

## PREFERENCES FOR DETACHED HOUSE: DINKS PERSPECTIVE

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### ABSTRACT

*Despite the political unrest, the prolonged improvement of Thailand economy has shaped most people's lives, especially in the urban area. In accordance with the continuously expansion of infrastructure, it draws the concentration of population towards living in the city where all the facilities, variety of services and conveniences benefit their living. Married people's attitudes are changing in a way that enjoys couple life with no child and more leisure time. Housing developers should put more attention to this segment called Dual Income No Kids or DINKs.*

*Important features of detached home for DINKs should be different from those of couples with children. Final attributes derived from letting participants rate 1-10 score to each provided attributes based on their preferences. Then the top four attributes with the highest rating score were chosen. Then the conjoint analysis is used for statistical calculation.*

*Results indicated that the DINKs had higher utility for driving time between home and office followed by distance between home and shopping center, reputation of home developer and total utility space in home respectively.*

**Keywords:** Conjoint analysis, Bangkok, DINKs, Real Estate, Lifestyle, Detached house preference

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### INTRODUCTION

Real estate sector plays an important role in Thailand. The number of home purchases has been up to 7 times of Thai's GDP in 2005 and still rising up significantly every year (Thaiappraisal 2007). Bangkok and peripheral provinces are the most wanted areas, accounting for 27 percent of all housing purchased (around 12 trillion Thai Baht).

As lifestyle of the 21<sup>st</sup> century has changed not only due to the social circumstances, but also rapid changes of overall social environment, the influences of city-oriented lifestyle have affected the consumption patterns as shown in the statistical information of Bangkok's housing projects launched in the market during the first quarter of year 2010.

Owing to changing structure of Thai population, with declining birth rate of children proportion of aged people is increasing (NSO 2009). This implies that people tend to have fewer babies than in the past and some do not even want to have a baby at all. Thornton (1977) had studied the attitude of this group and found that the couple that has fewer babies has fewer problems and less stress than other couple. This group is often the target of marketing efforts for selling luxury items such as expensive cars and vacations. Moreover, they have higher spending power in luxury goods and services. This couple is called Double-Dual Income No Kids or DINKs (Cooper 2003), Childless spouse (Peterson 1983) or Childlessness (Persson 2010).

Since real estate developers have targeted DINKs group we, as researchers, have investigated their habits and lifestyle that affect the styles and components of their housing purchase. The developers try to find the black box or a model that explains tastes and desires of DINKs to understand and to make the maximum utility for them (Kauko 2006).

The satisfaction toward detached house can be described in three major factors, which are "physical housing characteristics", "neighborhood" and "developers' characteristics". First factor is physical housing characteristics that explain the characters, appearances, and components combined to be a house. There are both tangible and intangible characteristics of house (Pasha 1996, Molin 1997, Greene 2002, Malkawi 2003, ÆRØ 2006, and Cho 2008). Second is neighborhood which includes the important places or organizations surrounding the house and distance between important place and the house such as distance from home to school to work office (Greene 2002, Kim 2005, and Cho 2010). The third factor is the developers' characteristics that mean the characters of companies or businesses, which make the building for selling or renting.

The aim for this research is to identify DINKs' preferences in order to enable a better overview of detached house choice behavior. These following factors, namely, physical housing characteristics, neighborhood and developers' characteristics, are the basic factors for detached house preferences; however, this research tries to analyze other factors that may affect the preference of detached house choice for the particular target group, DINKs. The factors' utilities were analyzed by conjoint analysis method and the importance of each attribute for the buyer's purchase decision was determined. The objectives of this research are as followings:

- To understand the behavior of DINKs for detached house choice behavior

- To study factors that will have influences on DINKs preferences and lifestyles that affect the choice for detached house
- To find the combinations of attributes which meet with DINKs preferences
- To determine the extent to which physical housing characteristics, neighborhood and developer affect changing patterns in living and well being, to recommend potential strategies to improve the delivery of outcome products.

**RESEARCH METHODOLOGY**

**FRAMEWORK**

The analysis method used in this research is conjoint analysis. Because of the complexity of the conjoint method, there are various approaches to gather data as well as to analyze the data available to a researcher. In order to construct the appropriate framework, the main conjoint analysis phases are pointed out together with the most commonly used alternative approaches.

1. Collecting attributes to be investigated from literature review
2. Choosing attributes by scoring give rating scales ranging from 1 to 10
3. Eliminating the attribute that has multi collinearity to other attributes
4. Composing the concept cards (in full-concept approach): either all possible combinations or certain choice among them
5. Gathering data from respondents by using questionnaire
6. Formulating a utility equation

**Table 1: Factors and Attributes**

Major Factor	Attribute
Housing characteristics	Price, Age, Land size, Number of room, Number of toilet
	Utility space, Dining Area, Garden, Number of story,
	Number of car parking lot, House style, House material
Neighborhood	Location, Traffic density, Distance from home to Work,
	to Shopping center and to Market place, Safety of area,
	Near to mass-transit train network
Developers' characteristics	Brand, After sale service

The initial attributes derived from the preliminary interview and literature review are selected just only the first four most important attributes to be analyzed with the conjoint model. The total four attributes used to form product profiles are total utility space, driving time between home and office, distance between home and shopping center and reputation of home developer. All attributes are consisted of two levels each (2x2x2x2=16 combinations).

**Table 2: Attributes and levels used in this study**

Attribute	Level
Utility Space	120-150 square meter
	151-175 square meter
Driving time between home and office	less than 1 hour
	1-1.5 hour
Distance between home and shopping center	close to shopping center
	not close to shopping center
Reputation of home developer	concern
	not concern

**SAMPLE**

Population of this study is DINKs aged between 22-59 years old, living in Bangkok, have salary or business owners. Sample size to represent the population is 80 samples.

**THE METHODOLOGY AND MODEL**

This study uses conjoint analysis to examine preferences as below

- Data collection method: full-profile conjoint analysis is selected since this method is suitable for the study with less than six attributes. This method can offer a big picture to the respondents better than other method.
- Stimulus set construction: all possible profiles are 16, which can reduce to the minimum number of eight and four hold out case by using orthogonal design.
- Stimulus presentation: description is used to present all 12 combinations in order to be easy to understand.
- Measurement scale for dependent variable: respondents are asked to give rating score for their preference on a 10-point scale, ranging from 1 the least satisfied to 10 the most satisfied

To identify DINKs for this research, the demographic information of each respondent is from the questionnaire.

**RESEARCH RESULTS**

**DEMOGRAPHIC DATA**

Most respondents are 30 to 39 years old (77.5 percent of all respondent) and this group is mostly educated over master’s degree (61.3 percent of all respondent) and has high income over 90,000 Baht per month per household (57.5 percent of all respondent). Also the most of DINKs respondent live in detached house (53.75 percent of all respondent).

**CONJOINT ANALYSIS**

The combinations of all four attributes which stimulate orthogonal design are shown in Table 3

**Table 3: Stimulus all combination card by orthogonal design**

Card ID	Utility space	Driving time	Distance to Shopping Center	Developer Reputation
1	151 - 175 sq.m.	< 1 hour	Far	Not concern
2	151 - 175 sq.m.	1 - 1.5 hour	Near	Concern
3	120 - 150 sq.m.	< 1 hour	Near	Not concern
4	120 - 150 sq.m.	1 - 1.5 hour	Far	Not concern
5	120 - 150 sq.m.	1 - 1.5 hour	Far	Concern
6	120 - 150 sq.m.	< 1 hour	Near	Concern
7	151 - 175 sq.m.	< 1 hour	Far	Concern
8	151 - 175 sq.m.	1 - 1.5 hour	Near	Not concern
9 <sup>a</sup>	120 - 150 sq.m.	1 - 1.5 hour	Near	Concern
10 <sup>a</sup>	120 - 150 sq.m.	1 - 1.5 hour	Near	Not concern
11 <sup>a</sup>	151 - 175 sq.m.	< 1 hour	Near	Not concern
12 <sup>a</sup>	151 - 175 sq.m.	< 1 hour	Near	Concern

a. = Hold out case

Results from running conjoint analysis with the importance values and utility estimated values for each level are shown in Table 4

**Table 4: Result from Conjoint analysis**

Attribute	Importance Values	Level	Utility estimate
Utility Space	18.923	120 - 150 sq.m.	-0.075
		151 - 175 sq.m.	0.075
Driving time	33.431	< 1 hour	0.900
		1 - 1.5 hour	-0.900
Distance to Shopping Center	26.889	Near	0.731
		Far	-0.731
Developer Reputation	20.756	Concern	0.556
		Not concern	-0.556
Constant			5.969

The importance values determine the DINKs preference in single detached house located in Bangkok and peripheral province. These attributes “Driving time between home and office” (importance values 33.431 percent), “Distance between home and

shopping center” (importance values 26.889 percent), “Reputation of home developer” (importance values 20.756 percent) and “Utility Space” (importance values 18.923 percent). For the utility estimate values, greater value means more preference to that attribute level. Refer to utility estimated values of utility space attribute; area ranged 151-175 square meters has higher preference than one with 120-150 square meters. This implies that larger area is more preferred to smaller area. For “Driving time between home and office” attribute, the level of less than 1 hour is more preferred than one with 1-1.5 hour level. For the preferences in distance between home and shopping center, the closer location to the shopping center is more preferable. For Reputation of home developer attribute, reputation is regarded as more preferred to without developer reputation.

After analyzing the data with conjoint analysis, the mathematical expression of the model is as follow:

$$U(X) = 5.969 + 0.900 (\text{time1}) - 0.900 (\text{time2}) + 0.731 (\text{shop1}) - 0.731 (\text{shop2}) + 0.556 (\text{developer1}) - 0.556 (\text{developer2}) + 0.075 (\text{space1}) - 0.075 (\text{space2})$$

Where as U(X)	=	Total Utility
time1	=	Driving time between home and office less than 1 hour
time2	=	Driving time between home and office 1-1.5 hour
shop1	=	Near to shopping center
shop2	=	Far from shopping center
reputation1	=	Concern to reputation of home developer
reputation2	=	Not concern to reputation of home developer
space1	=	Utility space of 120 - 150 sq.m.
space2	=	Utility space of 151 - 175 sq.m.

The attributes ranked according to the importance values are shown in Table 5.

**Table 5: Utility score and rank**

Card	Constant	Time	Shop	Developer	Space	Utility score	Rank
1	5.75	0.834	-0.703	-0.556	-0.075	5.250	8
2	5.75	-0.834	0.703	0.556	-0.075	6.100	7
3	5.75	0.834	0.703	-0.556	0.075	6.806	3
4	5.75	-0.834	-0.703	-0.556	0.075	3.732	12
5	5.75	-0.834	-0.703	0.556	0.075	4.844	11
6	5.75	0.834	0.703	0.556	0.075	7.918	1
7	5.75	0.834	-0.703	0.556	-0.075	6.362	5
8	5.75	-0.834	0.703	-0.556	-0.075	4.988	10
9	5.75	-0.834	0.703	0.556	0.075	6.250	6
10	5.75	-0.834	0.703	-0.556	0.075	5.138	9
11	5.75	0.834	0.703	-0.556	-0.075	6.656	4
12	5.75	0.834	0.703	0.556	-0.075	7.768	2

Table 5 shows all the ranks of utility scores, which can imply that the worst rank is card number 4 (score is 3.732) that has positive score only in developer reputation and utility space. The best score of the card is number 6 which all utility estimate value is positive with total score of 7.918.

**SUMMARY AND CONCLUSIONS**

This research found that the most important attribute is “Driving time between home and office”. This means DINKs are still in the working age and need to go to work everyday, thus, the distance from home to office is the most important. From the depth interview, this attribute (driving time) is related to the other attribute (the distance) because the area with high traffic jam will cause higher driving time, these two attributes are inversely related. The next important attribute is “Distance between home and shopping center” which fulfilled the DINKs lifestyle. From the depth interview, this attribute is important to DINKs because the attitude to the luxury goods and services can be fulfilled with good responded in the shopping center. The attribute “utility space” from Table 5 explains that DINKs’ couples has no kid but the utility space area is still important to this group because the couple need his/her own personal area to use for other function that can be flexible in the future use. Reputation of home developer is one of the attributes which is also important for DINKs’ group when they want to buy a house. Moreover, in depth interview shows that this attribute is one of an important attribute to concern for house buyer especially for DINKs. Also depth interview told us that in the 21 century, the Internet can easily reach the reputation of developer, thus, the new comers (developers) who have good reputation can be touched by the buyers.

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