services is so high, however, they spend their money or time without reluctance in order just to feed their needs. Two interview techniques applied in gaining the WTP are Contingent Valuation (CV) and Conjoint Analysis (CA).

### 2.2 Conjoint analysis (CA)

CA is a technique to search for the inclination to like in various attributes of products and services with features exchange by choosing one thing and giving up the other thing (Complex Trade-offs). Then is to bring the selected attributes to be combined, calculated and ranked for the preference order. Next is to bring them to an analysis for the inclination to like in products and services. Basically, the idea of CA starts from a statistician and a psychologist (Luce and Tukey) in 1964. Since then CA has been used for analyzing the customers' inclination to like. CA helps in making decision on which products and services are the most important and mostly affect the customers' preference (Green & Srinivasan, 1978). CA comes from Conjoint Measurement (CM) which is a preference or inclination to like for product features. There is a separate feature set attribute with a level assigned for each attribute and a data accuracy test for precision and an analysis with Multiple Regression Analysis (MRA). The Analysis of Variance (ANOVA) may be used in some research.

CA is a powerful technique in consideration of consumer choice (Ding, Geschke, Lewis 1991; Huertas-Garcia, Laguna García & Consolación, 2012). CA can also be used as a supporting tool in real estate selection (Marmolejo-Duarte & Ruiz-Lineros, 2013). CA used in business study focusing on time saving will help clarify the attributes in detail (Verma and Chandra, 2017). Many research papers (Table 1) illustrated the study of WTP and CA method.

Table 1

CA and WTP method in the research paper

No.	Content	Author	CA	WTP
1	Consumer Behavior in Higher Education	Azarcon, Gallardo, Anacin and Velasco, 2014	x	
2	How hotel managers decide to discount room rates	Lee, 2016	x	
3	Analysis of perceptions of hotel attributes.	Wei, Ruys & Muller, 1999	x	
4	Effects of review attributes on hotel choice decisions:	Murphy & Chen, 2014	x	
5	Limit conjoint analysis and Vickrey auction	Sichtmann and Stingel, 2007	x	x
6	Determine women's preferences for ovarian stimulating hormones	Palumbo et al., 2011	x	x
7	Willing to pay for a higher level of service	Tse, 2001	x	x
8	Gen Y's attitudes and willingness to pay for green hotels	Tang & Lam, 2017	x	x

### 2.3 Baby boomers segmentation

After a dramatic loss in World War II, the birth rate had dropped significantly. Therefore, after the war, there was a policy to increase the number of population in the United States of America in order to restore the country. This finally resulted in the trend of having a lot of children at that time. That high birth rate resulted in over 72.5 million people in America, and this group of population is called Baby Boomers--a.k.a. Boomers, Me Generation, Baboo, Love Generation, Woodstock Generation, and Sandwich Generation. They were born during 1946 to 1964 (Figure 1) and currently age between 54 and 72 years old (Williams & Page, 2011) Most of the Baby Boomers do not want to stay at home, but they like to travel and to spend money and time on pursuing their dreams with their friends in the same age group. The Baby boomers travelling market greatly adds value to the tourism industry. (Eusébio, Carneiro, Kastenholz & Alvelos, 2015) The number of the Baby boomers travelers has increased continuously as they enjoy traveling and doing different activities. (Viergge, Phetkaew, Beldona, Lumsden & DeMicco, 2007) Segmentation is a marketing strategies with

different target consumption behaviors. The contents to consider in operating the segmentation is finding the likeness in each subgroup of which the size is big enough to study and which can afford the expense spending on products and services in order that they can be developed for them as a target group and the products and services can be marketed relatively based on the policy of each entrepreneur in order to precisely accommodate the needs of each subgroup (Dibb and Simkin, 2010)

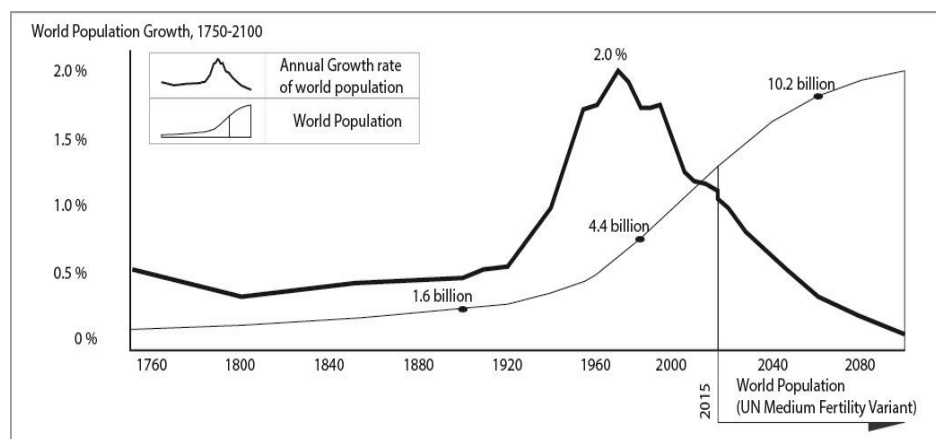


Figure 1 World Popular Growth 1750-2100 Modified from <https://ourworldindata.org/world-population-growth>

## 2.4 Hotel Attributes

Because in Thailand there are very few hotels particularly built for the Baby Boomers, the researchers have to do the research on the seniors' hotel preference and the preference in ordinary hotels for Hotel attributes and other levels to study are gathered from the summary of all attributes compiled from various pieces of research (Kim & Park, 2017; Kucukusta, 2017; Murphy & Chen, 2014; Callan & Bowman, 2000; Hsu & Lee, 2002; Huertas-Garcia, Laguna García & Consolación, 2012; Yang, Huang & Shen, 2017; Meltem & Tahir 2014; Vieregge, Phetkaew, Beldona, Lumsden & DeMicco, 2007; Lockyer, 2002; Verma and Chandra, 2017; Ananth, 1992) founded 9 important hotel attributes such as (1) Value (2) Service (3) Room (4) Sleep Quality (5) Location (6) Cleanliness (7) Overall Atmosphere (8) Review Rating (9) Social Activities (Table 2)

Table 2

Hotel Attribute/Factor in Researches

Attributes\Authors*	1	2	3	4	5	6	7	8	9	10	11	12
1. Value	x	x	x	x			x	x	x		x	x
2. Service	x			x			x	x	x	x	x	x
3. Room	x							x	x			x
4. Sleep Quality	x			x				x	x	x		x
5. Location	x	x		x			x	x	x	x	x	x
6. Cleanliness	x		x					x		x		x
7. Overall Atmosphere	x		x					x	x			x
8. Review Rating			x	x		x						
9. Social Activities					x			x	x			x

\*Note: numbers reference at table 3

Table 3

\*Author (Hotel Attribute/Factor)

No.	Author*	No.	Author*
1	Kim & Park, 2017	7	Yang, Huang & Shen, 2017
2	Kucukusta, 2017	8	Meltem & Tahir 2014
3	Murphy & Chen, 2014	9	Ananth, 1992
4	Callan & Bowman, 2000	10	Lockyer, 2002
5	Hsu & Lee, 2002	11	Verma and Chandra, 2017
6	Huertas-Garcia, Laguna García & Consolación, 2012	12	Vierregge, Phetkaew, Beldona, Lumsden & DeMicco, 2007

### 3. Methodology

#### 3.1 Population and Sample

The target population in this research are experienced tourists staying in a medium and small hotel (no more than 79 rooms / hotel) and operated by SMEs. The population was born between 1946 and 1964, aging 53 to 71 years old. Based on a research study using Conjoint Analysis, there should be at least 200 pieces of sample data collected to be appropriately studied with this technique. The sample group is selected with Purposive Sampling method.

### 3.2 Research Methodology

It can be divided into 9 main stages such as

Stage 1 Do a comprehensive research in Thailand and other countries then do a literature review to find the hotel attributes.

Stage 2 Bring the data from stage 1 to make an in-depth interview with 20 informants using qualitative data validation by Methodological Triangulation (MT). Then, analyze the data to seek for the attributes that are less important.

Stage 3 Bring the data from stage 2 to create a questionnaire and make an in-depth interview with another 20 informants by using MT. Then, analyze the data to get rid of other attributes and levels that are less important. This research uses only 5 attributes out of 9 extracted attributes. (Figure 2)

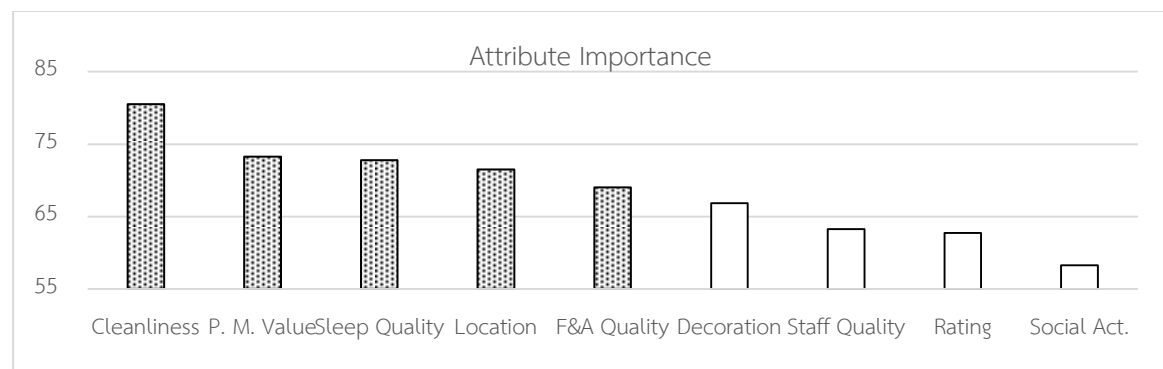


Figure 2 Attribute Importance

Stage 4 Bring all the data to create the Profile Card using the Orthogonal Design method of processing in SPSS Computer Program in order to get 16 profile cards.

Stage 5 Design the symbol set for each level on profile card with a graphic program and make it an innovative board game for researching (Figure 3)

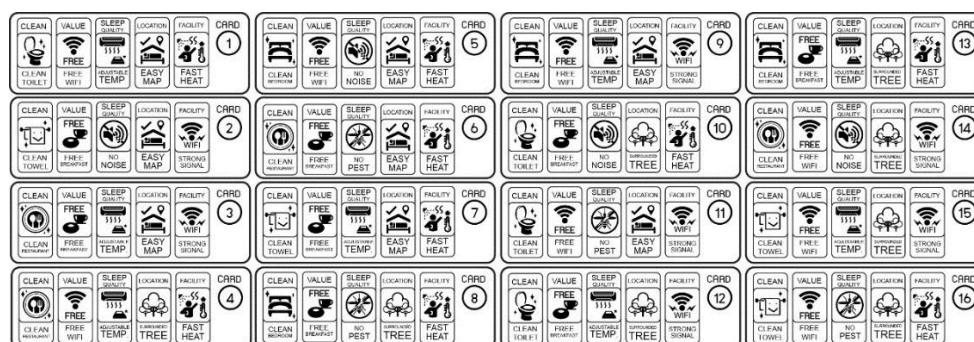


Figure 3 Board game profile card.

Stage 6 Administer the set of questionnaires among 218 respondents using Purposive Sampling. The respondents were asked to put in order the most preference profile cards (Ranking) and lay all the profile cards on the prepared board

Stage 7 bring the data from stage 6 to make a CA, WTP, Segmentation by SPSS and Microsoft Excel

Stage 8 Conclude the results of the study and discussion. Then, expand for the future research.

#### 4. Result

This research uses Nonprobability Sampling method which is a Purposive Sampling method or Judgmental Sampling method in which the researchers can select 218 sample people to answer to the questionnaires by an individual and a group interview. They will play a board game designed by the researchers and then, will do the questionnaires data analysis with SPSS (Statistical Package for Social Science) in order to find the Utility Score, perform Segmentation and search for the Willingness to Pay in choosing a medium or small hotel to stay. This can be divided into 6 parts as follows.

##### 4.1 Summary of the population data and other data of the sample group

The whole picture of the sample group shows that they are Thai tourists aging between 54 and 59 years old, which are the group of the early retiring ages. They are private business owners, company employees, or government officers who earn around 15,000 to 70,000 Baht monthly, and most of them are married. Mostly, they travel by their personal automobiles with their family.

##### 4.2 The analysis of the significance of each hotel attribute

The significance of each hotel attribute weights as follows: Cleanliness: 62.85 %, Perceived Monetary Value: 14.15 %, Sleep Quality: 8.62 %, Location: 7.04 %, Facilities & Amenities Quality: 7.34%.

##### 4.3 Conjoint utility model

The equation derived from the conjoint analysis technique is as follows.

$$Y = 8.472 - 2.508 C1 + 0.986 C2 + 3.865 C3 - 2.343 C4 - 0.759 V1 + 0.759 V2 + 0.114 S1 - 0.069 S2 - 0.045 S3 + 0.189 L1 - 0.189 L2 - 0.286 F1 + 0.286 F2$$

The meaning of the variables in the equations is as follows Y: Total Utility Score C1: Cleaned Towel C2: Cleaned Toilet C3: Clean Bedding C4: Clean Restaurants V1: Free WI-FI V2:



Free Breakfast S1: Adjustable Temperature S2: No Pest S3: No Noise L1: Green surroundings L2: Easy Map F1: Good WI-FI Signal F2: Fast-heated water heaters

#### 4.4 Profile card ranking, total utility score

The Rank Profile cards by total utility scores show that the Profile card no. receives the highest total utility scores and ranks at no. 1

Table 4 Profile card Ranking, Total utility Score

Profile card	Cons- tant	Cleanliness		Perceived Monetary Value		Sleep Quality		Location		Facilities & Amenities Quality		Total Utility Score	Rank
1	8.472	C <sub>2</sub>	0.986	V <sub>1</sub>	-0.759	S <sub>1</sub>	0.114	L <sub>2</sub>	-0.189	F <sub>2</sub>	0.286	8.910	7
2	8.472	C <sub>1</sub>	-2.508	V <sub>2</sub>	0.759	S <sub>3</sub>	-0.045	L <sub>2</sub>	-0.189	F <sub>1</sub>	-0.286	6.203	12
3	8.472	C <sub>4</sub>	-2.343	V <sub>2</sub>	0.759	S <sub>1</sub>	0.114	L <sub>2</sub>	-0.189	F <sub>1</sub>	-0.286	6.527	11
4	8.472	C <sub>4</sub>	-2.343	V <sub>1</sub>	-0.759	S <sub>1</sub>	0.114	L <sub>1</sub>	0.189	F <sub>2</sub>	0.286	5.959	13
5	8.472	C <sub>3</sub>	3.865	V <sub>1</sub>	-0.759	S <sub>3</sub>	-0.045	L <sub>2</sub>	-0.189	F <sub>2</sub>	0.286	11.630	3
6	8.472	C <sub>4</sub>	-2.343	V <sub>2</sub>	0.759	S <sub>2</sub>	-0.069	L <sub>2</sub>	-0.189	F <sub>2</sub>	0.286	6.916	10
7	8.472	C <sub>1</sub>	-2.508	V <sub>2</sub>	0.759	S <sub>1</sub>	0.114	L <sub>2</sub>	-0.189	F <sub>2</sub>	0.286	6.934	9
8	8.472	C <sub>3</sub>	3.865	V <sub>2</sub>	0.759	S <sub>2</sub>	-0.069	L <sub>1</sub>	0.189	F <sub>1</sub>	-0.286	12.930	2
9	8.472	C <sub>3</sub>	3.865	V <sub>1</sub>	-0.759	S <sub>1</sub>	0.114	L <sub>2</sub>	-0.189	F <sub>1</sub>	-0.286	11.217	4
10	8.472	C <sub>2</sub>	0.986	V <sub>2</sub>	0.759	S <sub>3</sub>	-0.045	L <sub>1</sub>	0.189	F <sub>2</sub>	0.286	10.647	5
11	8.472	C <sub>2</sub>	0.986	V <sub>1</sub>	-0.759	S <sub>2</sub>	-0.069	L <sub>2</sub>	-0.189	F <sub>1</sub>	-0.286	8.155	8
12	8.472	C <sub>2</sub>	0.986	V <sub>2</sub>	0.759	S <sub>1</sub>	0.114	L <sub>1</sub>	0.189	F <sub>1</sub>	-0.286	10.234	6
13	8.472	C <sub>3</sub>	3.865	V <sub>2</sub>	0.759	S <sub>1</sub>	0.114	L <sub>1</sub>	0.189	F <sub>2</sub>	0.286	13.685	1
14	8.472	C <sub>4</sub>	-2.343	V <sub>1</sub>	-0.759	S <sub>3</sub>	-0.045	L <sub>1</sub>	0.189	F <sub>1</sub>	-0.286	5.228	15
15	8.472	C <sub>1</sub>	-2.508	V <sub>1</sub>	-0.759	S <sub>1</sub>	0.114	L <sub>1</sub>	0.189	F <sub>1</sub>	-0.286	5.222	16
16	8.472	C <sub>1</sub>	-2.508	V <sub>1</sub>	-0.759	S <sub>2</sub>	-0.069	L <sub>1</sub>	0.189	F <sub>2</sub>	0.286	5.611	14

#### 4.5 Willingness to pay

The result of the data analysis for the willingness to pay for the hotel selection in which the sample group gives scores to each set of the profile cards shows that the Profile card no. 13 receive the highest scores for the willingness to pay, which is 4.60 out of 5.00 points (Figure 5)

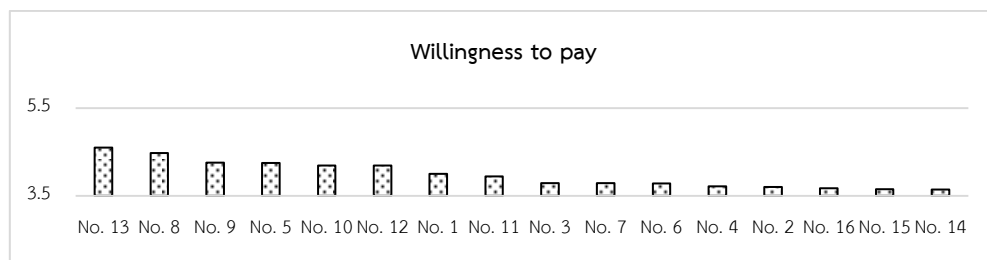


Figure 5 Willingness to pay for each Profile card

#### 4.6 Summary of the questionnaire respondents' segmentation

The main purpose in sample group segmentation with Cluster Analysis method is to downsize the data by preventing the loss of significant data. The researcher makes a data cluster with SPSS and uses K-Mean Cluster method.

With Segmentation, the data can be clustered as follows

(1) Group 1: A female group traveling with family: the population data are as follows: female, aging from 57 to 59 years old, graduated with a bachelor degree, retired, no income, married, traveling by private automobiles with family.

(2) Group 2: A male group traveling with family: the population data are as follows: male, aging from 54 to 56 years old, graduated with a bachelor degree, self-employed, earning from 45,001 to 70,000 Baht per month, married, traveling by private automobiles with family.

(3) Group 3: A single female group traveling with friends: the population data are as follows: female, aging from 54 to 56 years old, graduated with a bachelor degree, working as a company employee or a government officer, earning lower than 15,000 Baht per month, single, traveling by plane and then, rental automobiles with friends.

## 5. Conclusion

### 5.1 Research Conclusion

Data compilation and analysis with SPSS program shows that the population of the questionnaires correspondents is the married early retire individuals who are self-employed or an employee of an organization and they like to travel with family by their private automobiles. The highest utility score of 13th Profile card is 13.685, and the highest total utility scores is the Clean Bedding, scoring at 3.865 points. The profile card which receives the highest Willingness to pay scores is also the 13th Profile Card which earns 4.60 points out of 5.00 points. The segmentation can divide the target groups into 3 groups. Each group has slightly different scores for each level. (Figure 6)

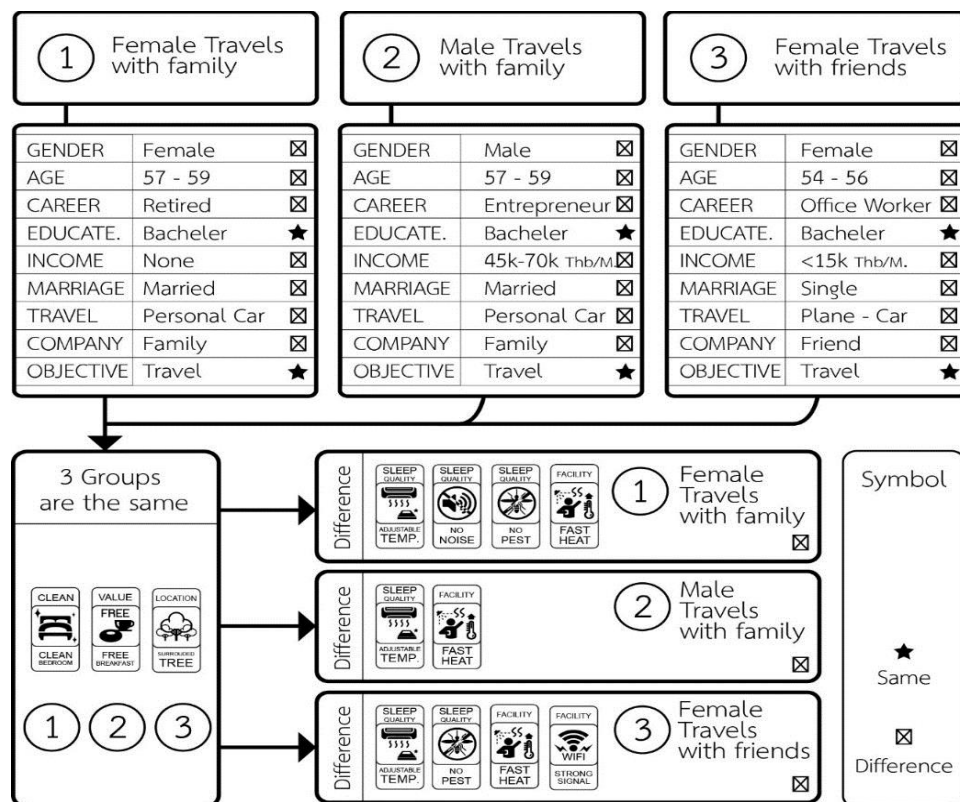


Figure 6 Segmentation and each group's Preferences attributes

## 5.2 Research findings discussion

The data analysis shows that cleanliness is the most preferred attribute for the sample group in selecting a medium or small hotel to stay. It receives the highest scores which is 4 times much more than that given to the 2nd rank which is Perceived Monetary Value. The preference in cleanliness conforms to the research of Kim & Park (2017), Callan & Bowman (2000), Yang, Huang & Shen (2017), Meltem & Tahir (2014), Vieregge, Phetkaew, Beldona, Lumsden & DeMicco (2007) Ananth (1992)

The Conjoint Analysis model which appears after the analysis shows the conformation of each attribute level from the literature reviews and the in-depth interviews of the sample groups and the data collected from the group questionnaires. The result shows that all of the three groups share the same preference in the highly significant attributes and have slightly different preference in the less significant attributes

(1) Product: The hotel must focus on the cleanliness. Especially, the extremely clean bedding has to be necessarily and effectively managed and provided by the hotel business entrepreneurs. The air conditioners in the hotel rooms should be adjustable in

accordance with the need of the guest. A pest control system such as a mosquito wire screen must be effectively installed. A termite's prevention system must be operated, and the heating speed of the water heating system must consume less time. Finally, the investment in the above Building equipment must be qualified.

(2) Promotions: A discount strategy should be eliminated from sales promotion strategies. Instead, special service and products providing is likely to be preferred by the hotel guests, for example, free room type upgrading.

(3) Service: Free breakfast is provided, but there is no need to provide the restaurant because the target customers usually party with their friends or family in a restaurant outside of the hotel. If the hotel aims to serve the guests who come to stay with their friends, excellent internet Wi-Fi is necessary.

(4) Design Management: To apply the levels in designing a building which has an adequate area, the designer may have to invest in designing the green areas with trees. However, in case the hotel is an old building or a building with a limited area, the green environment can be added by using trees in pots which can be placed in different spots of the hotel. The sophisticated design of the building does not significantly affect the hotel preference of the guests. This means if some hotel entrepreneurs are willing to create a uniqueness of their hotels.

In sum, baby boomer tourists prefer and are willing to pay for hotels which emphasize the cleanliness of bedding, free breakfast and building design with green area.

### 5.3 Management Implications

This research shows that designing a data collecting tool in a form of a board game can make it easy for the correspondents Management Implications to understand and to answer to the questionnaires. This method, however, is not practical in an online survey. The benefit of this method can be used to develop other research tools in the future. The entrepreneurs can use the findings in this research study to develop their hotels, both those they are running or those that are new medium and small hotels they are about to invest, in order to create the hotel attributes which are preferred by the target group.

### 5.4 The research suggestion

The research suggests that an online application tools providing online questionnaires which are easy to use like an online game should be brought to a consideration in the future, or the study with Big Data and the assessment with the Artificial Intelligence: AI

together with a Hologram technology should be brought into a consideration in the future as well.

This study reflects that the attribute ranking aligns to the highest score of willingness to pay (card 13) because the respondents understand how to respond to the designed game board.

#### 5.5 The research limitation

The researcher did the test with the sample groups in a public park, public transportation terminals and other public places, but the test has never been done with the seniors in a nursing home or other places where the seniors usually gather, so this might result in the incomplete data.

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