BEHAVIOR INTENTION TO PURCHASE REAL ESTATE: AN EMPIRICAL STUDY IN HO CHI MINH CITY

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ABSTRACT

This research aims to identify and measure the factors that influence customers' behavior intention to purchase real estate in Ho Chi Minh City, Vietnam. The survey was conducted with the participation of 220 customers, and 201 valid respondents can meet the requirement to analyze. The author explored five factors that influence customers' intention to buy real estate, including financial status, corporate reputation, location, private living space, and surroundings. The results from the Explore Factor Analysis (EFA) show that location, financial status, corporate reputation, and private living space have a significant influence on customers' intention to buy real estate. In particular, the location in the context of Ho Chi Minh City is the most influential factor, so it strongly confirms the research of Opoku and Abdul-Muhmin (2010), Wang and Li (2006), Yam and McGreal (2010), Chia et al. (2016), Le-Hoang et al. (2020a). The study also proposed some recommendations to increase the attractiveness of the real estate market. Moreover, real estate developers, marketers, brokers, sellers, consultants, and policymakers can use the results of this study to have better understand customer needs and satisfy customers.

Keywords: Financial status; Corporate reputation; Location; Private living space; Surroundings; Real estate

1. INTRODUCTION

Vietnam's economy has had many positive changes since the renovation. Economic development is accompanied by an increase in population, especially in Ho Chi Minh City, with nearly 9 million people in 2019, the largest population in the country (Macrotrends, 2019), which is accompanied by increasing housing demand. The real estate market in Vietnam has been formed and is rapidly growing, providing a range of products for people. However, for many reasons, the real estate market is going through a difficult time. At this time, the product supply is quite large with many types of products such as townhouses, apartments, villas, land plots, ... while the demand of people is high.

On the other hand, the massive development of real estate projects with design solutions that are not in line with customer needs has partly led to difficulties when businesses re-launch this product to customers. To catch up the reviving real estate market, real estate businesses must understand the needs of their customers, so it is essential to study consumer behavior to improve the success of the business.

Moreover, the competition in the real estate product segment is also very intense, with many projects in new urban areas. Besides, the real estate market is also going through a difficult time with a large volume of goods. Particularly, being accumulated in many projects and a decrease in purchasing power. Whether the real estate business still exists or not depends on adjusting the products to suit the market and quickly selling the remaining products.

In recent years, recognizing the importance of understanding the needs of customers, businesses have paid attention to many issues of real estate products to promote customer attraction. However, it does still not reach high efficiency yet. The economic development under the market mechanism has a high impact on the development of urban areas. The demand for housing for people in HCM City has become increasingly urgent and needs more state intervention. Recently, the housing market in the city is facing many difficulties. The real estate projects in the city temporarily suspended construction or construction at a plodding speed, do not deliver goods as expected, slow progress causing loss of confidence for consumers.

Due to the above reasons, along with the desire to explore new things in the real estate market and realize the importance of identifying the different needs of each customer when buying the product. The study "behavior intention to purchase real estate: An empirical study in Ho Chi Minh City" was conducted to identify and measure the influence of factors affecting behavior intentions to buy real estate from the customer.

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2. LITERATURE REVIEW, HYPOTHESIS DEVELOPMENT AND METHODOLOGY

2.1. Theoretical

2.1.1. *The concept of consumer behavior*

Many researchers define the concept of consumer behavior. According to Schiffman and Kanuk (2004), consumer behavior is the behavior that consumers exhibit in finding, buying, using, and evaluating products and services that they expect will satisfy their individual needs. From Schiffman et al. (2005) point of view, consumer behavior is a dynamic interaction of factors affecting perceptions, behaviors, and the environment through which people change their lives.

In the opinion of Lamb et al. (2004), consumer behavior is a process that describes how consumers make decisions about choosing and eliminating a type of product or service. Also, according to Kotler and Keller (2016), businesses research consumer behavior to identify their needs, interests, and habits. Specifically, what consumers want to buy, why they buy the product or service, why they buy the brand, how they buy it, where to buy it, when to buy it and how much to make a marketing strategy to promote consumers to choose their products and services.

2.1.2. *Theory of reason action (TRA) and theory of planned bahavior (TPB)*

Many theories explain customer behavior in general, and consumers' buying behavior in particular. In it, the intention to implement acts with rational behavior theory (TRA) (Fishbein & Ajzen, 1975) and the theory of planned behavior (TPB) (Ajzen, 1991). These two theories are widely used and popular in explaining the intention to implement human behavior.

In real estate, many studies use these two theories to find the relationship between different factors to the intention of buying a real estate. Moreover, real estate is a high-value product; buyers need to consider and plan on buying this product, rather than an impromptu purchase. Through the review of previous studies on the intention to buy a real estate and its considerations and that the use of TRA and TPB is the theoretical basis for this research is fit. The real estate in this research context is duplex, villa, townhouse, detached house, semi-detached house.

2.2. Research model and hypothesis development

2.2.1. Private living space

Living space is one of the factors that affect customers' buying intent, including the kitchen area, living room area, number of bedrooms, number of bathrooms Shyue et al. (2012). Also, studies of Opoku and Abdul (2010), Chia et al. (2016) also suggest that living space positively affects customers' buying intentions. These factors influence the customer's purchase intent, including independent variables: House area, large living room, number of floors suitable for customers, reasonable number of bedrooms, fully furnished, the comfort in the house.

- **H1**: Private living space has a positive effect on behavior intention to purchase real estate.

2.2.2. Corporate reputation

Corporate reputation is the belief, the trust of the company to customers, which significantly affects customers' buying intentions. The study of Luo and James (2013) suggests that the company's reputation is to create an absolute trust for customers, enthusiastic, professional service attitude, accurate, timely advice to customers. Chia et al. (2016) also found that these factors influence customers' buying intent, including the company's reputation, creates absolute trust for customers, enthusiastic and professional customer service attitude, know the company's reputation from relatives, friends, timely accurate advice to customers.

- **H2**: Corporate reputation has a positive effect on behavior intention to purchase real estate.

2.2.3. Location

Location plays a vital role in building a home or choosing a home for the people (Adair et al., 1996; Chia et al., 2016; Daly et al., 2003; Kaynak & Stevenson, 1982; Le-Hoang et al., 2020a; Le-Hoang et al., 2020b; Sengul et al. 2010). If the buyers choose a good location, it will be convenient to move in the central areas. Thus, it saves many travel expenses, such as shopping, studying, and entertainment.

According to Shyue et al. (2012), the study suggests that the home location is near the workplace, near the market, near shopping centers, schools, main roads, close to family and friends. Besides, Yam and McGreal (2010) also found that home location is an important criterion mainly due to traffic congestion, including locations near workplaces, schools, supermarkets. Le-Hoang et al. (2020a) pointed out that distance includes many factors that can

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measure location variables such as a location near the working places, near the school, near shopping mall, near downtown, and highway.

- **H3**: Location has a positive effect on behavior intention to purchase real estate.

2.2.4. *Financial status*

Many scales can measure financial status. Some research shows that the financial status is the factors of house price, payment time, monthly income, monthly payment (Le-Hoang et al., 2020a; Opoku & Abdul-MUHMIN, 2010; Yongzhou, 2009), mortgage ability, interest rate, registration fee (Chung et al., 2018; Chia et al., 2016; Kamal & Pramanik, 2015; Khrais, 2016).

Also, Opoku and Abdul (2010) also think that financial status influences people's intention to buy houses including High and stable customer income, Flexible solvency activities, payment method in installments, banks support low-interest loans, support maximum payment time for customers, prices consistent with the financial capacity of the customer. Also, according to Haddad et al. (2011), this definition refers to collateral, terms of purchase, house prices, the assessed value of assets, opportunities for a quick assessment, and waiting time.

- **H4**: Financial status has a positive effect on behavior intention to purchase real estate.

2.2.5. *Surrounding environment*

Research by Adair et al. (1996) suggested that the environment consists of the neighborhood, view, noise from around districts, general security that can affect the buying decision of the household. Other research indicated that the surrounding environment is factors such as quality of infrastructure, surrounding neighbors, surrounding landscape, area security situation, surrounding noise, pollution of the surrounding environment. Yam and McGreal (2010) also said that the environment is the security features, security, surrounding space. Chia et al. (2016), Shyue et al. (2012) also stated that the surrounding living environment positively affects customers' buying intentions.

- **H5**: Surroundings have a positive effect on behavior intention to purchase real estate.

The results of previous studies on customer behavioural intentions showed that many factors effect buying intention. For example financial situation, housing characteristics, location, corporate reputation, surrounding environment, price, private living space, actual product, promotion, human, utilities, safe zones, distance, quality of the real estate. However,

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the author proposes the factors that fit the situation via expert discussion. As a result, this study offers five factors that influence the intention to buy a real estate in Ho Chi Minh City: Location (LO), Financial status (FS), Corporate reputation (CR), Private living space (PS), surroundings (SU).
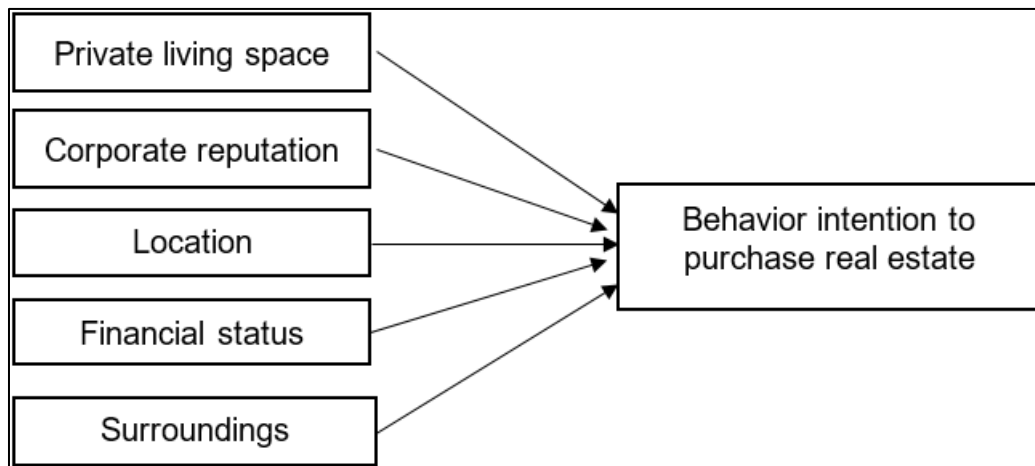

Figure 1: Proposed research model of the author

From the proposed research model, previous studies, and the actual context of the real estate market in Ho Chi Minh City, the author uses 25 items to measure five independent variables and one dependent variable.

Table 1: Variables in the research model

No.	Items	Variables	Source
		PRIVATE LIVING SPACE	
1	PS1	Area of the real estate, large living room	Shyue et al. (2012), Opoku and
2	PS2	Number of floors for customers	Abdul-Muhmin (2010), Chia et
3	PS3	A reasonable number of bedrooms	al. (2016)
4	PS4	Fully meet the amenities in the real estate	
		CORPORATE REPUTATION	
5	CR1	The company's reputation creates absolute trust for customers	Luo and James (2013), Chia et al. (2016)
6	CR2	Professional and enthusiastic customer service attitude	
7	CR3	Knowing corporate reputation from relatives and friends	
8	CR4	Accurate, timely advice to customers	
		LOCATION	
9	LO1	Location right wide road front	Adair et al. (1996),
10	LO2	Location near main roads, big roads	Chia et al. (2016),
11	LO3	Location near the city center	Daly et al. (2003),
12	LO4	Location near work, school, supermarket	Kaynak and Stevenson (1982), Le-Hoang et al. (2020a), Le-Hoang et al. (2020b), Sengul et al. (2010), Yam and McGreal (2010)
		FINANCIAL STATUS	
13	FS1	Customer's income is high and stable	Opoku and Abdul-Muhmin (2010), Shyue et al. (2012),
14	FS2	Flexible payment capacity, the payment method is divided into installments	

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15	FS3	Banks support low-interest loans	Yam and McGreal (2010),
16	FS4	Support maximum payment time for customers	Chia et al. (2016)
17	FS5	Price consistent with the financial capacity of the customer	Chung et al. (2018), Chia et al. (2016), Kamal and Pramanik (2015), Khrais (2016)
SURROUNDINGS			
18	SU1	Regional security is good	Yam and McGreal (2010),
19	SU2	Clean surroundings, cool	Opoku and Abdul-Muhmin
20	SU3	The environment is not noisy, no pollution	(2010),
21	SU4	Civilized living environment	Chia et al. (2016),
22	SU5	Good infrastructure quality	Shyue et al. (2012)
INTENTION TO BUY A REAL ESTATE			
23	IT1	I intend to buy a real estate	Ajzen (1991),
24	IT2	I am an essential person in buying a real estate	Shyue et al. (2012)
25	IT3	I will introduce to my friends and relatives to buy real estate	

This study applies the quantitative research. The purpose of quantitative research is to test the hypotheses about the intention in real estate marketing through the use of statistical methods. The complete questionnaire consists of two parts. Part one is a demographic survey, while part two is the factors affecting the behaviour intention to purchase real estate. The study uses the Likert scale with five levels: (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) strongly agree to measure. The study was carried out with 25 variables.

To reach the minimum number of samples, Hair et al. (2014) indicated that the sample size must be at least 125 elements (= 5*25 observed variables). So, the author distributed 220 questionnaires and collected 201 valid respondents. The research was conducted in Ho Chi Minh City in the period from October 2019 to December 2019. The methods of this research are Cronbach's Alpha coefficients, exploratory factor analysis (EFA), and multivariate regression analysis.

3. DATA ANALYSIS AND RESULTS

3.1. Data description

Table 2: Data description

		Frequency	Percent	Cum. Percent
Gender	Men	103	51.2	51.2
	Women	98	48.8	100.0
Age	Under 25 years old	49	24.4	24.4
	25-30 years old	60	29.9	54.2
	33-35 years old	46	22.9	77.1
	Over 35 years old	46	22.9	100.0
Occupation	Officer	36	17.9	17.9
	Owner	34	16.9	34.8
	Goverment officials and employees	47	23.4	58.2
	Traders households	50	24.9	83.1
	Other	34	16.9	100.0

Income	Under 10 million VND	36	17.9	17.9
	10-15 million VND	49	24.4	42.3
	15-20 million VND	67	33.3	75.6
	Over 25 million VND	49	24.4	100.0

Gender: According to the analysis of survey data from 201 respondents, there were 98 female customers, accounting for 48.8%, the remaining 103 were male with 51.2%. This rate is not much different. For men, they have a habit of buying fast, especially with products that are right for them. Furthermore, for women, there is always a need for shopping and consider to choose, so the percentage of women is less than men is understandable.

Age: The results showed that there are 49 customers under the age of 25 (accounting for 24.4%). Most of them are young people who like to be new, modern, and comfortable. 60% of customers aged 25-30 years old, and it accounts for the highest proportion of 29.9%. This age group is the majority of adults who have real needs to buy houses. 46- to 30-year-old customers (accounting for 22.9%) are a group of people with stable incomes who intend to buy real estate or invest. There are 46 customers aged 35 and over (accounting for 22.9%) who are middle-aged people who intend to stay, invest, or buy to make properties.

Occupation: Through the process of surveying and analyzing data, 36 customers were officer (accounting for 17.9%), and 34 customers who were business owners (accounting for 16.9%). There are 47 customers of government officials and employees (23.4%). Fifty customers are traders households (accounting for 24.9%). Furthermore, 34 customers have other occupations (accounting for 16.9%) with a variety of occupations such as doctors, technicians, freelancers.

Income: There are 36 customers with an income of less than 10 million (accounting for 17.9%), there are 49 customers with income from 10-15 million (accounting for 24.4%), there are 67 customers with income from 15- 20 million (accounting for 33.3%). Finally, customers with an income of over 25 million were 49 customers (accounting for 24.4%). For a high-value property like home, customers need to have a stable income to own and pay the monthly service and utility costs to meet the needs of daily life.

3.2. Reliability test: Cronbach's Alpha

Table 3: Results of testing the reliability of the scale

Reliability Statistics				
Factors	**The number of variables**	**Cronbach's Alpha**	**Corrected Item-Total Correlation**	**Note**
PS	4	0.787	>= 0.546	

CR	4	0.807	>= 0.555	
LO	4	0.788	>= 0.509	
FS	5	0.846	>= 0.614	
SU	5	0.770	>= 0.399	
IT	3	0.843	>= 0.642	

The total Cronbach's Alpha coefficient of private living space, corporate reputation, location, financial status, surrounding environment, behavior intention to purchase a real estate are greater than 0.7. The observed factors have a total correlation coefficient greater than 0.3. So the scales meet all requirements.

3.3.   Exploratory Factor Analysis (EFA)

Table 4: Result of exploratory factor analysis

Component Matrix						
Factors	**Variables**	**Component**				
		1	**2**	**3**	**4**	**5**
Financial status (FS)	FS4	.783				
	FS1	.774				
	FS3	.764				
	FS5	.760				
	FS2	.704				
Surroundings (SU)	SU1		.780			
	SU4		.770			
	SU5		.755			
	SU2		.696			
	SU3		.570			
Corporate Reputation (CR)	CR2			.828		
	CR4			.800		
	CR1			.773		
	CR3			.746		
Location (LO)	LO3				.781	
	LO1				.754	
	LO4				.709	
	LO2				.668	
Private Living Space (PS)	PS2					.815
	PS4					.806
	PS1					.721
	PS3					.700
KMO (Kaiser-Meyer-Olkin)		0.799				
Barlett's: Sig		0.000				
Eigenvalues		1.402				
Total Variance Explained		66.997				

The EFA analysis results show that KMO coefficient (Kaiser-Meyer-Olkin) is 0.799> 0.5, showing that factor analysis is appropriate. Barlett's test: Sig = 0.000 <0.05 shows that variables in factor analysis are correlated with each other in the overall. The Eigenvalues value = 1.402> 1 represents the variation part explained by each factor, the factor that draws the most

meaningful information. The total variance extracted value: 66.997% indicates that five factors explain 66.997% variation of variables in the data, the model is appropriate — factor loading of all variable is greater than 0.55, indicating a correlation between variables for representative factors.

3.4. Regression analysis

The regression model shows the impact of five factors, such as private living space, corporate reputation, location, financial status, and the surrounding environment influences the overall assessment with R square = 0.604. It means that five factors can explain 60.4% for the behaviour intention to purchase real estate of the customer, while the other factors outside the model can explain 39.6% for the behaviour intention to purchase real estate. The regression model meets the requirement of correlation rule in the model because of the Durbin-Watson test coefficient = 2.105. So, there is no autocorrelation in the residuals of the linear regression model.

Table 5: Result of regression model

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-1.404	.372		-3.772	.000		
PS	.219	.059	.180	3.730	.000	.872	1.147
CR	.255	.054	.219	4.721	.000	.941	1.063
LO	.542	.064	.455	8.470	.000	.705	1.419
FS	.311	.063	.256	4.954	.000	.758	1.318
SU	.015	.056	.012	.268	.789	.974	1.026
R Square						0.604	
Durbin-Watson						2.105	
Sig						0.000	

Diagnosis of multicollinearity phenomenon: The Variance Inflation Factor (VIF) of the independent variables in the model is very small. The results table shows that the VIF of PS, CR, LO, FS, SU equals 1.147, 1.063, 1.419, 1.318, 1.026 <10. So, there is no multicollinearity in the research model.

The result of the regression model shows that four factors are private living space, corporate reputation, location, and financial status are statistical significance because the sig is very small and smaller than 0.05. Therefore, these four factors affect the behaviour intention to purchase real estate with 95%. The surrounding environment factor has a sig > 0.05, so this variable is not correlated to buy a real estate.

The below formula can express the standardized regression equation:

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$$IT = 0.180*PS + 0.219*CR + 0.455*LO + 0.256*FS$$

The regression equation above shows that the location has the strongest impact on the intention of purchasing a real estate because the beta coefficient of this factor is the highest (beta = 0.455). The second most powerful factor affecting the intention to buy real estate is the financial status with the beta coefficient = 0.256. The third most influential factor affecting the intention to buy real estate is a corporate reputation, with a beta of 0.219. The fourth most influential factor affecting the intention to buy a real estate is a private living space with beta = 0.180. The correlation between the four factors affecting the intention to buy a real estate is positively correlated because the beta values of the four factors are positive (beta> 0).

4. Conclusion

4.1. Conclusion

The authors have proposed a research model consisting of 5 elements based on previous studies and practical observations during the experiment working in the real estate industry. After analysing the study by Cronbach Alpha, EFA, regression analysis, and eliminating inadequate variables, this study identified four factors that influence the behaviour intention to purchase real estate are private living space, corporate reputation, location, financial status. The variable "surroundings" is excluded because in the regression analysis with the coefficient Sig = 0.789> 0.05, it rejects the hypothesis that surroundings have a positive impact on customers' intention to buy real estate in Ho Chi Minh City.

According to the regression results, among the independent factors, the location has the most significant influence on the customers' intention to buy real estate (Beta = 0.455 and Sig = 0,000). In particular, customers are very interested in the location of their place compared to going to work, school, shopping center, or shopping to cater for daily living activities. Also, they also care about where they are quiet or not. Thus, businesses need ideas for product development in densely populated, convenient places to meet the needs of customers in Ho Chi Minh City.

The financial status is the second influence factor on the purchasing intention of customers (Beta = 0.256 and Sig = 0.000). Without preparation and financial balance, buying real estate will be difficult. Customers expect to buy real estate that is suitable for their finances. Today, with many support policies of loans from investors/banks such as interest rate support or flexible payment policy, it will significantly affect the consideration of real estate options. From the price of the real estate and the form of payment, the payment period is considered

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carefully to buy a real estate that is suitable for each family's finances. Therefore, businesses need to create products that are suitable for customers, especially maximum support for customers financially, thereby helping customers solve financial problems.

The corporate reputation is the third influence factor on the customer's purchasing intention (Beta = 0.219 and Sig = 0,000). The reputation of the business will increasingly play an essential role in building the confidence of the business itself and building trust with the public. For customers to follow the business and buy products of that business, they must create the reputation of the business and create customer trust in that business. In order to create the reputation of the business as well as the trust of customers, businesses need to have the customer service team to consult correctly and promptly when customers ask, besides businesses need to launch real estate products that have a valid legal to create a reputation for businesses to customers when buying real estate products.

The private living space is the fourth influence factor on customers' buying intention (Beta = 0.180 and Sig = 0.000). The customers who intend to buy products also based on the interior design of the house. Moreover, the customers want to have a spacious and airy house, the number of floors of the house, and fully meet the comfort of the house. Finally, a fresh, spacious, and fully furnished space will attract many customers to choose the products of that business.

In the study, customers did not think that they would buy real estate with their surroundings, instead of their surroundings paying attention to how close to the center was. Infrastructure or environment, it is not yet confirmed whether real estate is really good and suitable for their needs. Investors play an essential role in buying real estate of customers. However, in the mid-end segment, these customers are more interested in the factors mentioned above, such as private living space, location, financial status, and corporate reputation.

4.2.   Recommendation

Many in real estate investors often choose the location to aim to buy real estate. Location plays an essential role in real estate. Locations near the center will always cost more than the location in suburban areas. Investors need to consider their financial potentials, pay attention to the development potential of the real estate area, and have a long-term vision of the region's future in order to make accurate judgment and investment. Areas near the center will always have higher prices due to the convenience of work, education, health, or entertainment of people.

Nevertheless, real estate in areas along Ho Chi Minh City has been the focus of investors when roads are gradually completed; transportation is easy and convenient, comprehensive planning, and especially the price of real estate in the suburbs is still exceptionally well, targeting the majority of middle-income and real-life people. It is a large number of customers who need to be fully exploited. Therefore, it is important to understand the segment of the customer.

Businesses, as well as consultants, need to understand the market, compare the apartments in the same segment, in different locations so that customers have an overview, see the advantages and potential of the unit. Investors need to choose the location that best suits their financial and customer orientation and capture the tastes of their customers. Priorities should be given to locations near schools, labour-intensive areas, shopping, entertainment, and quiet, secure residential areas. Accordingly, the location to buy is a real estate located in the suburbs or adjacent to the center, with an ideal radius of 10 - 12km back or located in an urban embellishment area, densely integrated, utilities such as schools, shopping malls, offices.

Finance is One of the other important issues when buying real estate in general and real estate in particular. Customers always consider carefully to choose the real estate that suits their affordability. Investors, businesses need to research the market carefully to offer reasonable and competitive prices. The payment and the policy of supporting loans always occupy great attention of customers besides the real estate price.

Customers want to know that the initial amount is spent, then pay each instalment, should use the payment method of the investor to receive incentives, or use the loan policy of the support bank. Therefore, to increase the interest of customers in real estate products, customers have more choices, investors should diversify payment policies. Real estate developers should offer attractive discount rates if customers pay quickly, and pay only once. Developers combine with banks to offer attractive loan policies with many incentives such as low-interest rates, support grace of principal and interest.

Research shows that family, relatives, and friends consulted customers who plan to buy a real estate. Besides, the business needs to increase the level of brand awareness for customers by building the company's reputation to influence customer awareness. The business has to create a trust for customers by bringing the right product and worth buying. Consultants, brokers, and sellers need to build a professional, dedicated, and enthusiastic image with customers. Build a professional distribution channel, modern facilities to build the right image.

Another factor to consider is the private living space of a real estate. For customers, the real estate that the customers buy will be a long-term attachment to them and their families.

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The investor should choose suitable, knowledgeable design units to optimize the area of the apartment, arrange flexible space, create more space to expand visibility, fresh view, clean. To bring a reasonable price for accessible customers, it is necessary to design an apartment with a reasonable area but still find a spacious, fresh, and fully functional house for the daily living of the family.

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