Factors affecting on the Apartment purchase decision of officers in Small and Medium - sized enterprises in Ho Chi Minh City

Le Thanh Tung^{1,*}, Huynh Cam Hanh¹, Nguyen Thi Thu Nga¹, Nguyen Hieu Nghia¹

¹Faculty of Business Administration, Ton Duc Thang University, HCMC, Vietnam

*Corresponding author: lethanhtung@tdt.edu.vn

Abstract

In recent years, demand for housing has increased in Ho Chi Minh City (HCMC) despite of apartment market's falling into the freeze. Besides, apartment's price has continuously dropped, but the situation has not improved much. Do not the real estate companies really understand the need of buyers ? This paper researches factors affecting the decision to purchase apartment of officers in Small and Medium-sized enterprises (SMEs) in HCMC. We surveyed 321 buyers, using Cronbach's Alpha Scale testing method, Exploratory Factor Analysis method and multivariate regression methodology. The results indicated that the decision to buy an apartment of officers was affected by three important factors which are habitat environment, characteristics and finance respectively. From the research results, this paper also proposes some solutions to bring the supply and the demand of apartment in HCMC closer together, thereby contributing to solve difficulties for market.

Keywords: purchase decision, apartment, real estate market, HCMC

1. INTRODUCTION

After the period of overheating development, real estate market has fell back into stagnation and transactions have dropped sharply across all market segments in the area of Ho Chi Minh City since 2008. Therefore, the backlog of real estate properties is getting much more, especially apartments. At the end of 2013, according to preliminary data from the Ho Chi Minh City Real Estate Association, the number of apartments completed but not yet sold was 10,053 apartments. To overcome this difficulty, many projects have been discounted of up 20%-30% by investors, even 50% discount projects compared to the period of overheating growth. Besides, the investors also have strengthened the marketing and performed the

additional forms of sales promotion such as customer acceptance for installment plan up to 70% of the apartment for 20 years, loan interest support, giving furniture when buying apartment... Although there is a positive change, the overall market remains gloomy and the situation of consuming apartments is very slow.

Paradoxically, although an amount of apartments are highly in stock, the demand of housing continues to increase sharply due to the pressures of population growth. According to estimates of the Ho Chi Minh City Real Estate Association, the number of apartments compared with actual demand is deficient about 100.000 apartments. Thus, the result occurs because the apartments did not meet with the requirements of the customer. Besides, the real estate companies do not have full and accurate information about the customer's needs when conducting the projects.

Since then, the goal of the article is to analyze the quantitative impact of the factors affecting the decision to purchase apartment of officers in SMEs in the area of Ho Chi Minh City. Since officers is one of the potential customer groups of the condominium projects, the factors impacting the purchase decisions of this group will be a source of reference information which is useful for real estate enterprises to serve market's needs well. Also from the result of research, the team also proposed a number of measures to help the apartments suit the needs of officers in particular and people in general in the Vietnamese market.

2. LITERATURE REVIEW AND RESEARCH MODEL

In the study of marketing management, Kotler and Keller (2005) gave the theoretical basis of the model of consumer behavior. In particular, Kotler and Keller said that the buying decision of the consumers is a five-step process: identify needs, seek information, evaluate alternatives, purchase decisions, attitudes after purchase. In addition, consumers in making purchasing decisions goods for themselves or their family, they are always influenced by external factors. In particular, the external factors are divided into two groups, including the group of non-commercial factors (changes in economic, social, cultural ...) and commercial group elements (the effort to introduce the product, advertising, promotions ...). External factors also affect the psychology of the consumer and thereby affect buying behavior, their buying decisions.

The model of valuation of residential property (Adair et al., 1996) get the factors made an impact on the decision of the customer to buy the house is represented by 55 variables studied were divided into four groups and variables are: physical, finance, distance, environment. Ratchatakulpat et al (2009) conducted in Australia, also pointed out a number of factors affecting the real estate buying decisions of customers

in the state of Queensland. In this study Ratchatakulpat inherit the study variables of Adair et al. (1996), as well as the variables in the study by Daly et al. (2003) on consumer purchasing behavior for any real.

According to the previous studies and practical on the real estate market in HCMC, we proposed model to study the factors affecting the decision to buy apartments of officers in SMEs is composed of four factors: (1) Physical, (2) Financial, (3) Distance and (4) Environmental.

Fig. 1 Conceptual framework

– **Physical factor (PHY):** Includes the structure and characteristics of the apartment. Factors physical were impacted significantly on purchase decisions of customers (Adair et al., 1996; Daly et al., 2003; Sengul et al., 2010).

– **Financial factor (FIN):** Purchasing products depends on finance factor which are also important factor deciding the financial solvency of the buyer's apartment. However, in the study by Adair et al. (1996) and Daly et al. (2003), the financial factor also extends to issues such as the ability to flat mortgage interest rate.

– **Distance factor (DIS):** The findings of Adair et al. (1996) as well as Ratchatakulpat et al. (2009) showed that the position is located is one of the factors that influence purchasing decisions real estate in general. In fact, the decision to own apartment, the buyer should always consider the distance from the apartment to the point as work, hospitals, schools, markets, shopping centers and entertainment areas.

– **Environmental factor (ENV):** When you want to own a property, the buyer always interest to the surrounding environment such as security, education level of the people, landscape related or noise. Environmental factor also confirmed the impact on the decision to buy real estate (Adair et al., 1996; Ratchatakulpat et al., 2009).

The hypotheses were tested in this study are presented below:

- Hypothesis 1 (H1): Physical factor have positive impact to decide to buy apartments of officers in SMEs.
- Hypothesis 2 (H2): Financial factor have positive impact on the decision to buy apartment of officers in SMEs.
- Hypothesis 3 (H3): Distance factor have positive to the positive impact buying decisions apartment of officers in SMEs.
- Hypothesis 4 (H4): Environmental factors positively impact the decision to buy apartment of officers in SMEs.

3. METHODOLOGY

In this study, the authors combine qualitative research to explore and develop the relationship between the scale factor and quantitative research to test scale. This process was carried out through a two-step is a preliminary study and formal study.

First, a preliminary study was performed using qualitative methods in the form of discussion with 05 experts currently working in the real estate business on the factors affecting the decision to buy apartments of officers at SMEs. The results discussed in order to build additional scale for questionnaire survey to study quantitatively in the next section. Preliminary scales were built including one dependent variable is the decision to buy apartments and 4 independent variables are physical, financial position located habitat. Quantitative questionnaire (Table 1) consists of 31 observed variables is measured by 5 point Likert scales (1: totally unimportant to 5: very important).

Table 1. The main factors affecting purchase decision a apartment

Factor	Variables
Physical	
PHY1	Apartment size
PHY2	Interior décor and design
PHY3	Living room size
PHY4	Number of bedroom
PHY5	Kitchen size
PHY6	Number of bathroom
PHY7	External design
PHY8	Well built
PHY9	Low maintenance

PHY10	Accessible garage
PHY11	Legal status
Financial	
FIN1	Buyer's income
FIN2	Price of a apartment
FIN3	Maximum mortgage
FIN4	Maximum monthly repayments
FIN5	Interest rate
Distance	
DIS1	Distance to work
DIS2	Distance to school
DIS3	Distance to market
DIS4	Distance to shopping centre
DIS5	Distance to central business district
DIS6	Distance to recreation
DIS7	On a main bus route
Environment	
ENV1	Condition of neighbourhood
ENV2	Attractive views
ENV3	Open space
ENV4	Security
ENV5	Traffic noise
Purchase decisions	
PUR1	Planning to buy a new apartment
PUR2	Making effort to buy a new apartment
PUR3	An important person affecting house purchase decision

Resource: Compiled from the relevant research

The next step, formal study was conducted to observe the variables, determine the composition, value and reliability of the scale. The method is implemented and tested for scale reliability using Cronbach's Alpha Scale testing method and factor analysis to explore by EFA method.

Survey process was conducted in the period from 01/2014 to 05/2014 in some real estate transactions in HCMC. Sending questionnaires directly to the consumer who are employees working in SMEs go to real estate transaction floor to find out information to buy apartments. Sample size of 450 customers selected the survey found (n = 450). However, the end of the survey process, only accepted 321 qualified questionnaires (representing 71.3%) and continued to the data entry, cleaning with SPSS 16.0 software (the rejected votes left vacant by the bug as many survey variables, type 1 coincides wide selection of variables, type all or too many variables with only 1 point value). The analysis of the survey results (Table 2), the rate of 38.3% female and 61.7% male; marital status accounted for 63.9% are single. In education, the university occupies 72.6%. Under age 25 accounted for 29.0% and from 26 to 35 years old accounted for 56.1%. Monthly income of 5 to 10 million accounted 53.0%.

Table 2. Respondent demographic characteristics

Sample size (n) = 321		Frequency	Percentage (%)
Gender	Male	198	61,7
	Female	123	38,3
Age Group	18 – 25 years	93	29,0
	26 – 35 years	180	56,1
	36 – 45 years	38	11,8
	Over 46 years	10	3,1
Education	Highschool, college	57	17,7
	Bachelor's degree	233	72,6
	Master's degree or higher	31	9,7
Marital Status	Single	205	63,9
	Married	110	34,3
	Divorced	6	1,8
Income	Less 5 millions VND	73	22,7
	5 – 10 millions VND	170	53,0
	10 – 25 millions VND	59	18,4
	Over 25 millions VND	19	5,9

Resource: Calculated from the relevant research

4. RESULTS AND DISCUSSION

4.1. Scale testing

The process of factors affecting the decision to purchase apartment of the officers in small-medium sized businesses`scale testing has been done through calculating the coefficient of reliability Cronbach`s Alpha and analysing EFA. The analytical results (Table 3) showed that Cronbach`s Alpha coefficients of factors were greater than 0.6 and item-total correlation was greater than 0.3. According to Nunnally and Bernstein (1994), it can be concluded that scales of all these factors have gained credibility, they can be used to analyze EFA in the next section.

Table 3. The results of Cronbach's Alpha Scales testing

Scale	Number of items	Cronbach's Alpha	Corrected item-Total Correlation
Characteristics variable (PHY)	11	0,797	0,753
Finance variable (FIN)	5	0,793	0,714
Distance variable (DIS)	7	0,822	0,782
Environment variable (ENV)	5	0,868	0,832
Purchase variable (PUR)	3	0,810	0,709

Resource: Calculated from the relevant research

In the 28 observed variables of the four factors affecting the decision to purchase apartment of officers, they are included in the EFA analysis. The results show that 6 observed variables` load factor coefficients is less than 0, 5 (including PHY2, PHY3, PHY4, PHY5, PHY6, DIS7) and they are not satisfactory, so all

06 variables were excluded. The remaining 22 observed variables continue to be included in the EFA analysis, the results (Table 4) show that the variables' load factor coefficients are greater than 0.5 and variance equals 57.656% which is greater than 50%. Next, Cronbach's Alpha coefficients are calculated again and the results show that the Cronbach's Alpha coefficients of these factors are greater than 0.6. KMO Index (Kaiser-Meyer-Olkin) is 0.825 (>0.5), Bartlett testing has Sig. = 0.000 (>0.05). Thus, the scale of the impact factors have been accepted and guaranteed reliability.

Table 4. The results of Exploratory Factor Analysis

Variables		Component			
		1	2	3	4
PHY1	Plot size			0,629	
PHY7	Outdoor architecture			0,879	
PHY8	Quality of building			0,853	
PHY9	Level of maintenance			0,653	
PHY10	Garage size			0,542	
PHY11	Legal condition			0,573	
FIN1	Income				0,609
FIN2	Apartment's price				0,580
FIN3	Maximum mortgage				0,764
FIN4	Maximum monthly repayments				0,850
FIN5	Interest rate				0,783
DIS1	Distance to work		0,662		
DIS2	Distance to school		0,603		
DIS3	Distance to market		0,696		
DIS4	Distance to shop center/mall		0,795		
DIS5	Distance to city center		0,796		
DIS6	Distance to entertainment area		0,721		
ENV1	Condition of neighbourhood	0,794			
ENV2	Attractive views	0,788			
ENV3	Open space	0,696			
ENV4	Security	0,778			
ENV5	Traffic noise	0,779			
Eigenvalues		5,675	2,952	2,289	1,768
Variance (%)		57,656	13,418	10,406	8,036

Resource: Calculated from the relevant research

4.2 Linear multivariate regression

After conducting Cronbach's Alpha testing and EFA, the paper will perform the result of the linear multivariate regression model (Table 5) due to analyzing quantitative of impacting level of each independent variable to decide to buy apartment of office workers in SMEs in HCMC.

Table 4. The results of Linear multivariate regression

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std.Error	β			Tolerance	VIF

(Constant)	0,375	0,254		1,481	0,140		
PHY	0,113	0,044	0,110	2,576	0,010	0,888	1,126
FIN	0,106	0,046	0,098	2,279	0,023	0,866	1,155
DIS	-0,015	0,047	-0,015	-0,327	0,744	0,815	1,227
ENV	0,719	0,053	0,629	13,484	0,000	0,739	1,353

Resource: Calculated from the relevant research

Results (Table. 5) showed that the decision to buy apartments (PUR) is influenced by characteristic (PHY), finance (FIN), environment (ENV) with a statistical significance of 5% ($\text{sig} < 0.05$), so hypothesis H1, H2, H4 is accepted. However, the impact of location factor (DIS) to decide to buy apartments (PUR) had no statistical significance ($\text{sig} > 0.05$), so hypothesis H3 is rejected. Results also showed that environmental factor had the largest influence to the decision to buy the apartment of officers in SMEs in HCMC ($\beta_5 = 0.629$), followed by the characteristic factor ($\beta_2 = 0.11$) and financial factors ($\beta_3 = 0.1$).

Beside, R^2 is 0.492 and R^2 adjusted 0.487 shows that the independent variables of the linear model explain 48.7% for deciding to buy apartments of officers in SMEs in HCMC. The results of analysing variance (ANOVA) calculate the value of $F = 102.382$ with $\text{Sig.} = 0.000$, so hypothesis $\beta_1 = \beta_2 = \beta_3 = \beta_4 = 0$ is rejected with a statistical significance of 1%, which means that there is less least one independent variable having linear relationship with the dependent variable (PUR). In addition, the regression results (Table 5) also showed that tolerance coefficient was low and VIFs of the independent variables were less than 1.4, which indicated that there was not multicollinearity between the independent variables in the model and ensured the reliability of estimated regression coefficient.

5. CONCLUSION AND RECOMMENDATION

Based on the theory of consumer behavior, research has indicated three positive factors affecting the decision to purchase apartment of officers in SMEs in HCMC are physical, financial environmental in which the strongest impact the environment. However, this paper also shows that distance factors no affecting to buying decision apartments of officers. From the findings, we propose some solutions to the real estate business to make products more apartments fit better meet customer needs in the future:

The first, the construction of apartment buildings need to pay special attention to the environmental factors of households living in this house. According to the research results, the main habitat is the most powerful factor in the decision to purchase apartment of officers in SMEs have shown that real estate companies need to plan, build apartment building in total harmony with the surrounding landscape, creating open space with cool green parks, with amusement parks and entertainment community will be easily accepted by customers more products. The condominium project must reduce the density to build harmony between the living space and the environment. Besides, the real estate company must also pay attention to the maintenance of security and order of the households in the apartment, but should be

limited to the collection of excessive fees in the apartment use . In particular, factors that place is located not impact the purchasing decision shows that the majority of this group still accept purchase apartment if the environment is guaranteed, a condominium project habitat good to convince officers in SMEs approved although positions may not be close to work, fair or entertainment center.

The second, the real estate company to study and implement measures to help customers be more proactive in choosing an area, the design of the apartment where they are expected to own. Need to research, design and build many types of apartments with the area of diversity, architecture, quantity and layout of the function rooms will get more advantage in attracting customers. In addition, the study results also indicate buyers concerned about the legality of the apartment, quality of construction, parking area so property companies should also be noted and measures satisfy this demand while building apartments. Stage to the real estate companies need to pay attention to the design, structure that allows the product offering apartments priced from 1 billion VND or less, this is the market segment transactions the most recent time.

The third, the real estate companies need to be more proactive in connection with customer contact, market. Need to establish relationships with these types of businesses, including SMEs through which to connect with employees in these businesses. Regularly conduct research, investigation and analysis of community needs staff are intending to buy apartments to adjust the price, design, product architecture and provides information directly project, payment mode, the incentives, sales service when buying apartments. Besides, the real estate company to accelerate implementation of programs installment sale apartments at lower interest rates or selling apartments in the form of unsecured credit (by verifying the income of workers).

The fourth, the real estate companies need to build the confidence of the markets for apartments because recently there are an increasing number of serious fraud, violations of law in the raising capital for the construction and sale of apartments in HCMC property market in particular and Vietnam in general. In fact, there exists a large part in the lack of customers, but not to buy products apartment on suspicion of transparency in the process of raising capital to build, build quality, slow progress handover of the apartment, the phenomenon of management fee is too high while living in the apartment caused certain difficulties for real estate companies in the consumer products market. Besides, information, images introduce new designs, gadgets, modern furniture, civilized lifestyle of apartment needs to be the real estate company investment, improve more polished to create a good impression for the market.

The last, the authorities and the banking system need to deploy stronger measures and combines with streamlined procedures to promote disbursed 30,000 billion VND credit package deals in real estate market production, which should lead to officers at SMEs because it is subject to high demand for

apartments priced from VND15 million /m² or less (conditions disbursed credit package). State Bank of Vietnam should continue research roadmap lowering rates lower, thereby increasing the ability to buy apartments in the form of a repayment of general workers and office workers in particular. However, the authorities should also closely monitor the property market to ensure a reduction in interest rates, market support but not enable speculation, price manipulation on the real estate market in order to profit as has happened time ago./.

REFERENCES

- [1] Adair, A., Berry, J., & McGreal, S. (1996), "Valuation of residential property: Analysis of participant behaviour", *Journal of Property Valuation & Investment*, 14, (1), pp. 20-35.
- [2] Ajzen, I. (1991), "The theory of planned behavior", *Organizational Behavior and Human Decision Processes*, 50, pp.179 -211.
- [3] Daly, J., Gronow, S., Jenkins, D., & Plimmer, F. (2003), "Consumer behaviour in the valuation of residential property: A comparative study in the UK, Ireland and Australia", *Property Management*, 21, (5), pp. 295-311.
- [4] Haddad, M., Judeh, M., & Haddad, S. (2011), "Factors affecting buying behavior of an apartment and empirical investigation in Amman, Jordan", *Applied Sciences, Engineering and Technology*, 3, (3), pp. 234-239.
- [5] Kotler, P., Keller (2005), K., *A Framework for Marketing Management*, 4th edition, Prentice Hall, USA.
- [6] Maslow, A. H. (1943), "A Theory of Human Motivation", *Psychological Review*, 50, (4), pp.370-390.
- [7] Nunnally, J.C., Bernstein, I.H. (1994), *Psychometric Theory*, McGraw-Hill, New York, USA.
- [8] Ratchatakulpat, T., Miller, P., & Marchant, T. (2009), "Residential real estate purchase decision: Is it more than location ?", *International Real Estate Review*, 12, (3), pp. 237-244.