

# Factors Influencing Real Estate Purchasing in Dubai

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#### Abstract

Identifying the factors affecting real estate purchasing is globally crucial to the industry stakeholders. The researcher noticed a lack of literature that defines and explains the factors influencing the expatriates' Intention to purchase residential properties in Dubai. In this quantitative study, the researcher utilized the theory of planned Behavior (TPB) to investigate the effect of attitude, subjective norms, and perceived behavior controls on the Intention to purchase residential real estate properties. Based on 384 usable responses received through randomly distributed survey questionnaires. All three research alternative hypotheses were found to be accepted. The empirical results show positive relationships between attitude, subjective norms, and perceived behavior control toward real estate property purchasing intention.

*Keywords:* Consumer behavior, behavioral intention, human planned behavior, Dubai real estate, Dubai properties, real estate purchasing, theory of planned behavior (TPB), residential properties

#### Introduction

Although purchasing a residential property can be a beneficial investment rather than renting it for a long duration of an expatriate's stay in Dubai, the expatriates prefer renting rather than investing the same amount of money in purchasing properties in mortgage plans. Interestingly, expatriate families spent on average 44% of their annual income on accommodation rent and utility bills according to Dubai Statistics Center (2014, 2015, 2021a). Moreover, the expatriates prefer to send their cash surplus to their home countries (Bridge, 2018), which has negatively influenced the UAE economy (Carvalho, 2005; Central Bank, 2020). The significance of the research problem becomes noticeable when comparing the number of rented-out residential properties of 405,000 lease contracts according to the Dubai Land Department (2022) and the number of households in Dubai of 598,870 families (Dubai Statistics Center, 2020).

Some interesting initial search findings that may be contrary to this prevailing condition are first, Dubai's real estate (RE) market has proven to be one of the fastest growing and highest vielding RE investments in the Middle East region as of 2022 (Dubai Land Department, 2020; "Dubai real estate", 2022; Lejeune et al., 2021). Also, it is worth mentioning that the real estate markets globally have witnessed several fluctuations in demand during the last decade due to several global economic recessions, the COVID-19 pandemic, the Russian-Ukrainian war, and other unpredicted events, however, the demand for purchasing Dubai properties remained steady (Abbas, 2018a; Fattah et al., 2022 & Turak, 2023). Also, in the early 2000s, the government allowed expatriates of all nationals to buy and sell RE properties on freehold ownership. Also, foreigners who do not reside in the country and residents are eligible to gain unrestricted ownership freehold rights, usufruct rights, or property leaseholds according



to information provided by The United Arab Emirates' Government (UAE, 2021). Finally, expatriates in Dubai earn better than others in other major global cities and hold the privilege of no taxation on income in the UAE (Abbas, 2018b). Despite all these facts that clarify the ease with which expatriates can purchase RE, it was found that it is not positively reflected in the demand for RE purchases in Dubai by the expatriates.

The researcher noticed a lack of identification of the factors influencing the expatriates' intentions to buy residential properties in Dubai, and it was evident that no academic studies investigated such factors.

Understanding such factors will help RE industry professionals and policymakers improve their strategies and explore new business opportunities. Therefore, the purpose of this quantitative study is to identify the factors influencing expatriates' purchasing intention for residential property in Dubai.

#### Literature Review

Through literature review, the researcher investigated the relevant RE prevalent information concerning the expatriates, ranging from their demography, income, financial capability, spending, and living conditions. Also, the researcher investigated the significance and importance of Dubai's RE market in the UAE economy. Finally, the researcher conducted a literature review for similar scope studies and searched for applicable theoretical frameworks that could guide this research.

#### Expatriates in Dubai and the RE market

In 2021, the number of UAE expatriates was 8.84 million, representing 89% of the total population and more than 90% of the country's workforce. More than 80% of Dubai's workforce are expatriates (Dubai Statistics Center, 2022; Kumar, 2018; "More than"; 2021). The gender ratio in Dubai was 69% male to 31% female (Dubai Statistics Center, 2021d; Forstenlechner & Rutledge, 2011), presumably due to many males leaving their families behind and staying alone in Dubai due to the high living expenses (Swan, 2017). Expatriates' stay in the country is conditioned by maintaining a valid employment contract, investment visa, or long-term golden visa for specific qualification individuals, and real

estate investors (Ali, 2011; Cave, 2004; The United Arab Emirates' Government, 2022a). An expatriate family's average annual household expenditure in Dubai is approximately AED 206,000 —USD 56,300 (Dubai Statistics Center, 2021a).

While the amount spent on a property rent over a 15–20-year is equivalent to investing the same amount in purchasing the same property in a mortgage plan in the same duration, a 2020 survey found that 75% of the expatriate participants were not able to save for their retirement in UAE; while half of them rely on end-of-service gratuity (Bell, 2011; Sawy, 2020). Meanwhile, the volume of their remittances was AED 154 billion or USD 42 billion in 2020, which had a negative impact on the local economy and the GDP of the UAE (Carvahalo, 2005; Central Bank, 2020).

When looking at the RE market in Dubai, the government recorded about 735,559 residential units in the emirate, where apartments and villas make up 96%. Other accommodation types, such as villa attachments, collective households, and traditional Arabic houses together are the remaining 4%. Out of the total available residential units, apartments represent 79% of units, while villas represent about 17% (Dubai Statistics Center, 2020).

There are several categories of buyers, mainly Emirati nationals, expatriate investors, expatriates who buy for their personal use, international investors, and retirees (The United Arab Emirates' Government, 2022b). Typically, the majority of RE buyers are older and middleaged, above 35 years old (Bridge, 2019; "Getting on the property", 2022; Nair, 2018).

Meanwhile, it was recognized that Dubai's RE market is continuously improving and carried out 84,196 sale transactions with a total amount exceeding AED 300 billion in 2021 alone —the highest number of transactions ever recorded in Dubai's RE history, thanks to the increasingly appealing payment plans and lower home costs (Dubai Land Department, 2023). This is an outcome of the UAE making it possible for a wide variety of interested buyers to become purchasers of RE properties, allowing expatriates of all nationals to buy and sell RE properties on freehold ownership. The government is continuously refining the laws and regulations of RE purchasing to increase property purchasing

frequency and potential buyer numbers through investment prospects to enhance the economy (The United Arab Emirates' Government, 2022b).

Additionally, economy specialists have provided that fostering demand for RE purchasing can play a substantial part in raising the UAE economy's non-oil GDP due to the RE industry being one of four major contributors to the Dubai economy (Central Bank, 2020; Dubai Land Department, 2022; Dubai Land Department, 2022; Lejeune et al., 2021).

The RE sector is one of four major components of the economy of Dubai. Also, the RE and Construction industry came in first with the highest number of employments at a significant weight of 22% or about 664 thousand workers out of 2.9 million employees in Dubai. Also, it came second with a 13.2% contribution to Dubai's GDP in 2020 compared to the retail and wholesale sector, which leads in first with a 24.2% contribution to the Dubai 2020 GDP (Dubai Statistics Center, 2021b; 2021c).

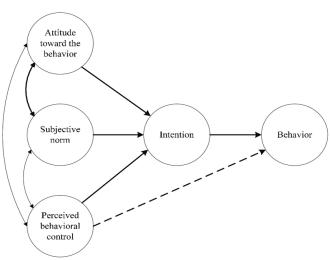
#### Theory of Planned Behavior (TPB)

The TPB of Ajzen is one of the most acknowledged and well-recognized theories in the field of human behavior, reaching about 5 million hits of relevant academic works and studies on a Google Scholar search in January of 2023. Several studies such as Hrubes et al. (2001), Knabe (2012), Gopi & Ramayah (2007), Tan (2013), and Montano & Kasprzyk (2008)

have concluded empirical evidence that supported the validity of the theory in different domains. In this research, the TPB of Ajzen (1991) was adopted for being a widely recognized theory in the field of behavioral change and for being a theory that works on both a psychological and socio-psychological level, as Boonroungrut and Huang (2020) suggest.

The TPB proposes that intentions to engage in activities can be predicted to a high degree of accuracy through factors, namely Subjective Norms (SN), Perceived Behavior Controls (PBC), and Attitude (ATD), along with variations in Behavior emerging from different notions of behavior control. Ajzen (2011) clarified that other contextual elements can broaden understanding of humans' social interactions. attitudes, and actions. The TPB provides a framework for the direction of human action or forecasts —if intentional— its occurrence through observing the relationship between the factors and Behavior. It is important to mention that the TPB was not widely utilized or proven to successfully measure the relation between the Intention and the actual individuals' behavior or action. However, according to Ajzen (2020), Intention can be utilized as a proximal measure of conduct even when the relation between behavioral intention and actual behavior is not perfect, which could be considered one of the drawbacks of the theory (Ajzen, 2020).

Figure 1
Theory of Planned Behavior (TPB)



Note. From The Theory of Planned Behavior. By Ajzen, 1991, Organizational Behavior and Human Decision Processes

#### Attitude

Attitude is a favorable or unfavorable assessment of the Behavior. It is believed that attitude is determined by a person's salient ideas of a conduct's negative and positive effects. Therefore, when an individual believes that a behavior's benefits outweigh the downsides, they are believed to have a positive attitude (Ajzen & Fishbein, 2000).

#### Subjective Norms

Subjective norms come from normative beliefs of whether perceived societal pressure to engage or disengage in Behavior will affect behavioral Intention. Subjective norms are commonly pronounced by those important/close to the individual. Normative beliefs affecting subjective norms are divided into injunctive and descriptive beliefs. Injunctive beliefs are the likelihood that a reference group of individuals will make their opinion on the Behavior known. Alternately, Descriptive beliefs are views on whether they practice the Behavior or not (Ajzen, 1991; Ajzen, 2002; Ajzen, 2011; Ajzen & Fishbein, 2000; Ajzen & Fishbein, 2005).

#### Perceived Behavior Controls

Perceived behavioral controls are shaped by control beliefs that appear through information hindering or encouraging individuals to partake in Behavior during situations of interest. Elements such as time, financial capability, experience, and other resources are all control factors (Ajzen, 1991; Ajzen, 2002; Ajzen & Fishbein, 2005). The theory does acknowledge that there may be other different background circumstances that can influence how beliefs are formed and impact intention and Behavior itself. Background

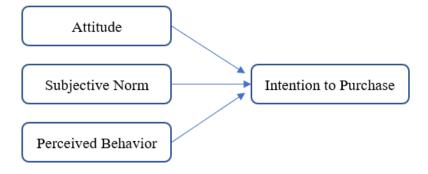
characteristics such as social structure, demographics, and personal traits have been highlighted as responsible for behavioral variations Ajzen (2011). The Normative, Behavioral, and Control beliefs contain the most in-depth substantial knowledge about the influencing factors (Ajzen, 2020).

#### Theoretical Framework

The TPB is a general theory and is not specific on studying the purchasing intention of RE properties. However, the decision to utilize its theoretical framework in this study is supported by the existence of other recent studies that have used it for the same purpose in the real estate field (Al-Nahdi, A.Habib & A.Albdour, 2015; Al-Nahdi, Emmanuel, et al., 2015; Judge et al., 2019; Lei, 2016; Tan, 2013). In these studies, the TPB was utilized for testing the significance of its factors -ATDs, SNs, and PBCs- on the Intention of purchasing residential in KSA, Thailand, Malaysia, and Australia. In most cases. it was concluded that the TPB independent factors are significant predictors of the RE purchasing intention. Accordingly, the TPB theoretical framework has proven to explain the RE purchasing Intention. It is worth mentioning that few of those researchers have developed upon the factors of the TPB in their own studies: the researcher did not do so as these are individual cases (Lei, 2016; Tan, 2013).

To carry out this quantitative study, the researcher employed the TPB factors to examine them empirically. The dependent variable is the Intention to purchase RE properties, while the independent variables are ATDs, SNs, and PBCs.

Figure 2
The Theoretical Framework Proposed by the Author



#### **Research Hypothesis**

The research hypotheses were derived from the proposed theoretical framework for each independent factor to investigate its relation to the dependent factor.

The first Null hypothesis (H1a) states that attitude will have no influence on expatriates' Intention to purchase RE properties in Dubai. In contrast, the Alternative hypothesis (H1b) states that the more positive the attitude, the greater the expatriates' Intention to purchase RE in Dubai.

The second Null hypothesis (H2a) states that Subjective norms will have no influence on expatriates' Intention to purchase RE properties in Dubai. In contrast, the Alternative hypothesis (H2b) states that the more positive the Subjective Norms, the greater the expatriates' Intention to purchase RE in Dubai.

The Null hypothesis (H3a) states that Perceived Behavior Controls will have no influence on the expatriates' Intention to purchase RE properties in Dubai. In contrast, the Alternative hypothesis (H3b) states that the more positive the Perceived Behavior Controls, the greater the expatriates' Intention to purchase RE in Dubai.

#### **Methods and Materials**

The primary data collection instrument of this quantitative study was adopted from the study developed by Al-Nahdi, Habib & A.Albdour (2015). The determined sample was 384 persons who underwent inclusion criteria ensuring the sample represents the targeted population. The survey questionnaire encompasses two main sections: (1) The demographic data of participants, which was designed as a multiplechoice format that inquiries into marital status, income, education, age, citizenship, gender, and type of employment, and (2) "The participants' views of purchasing property in Dubai" section which is divided into four sub-sections representing the dependent and independent factors that constitute Ajzen's TPB through a 5point Likert scale (Refer to Appendix B).

#### **Research Population**

This targeted population comprises households and individuals following the specified inclusion criteria. First, being expatriates or non-Emiratis who reside and/or work in Dubai or the adjacent emirates. Second,

they should match the eligible age for property purchasing but below the retirement age, within the 18-60 years old bracket. Third, Being current employees, business owners, self-employed, or individuals with other sources of income. Finally, being financially capable of purchasing a property or paying a home loan monthly installment. The financial capability threshold was identified by following the UAE banks' required minimum monthly income of AED 10,000 -USD 2,725accepting home loan requests from individuals, a minimum of AED 15,000 to afford household expenditures, and housing bank installments for 2-member families, a minimum of AED 18,000 for 3-member families, a minimum of AED 20,000 for 4-member families, and minimum monthly income of AED 25,000 for five-member families. The target population size of this study is 405,000 households —the same number of residential unit rentals in Dubai in 2020 (Dubai Land Department, 2020; Dubai Statistics Center, 2014; Dubai Statistics Center, 2015; Dubai Statistics Center, 2021a; "Home in one", 2022).

#### Sample Size

Sampling was done utilizing a random sampling technique, and since the target population exceeds the 100,000 mark, 384 participants were required in compliance with the Saunders et al. (2009) table of sample size identification at a 95% confidence level.

#### **Data Collection and Processing**

The instrument was a digitally self-administered close-ended survey questionnaire randomly distributed to participants online via emails, digital platforms, and smartphone applications such as LinkedIn, WhatsApp, Instagram, and Facebook. Due to time constraints, this research was conducted at a single moment in time, making it cross-sectional. The completion of collecting all the responses of participants took place in February 2023.

#### Results

#### Response rate

Out of the 609 total responses, only 384 or 63% sets were useable. The analysis of the distributed questionnaires is shown in Table 1. Abiding by the inclusion criteria, 37% of the responses received from the participants were eliminated.

**Table 1** *Questionnaire Responses Analysis* 

Items	Number	Percentage
Unusable responses	225	36.95%
Did not consent to participate	6	0.99%
Not matching the inclusion criteria	219	35.96%
Usable responses	384	63.05%
Total responses	609	100%

#### **Profile of Respondents**

To observe the socio-demographic characteristics of the survey respondents, the researcher conducted a descriptive analysis of their profiles. The analysis revealed that responses of the participants aged 18 to 30 years old represented 5.99% of the total responses, between 31 to 40 represented 48.18%, and between 41 to 59 represented 45.83%. The gender ratio split was 79.17% males to 20.83% females. 81.25% of the respondents were married, 17.71% were single, and 1% marked other marital statuses. 15.1% live alone in the

UAE, 11.98% have a two-member family, 20.83% have a 3-member family, 35.64% have a 4-member family, and 17.45% have a 5-member family or above. None of the respondents marked primary or secondary level education as the highest, whereas 1.56% marked Diploma level, 62.24% held bachelor's degrees, 30.21% held postgraduate degrees, and 5.99% were professional qualification holders. Furthermore, 4.95% own a private business, 7.29% work in government entities, and 87.76% work in the private sector.

**Table 2** *Profile of Respondents* 

Respondent's profile	Category	Frequency	Percentage
Age	18 to 30	23	5.99%
_	31 to 40	185	48.18%
	41 to 59	176	45.83%
Gender	Male	304	79.17%
	Female	80	20.83%
Marital Status	Single	68	17.71%
	Married	312	81.25%
	Other	4	1.04%
Number of family	1	58	15.10%
members	2	46	11.98%
	3	80	20.83%
	4	133	35.64%
	5 or above	67	17.45%
Education	Primary level	0	0
	Secondary level	0	0
	Diploma	6	1.56%
	Bachelor's degree	239	62.24%
	Postgraduate	116	30.21%
	Professional qualification	23	5.99%
Occupation /	Self-employed	19	4.95%
Employment	Government Employed	28	7.29%
- <b>-</b>	Private Sector Employed	337	87.76%

#### **Data Analysis**

To examine the datasets and test the proposed hypothesis, the researcher utilized the statistical software SPSS version 17.0. The following subsections represent the sequence in which the analytical testing was performed (IBM, 2021).

#### Absence of Outliers Among Cases

The data set was tested to indicate univariate outliers in the independent and dependent items. Outliers are values not in the +3.29 to -3.29 standard deviation range. No outliers were detected in all the datasets collected from the usable 384 participants (Tabachnick & Fidell, 2013).

#### Factor Analysis

The Factor Analysis (FA) test was performed on all items measuring independent variables to confirm whether the items for variables are simplified or not. The test establishes a link between the factors and their related variables, where the variables are grouped under the number of factors initially hypothesized (Shrestha, 2021).

The following methods are used in the FA testing. First, the Principal Components method

is concerned with the sequence of variances extraction and assigning them to hypothesized number of factors. Second, the Varimax Rotation method analyzes factors' structure and correlations between items included on the scale. It is an orthogonal rotation technique, meaning that interpretation of the factors is much easier through its reduction of the number of variables that each factor is assigned (IBM, 2021). Third, the Kaiser-Meyer-Olkin metric of sampling adequacy (KMO) was used to test the sample adequacy of each variable. The higher the variable, the better the data suitability for FA. Values are on a scale of 0.0 to 1.0, where the minimum acceptable value is 0.60; a value of 0.8 or bigger is found to be adequate (Shrestha, 2021; Tabachnick & Fidell, 2013). Fourth, Bartlett's test of sphericity is necessary to determine whether the factors are orthogonally perfect or not. If the correlation matrix of the variables deviates from the identity matrix, the factor analysis will be unacceptable (IBM, 2021). The Bartletts test of sphericity p-value should be significant <0.05. Fifth, the Eigenvalue that demonstrates a factor's capability to explain the total variance should not be less than 1.0 for all the components (Shrestha, 2021).

**Table 3**Factor Loading for Independent Variable - Rotated Component Matrix

	Compon	Component	
	1	2	3
Factor: Attitude			
Buying a residential property in Dubai is a beneficial decision	.274	.862	.137
Buying a residential property in Dubai is a good idea	298	.870	.110
Buying a residential property in Dubai is a wise decision	.323	.874	.090
Buying a residential property in Dubai is an admired decision	.346	.789	.119
Factor: Subjective Norm			
My family thinks that I should buy a property in Dubai	.897	.307	.123
My family would want me to buy a property in Dubai	.898	.313	.158
My family agrees with me to buy a property in Dubai	.875	.349	.139
My family thinks that buying a property in Dubai is a wise decision	.887	.316	.119
Factor: Perceived Behavior			
have enough opportunity in making a decision to buy a property in Dubai, and I have eas access to the market.	y .164	.170	.781
have enough time to make a decision to buy a property in Dubai	,110	.163	.792
have enough money to pay the advanced payment to buy a property in Dubai	.052	.017	.794
have enough skills and knowledge about real estate to make my own decision If I woul like to buy a property in Dubai.	d .068	.142	.771
have complete control over buying a property in Dubai	.090	026	.727
Eignevalue	6.318	2.54	1.240
Total variance explained		77.6779	%
Kaiser-Meyer-Olkin MSA (KMO)		0.899	
Bartlett's test of sphericity – Approx. Chi-square		4328	
-df		78	
- Sig.		0.00	

The findings of FA confirmed that the model is based on the three initially hypothesized independent factors, and all items tested are loading on their proposed factors. Moreover, the findings revealed that the total variance explanation for the three independent factors is at

77.677%, the KMO measure of sampling adequacy is at a value of 0.899 (adequate), the Bartletts test of sphericity is at a 0.0 p-value (significant), and that the Eigenvalue values are higher than 1.0 for the three factors (significant).

**Table 4**Factor Loading for the Dependent Variable - Component Matrix

Factor: Intention	Components
I will continue to buy a property in Dubai in the future	0.899
I intend to buy a property in Dubai frequently in the future	0.918
I plan to buy a property in Dubai	0.930
I will try to buy a property in Dubai	0.866
I want to buy property in Dubai	0.782
Eignevalue	3.878
Variance %	77.551%
Kaiser-Meyer-Olkin MSA (KMO)	0.882
Bartlett's test of sphericity – Approx. Chi-square	1589
df	10
Sig.	0.00

The FA test on the dependent variables was carried out by proposing five questions to represent the dependent variable. The factor total variance explanation is 77.55%, the KMO measure of sampling adequacy was at 0.882 (adequate), the Bartletts test of sphericity shows a 0.0 p-value (significant), and the Eigenvalue is 3.87 (significant).

#### Reliability Analysis

The Reliability analysis test aims at understanding and studying the items comprising

this study's measurement scale. The Cronbach alpha test-consisting of a 0 to 1 value range- was conducted to gauge the instrument's degree of reliability. A 1.0 score indicates 100% reliability, while a 0.70 is the minimum acceptable value (Brown, 1997; Shrestha, 2021).

Table 5 demonstrates Cronbach's alpha values for the dependent and independent variables, indicating acceptable values above 0.70 for all items (Brown, 1997).

**Table 5**Reliability Testing of Independent Variables

Variables	No. of items	No. of items retained	Cronbach Alpha
Attitude	4	4	0.931
Subjective Norms	4	4	0.968
Perceived Behavior	5	5	0.843
Intention	5	5	0.927

#### **Descriptive Analysis**

The results of the independent variables — ATDs, SNs, PBCs — and the dependent variable

— Intention — descriptive analysis results are listed in Table 6.

**Table 6**Descriptive Analysis

Variable	Mean	Std. Deviation
Attitude	3.632	0.948
Subjective Norms	3.339	1.20
Perceived Behavior control	3.328	0.875
Intention	3.379	1.057

#### Multiple regression assumptions

Testing the multiple regression assumptions is done to ensure the dataset quality. These assumptions often underlie multiple regression, including six tests. Three of these conditions are targeted at the error terms of the regression equation; error terms are assumed to be homoscedastic, independent, and normally distributed. The other assumptions concentrate on the relations' functional form between independent and dependent variables: linearity, the absence of multicollinearity, and the absence of influential observations (Best & Wolf, 2015).

There exists a graphical method for analyzing linearity and normality. Linearity is imperative for using regression analysis as a descriptive analysis (Best & Wolf, 2015), where the dependent and independent relation elements are presumed linear. Usually, the regression model assumes that the distribution of residuals or error terms has a specific form. On the other hand, normality requires that the error terms settle into a normal distribution.

Figures 3, 4, and 5 visually illustrate that no linearity-related issues are present, whereas the standardized residuals are normally distributed.

Figure 3
Normal P-P Plot

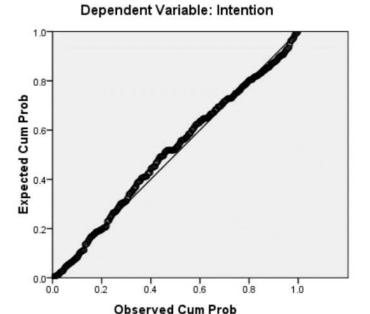


Figure 4
Scatterplot



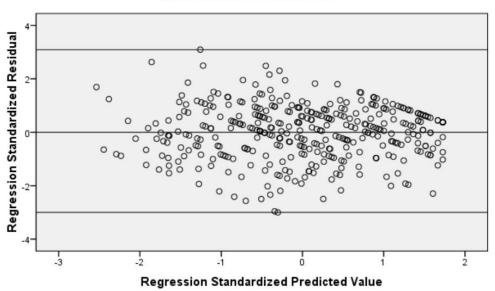
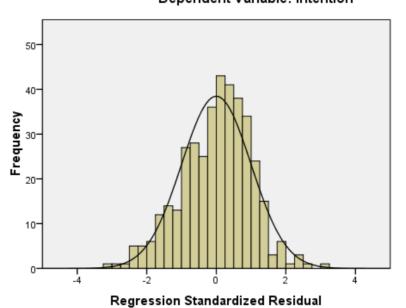


Figure 5 Histogram

# Dependent Variable: Intention



Mean =-6.84E-15 Std. Dev. =0.996 N =384 Figure 5 presents the typical bell shape with a P-P plot and a scattered plot. The standardized residuals are compared with the normal distribution. When examining the P-P plot, the data lies in a straight line, indicating no linearity and normality-related issues. In the scattered plot, the data is centralized, equally distributed in the chart, and falls between -3 and +3 (Fein et al., 2022).

The Homoscedasticity presumption relates to the dispersion of the model's error components or residuals. Alternatively, Heteroscedasticity describes a situation in which the variance of the residuals is not constant (Best & Wolf, 2015). If Heteroskedasticity is present, that highlights a violation in the assumptions of the linear regressions model; Heteroskedasticity must not be present in the residuals (White, 1980). The Breusch-Pagan test is used to examine whether the variance of the dependent variable's errors has any dependency on the value of the independent variables (IBM, 2021). Using the SPSS, the test results exhibit a significant value of 1.0 (> 0.05), concluding that there is no Heteroskedasticity in the data (Zeileis & Hothorn, 2002).

To test the independence of residuals - in cases matching the selection condition- the Durbin-Watson test examines the serial correlation of the residuals and case-specific diagnostic data (Best & Wolf, 2015; IBM, 2021). The test result was found to be 1.873, close to the ideal value of 2.0, relaying that there is no significant autocorrelation in the data (Best & Wolf, 2015; Mourougan & Sethuraman, 2017).

A situation of collinearity between the independent variables of a model or the redundancy in the set of variables is referred to as multicollinearity (Sykes, 1993). When testing collinearity diagnostics (where none of the independent variables have a high correlation between them), it was found that collinearity rests at 0.8. Simultaneously, the condition index accumulative value was 12.91 (<30.00). When the results of the collinearity statistics in coefficient analysis were interpreted, the tolerance of all variables was below 1.0, and the

collinearity variance influencing factors (VIF) was below 10. This concluded that the model has no collinearity and no overlap amongst the independent variables (Farrar & Glauber, 1964).

To check the individual sample cases' influence on fitted models (Best & Wolf, 2015), the researcher utilized Cook's distance value, in which the residual statistics distance analysis shows a maximum value of 0.044. 0.044, being less than 1.0, implies no outliers exist in the predictor variables data (Boussiala, 2020; Asemota & Asemota, 2022). Moreover, the value for all the dataset's standardized residuals lies between -3 and +3 (Fein et al., 2022).

#### Test for Hypothesis

While the multiple regression technique is focused on determining the relation between the independent and dependent variables, the regression analysis technique is focused on testing the proposed hypotheses.

The proposed hypotheses stated that the relation between the independent factors (ATDs, SNs, and PBCs) and the dependent factor (Intention) is one of positive correlation. To ascertain this relation, the researcher utilized the regression analysis technique. To produce — through the multiple regression technique— a straight line through the data set (to be significant), the relationship between the independent and dependent variables must be linear. Furthermore, the independent variables themselves must not be significantly linked amongst themselves ("Regression analysis," 2023).

The findings demonstrated in Table 7 show that R2 = 54.9%. Therefore, the findings exhibit that the independent variables taken together can account for 54.9% of dependent variable variation. Moreover, the model was found to be acceptable, as the F value was that of 153.9 and the p-value was that of 0.00 (R2 = 0.549, F(3, 380) = 153.9, p = 0.00). The overall regression is statistically significant. The fitted regression equation is: Predicted Intention = 0.388 (ATDs) + 0.376 (SNs) + 0.118 (PBCs) + 0.322 (constant), per one unit increase in each factor.

**Table 7** *Multiple Regression Analysis Results* 

Variable	Unstandardized Coefficient (B)	Standardized Coefficient Beta	P-Value
Constant	0.322		
Attitude	0.388	0.348	0.00
Subjective Norms	0.376	0.427	0.00
Perceived Behavior	0.118	0.098	0.007
R <sup>2</sup>	0.549		
Adjusted R <sup>2</sup>	0.545		
F	153.9		
Sig.	0.00		
Durbin-Watson Test	1.902		

When testing ATD's magnitude toward the purchasing intention of RE, ATD is found to be significant at 0.00 (p  $\leq$  0.05), Standardized Coefficients Beta was at ( $\beta$ ) =0.348, and a positive impact on the RE purchasing Intention existed ( $\beta$  = 0.348, p = 0.0). When analyzing the Standard Coefficient Beta analysis result, it was apparent that one increase of standard deviation in ATD resulted in a 0.348 Standard deviation unit increase in Intention. Then, the alternative hypothesis was accepted.

When testing SN's magnitude towards the purchasing intention of RE, SN is found to be significant at 0.00 (p  $\leq$  0.05), ( $\beta$ ) at 0.348, and a positive impact on the RE purchasing Intention existed ( $\beta$  = 0.427, p = 0.00). When analyzing the

Standard Coefficient Beta analysis result, it was apparent that one increase of standard deviation in Subjective norms results in a 0.427 Standard deviation unit increase in Intention. Then, the alternative hypothesis was accepted.

When testing PBC's magnitude toward the purchasing intention of RE, PBC is found to be significant at 0.007 (p  $\leq$  0.05),  $\beta$  = 0.098, and a positive impact on the RE purchasing Intention existed ( $\beta$  = 0.098, p = 0.007). When analyzing the Standard Coefficient Beta analysis result, it was apparent that one standard deviation increase in Perceived Behavior Controls resulted in a 0.098 Standard deviation unit increase in Intention. Then, the alternative hypothesis was accepted.

**Table 8**Hypotheses Testing Results Summary

Hypothesis	Accept / Reject
H1b the more positive the attitude, the greater the expatriates' intention to purchase real estate in Dubai	Accept
H2b the more positive the subjective norms, the greater the expatriates' intention to purchase real estate in Dubai	Accept
H3b The more positive the perceived behavioral control, the greater the expatriates' intention to purchase real estate in Dubai	Accept

#### **Implications**

It is of the findings' potential to aid researchers, policymakers, RE professionals, and developers in gaining valuable information. It can help the government, legislators, and RE

regulators in their objectives to formulate and refine the laws and regulations that promote property purchasing by the expatriates, also the same findings could assist the RE developers, marketing, and sales professionals to understand the factors influencing expatriates' purchasing intention —ATD, SNs, and PBCs, and accordingly allow to generate better sales and marketing strategies to positively influence their purchasing intention.

Also, the respondents' profile analysis is beneficial in better targeting potential buyers based their socio-demographic on characteristics. Considering the assumption that the suitably sized sample population is representative of the full population of buyers according to Saunders et al. (2009), the sample analysis of this study is expected to represent the whole population of potential RE buvers in Dubai. and the outcome of the analysis of respondents' socio-demographic profiles after applying the inclusion criteria could significantly help RE professionals to identify and detect potential property buyers, as 94% of the participants were

between the ages of 31 and 59, also, the approximate gender split of the sample is 20% females to 80% males, while the 3-member and 4-member family size is 56% of all categories when combined. Education level was significantly concentrated at bachelor's degree and higher educational levels, exceeding 98% of the included participants. The private sector-employed participants represented more than 87% of the sample members.

#### Comparisons

Comparing the results of the study conducted by other several researchers in several countries utilizing the TPB with the results of this research, it was found the three independent factors in most of these studies influence purchasing intention. Refer to Table 9.

**Table 9**Summary of the Most Relevant Studies to the Scope of this Research

Reference	Location	Dependent factor	Independent factors	Hypotheses test results
Al-Nahdi,	Jeddah, KSA	Property purchasing	ATD	ATD – Accepted
A.Habib &		Intention	SNs	SNs – Accepted
A.Albdour (2015)			PBCs	PBCs – Not Accepted
Tan (2013)	Malaysia	Green and sustainable	ATD	ATD – Accepted
		property purchasing	SNs	SNs – Accepted
		Intention	PBCs	PBCs - Accepted
Lei (2016)	Bangkok,	Property purchasing	ATD	ATD – Accepted
	Thailand	decision	SNs	SNs – Accepted
			PBCs	PBCs - Accepted
Judge et al.	Australia	Sustainable property	ATD	ATD – Accepted
(2019)		purchasing Intention	SNs	SNs – Accepted
			PBCs	PBCs - Accepted
This research -	Dubai, UAE	Property purchasing	ATD	ATD – Accepted
2023	,	Intention	SNs	SNs – Accepted
			PBCs	PBCs - Accepted

#### Conclusion

This research study has demonstrated the ability of the TPB to explain the purchase intention of properties by expatriates in Dubai. It was concluded that the intention to purchase residential properties in Dubai was influenced by ATD, SNs, and PBCs, with the SNs and the ATD

elements being more influential, respectively. The three independent factors—ATD, SNs, and PBCs—in combination explained 54.9% of the variance in the intention of purchasing RE properties in Dubai. On the other hand, the result of the respondents' profile analysis showed concentration in many of the potential buyers' socio-demographic brackets.

#### **Limitations and Delimitations**

Although additional factors may pose as moderating or mediating factors on the dependent factor of this study, the researcher decided to descope the identification of other potential factors. This is due to the lack of existing studies that established additional factors in successfully tested theoretical frameworks. Therefore, the researcher opted for this exclusion due to the time constraints. The research could not study the relationship between the independent factors and the actual Behavior, as these might be influenced by various contextual restrictions that cannot be identified; similarly, according to Ajzen (2011), the TPB model was criticized for its incapability of accurately acknowledging the PBCs and INT contributions to Behavior.

On the contrary, the researcher chose to study Dubai's real estate only, not including the geographically nearby Emirates, to render it more manageable considering the limited timeframe and the researcher's capacity. Furthermore, the researcher chose to focus on Dubai's expatriates as the main population for this research and excluding other categories of buyers such as the local Emiratis and international investors, the researcher found this main population suitable due to its high categorical volume compared to the rest of the categories.

#### **Recommendations for Future Studies**

This study has the potential to source more protracted studies. The researcher suggests several ideas for unfurling and maximizing opportunities for utilizing this study in future research, specifically in three areas:

First, the introduction of additional factors to the research model to increase the percentage of the variance found in the dependent variable since ATD, SN, and PBC only explained 54.9% of the variance in the dependent factor —INT, alluding to more room for additional factors. In this context, the researcher suggests three other potential factors to be tested: finance, financial literacy, and job insecurity.

Second, this study can be used as a starting point and a reference for coming studies in similar scopes, such as other real estate buyer categories or the expatriates residing in other Emirates or the nearby Arabian Gulf states' RE markets.

Finally, developing a framework that aims to forecast the demand for RE purchasing, which combines the identified factors, the concluded potential buyers' demographic data in this research, the traditional factors utilized in the traditional methods of RE demand forecasting, historical data, market trends, and seasonal cycles, based on which, from a practical standpoint, the framework could be applied to develop Al-based customers' outreach tools, which can be used to influence expatriates' Intention and also to forecast demand based on potential buyer's planned Behavior.

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#### Appendix A

#### Survey Questionnaire Informed Consent



#### Informed Consent

#### Title of Study

A study about factors influencing the real estate purchasing intention of the expatriates in Dubai.

#### Purpose of Study

The purpose of the proposed study is to identify the factors which are influencing the residential real estate purchasing intentions of the expatriate in Dubai.

#### Study Procedures

It's a descriptive quantitative study where the researcher will use the pre-developed questionnaire of a similar study which has been conducted in Saudi Arabia and published in 2015.

The questionnaire will be electronically administered to the target population to get their responses which will be further consolidated for analysis and answering the research questions.

#### Risks to Participants

There is no risk to the participant by participating in the study. Your valuable responses will help the researcher complete this study successfully. The participants' responses will be kept confidential and no personal data is collected in the research. Please be assured that your answers are anonymous, your identity will not be disclosed. Your responses shall be kept confidential and results will be used only for academic purpose. The data will be analyzed on aggregate basis for this study purpose.

#### Benefits

The research will be beneficial to participants in following ways:

- The study will provide an opportunity to identify the factor influences expatriates who work or live in Dubai towards purchasing real estate property in Dubai
- It will help the governmental organizations and regulatory bodies to analyze those factors for further enhancement to the real estate industry.

#### Confidentiality

The responses to this research study should be anonymous, study will not collect personal information such as name or date of birth etc. so as to keep the participants anonymity. All data file received will be coded and analyzed on aggregate level, also to safeguard and protect the participants confidentiality data will be password protected so that no one except the researcher can access it. After the use of information, the files will be discarded.

#### Contact Information

Should you have any questions, concerns, or clarifications regarding the survey or your right to participate in the survey, please do not hesitate to contact me at Amr.moawad@westcliff.edu

### Voluntary Participation

Your help with this research is strictly voluntary. It is your choice to take part in this research there is no incentives or rewards or any implied pressure to participate in the study.

## Principal Investigator

Amr Mohamed Ibrahim Moawad DBA Student Westcliff University +971 50 8

Amr.moawad@westcliff.edu

Signature:



#### Consent

By completing the online survey, I understand that I will be participating in the study, I freely consent to participate in this study. I've read, comprehended, and had a chance to ask questions about the material offered. I know that my participation is as a volunteer and that I am free to stop anytime.

Participant Signature	
Date / / 2022	

# Appendix B Survey Questionnaire Questionnaire Part 1 – Demographics of Participants

SURVEY QUESTIONNAIRE			
Instructions:  Please indicate your response to the following questions by ticking the appropriate choice  This section of the survey contains a list of information about you as participant in the survey.  Please check (x) the appropriate choide which describes yourself, but please fill in only one response for each item and please respond to all of the items.  If you need to change an answer, make an error and then circle your true response again.			
Part I - Demographic Information			
Tare Demographic information			
Age (Years)	Below 18 ( ) 18-30 ( ) 31-40 ( ) 41-59 ( ) 60 or above ( )		
Gender	Male ( ) Female ( )		
Marital Status	Single ( ) Married ( ) Other( )		
Number of family members in UAE	1() 2() 3() 4() 5 or above ()		
Citizenship	Emirati ( ) Expatriate ( )		
Education	Primary level() Secondary level() Diploma() Bachelor() Post graduate() Professional qualification()		
Occupation	Unemployed ( ) Retired ( ) Self-employed ( ) Government employee ( ) Private sector ( ) Others ( )		
Monthly Income	Below AED 10,000 ( ) AED 10,000 or above ( ) AED 18,000 or above ( ) AED 20,000 or above ( ) AED 25,000 or above ( )		

#### Questionnaire Part 2 - Participants' View of Purchasing Real Estate

#### Part II - Your view of purchasing real estate Instructions: Please indicate your response to the following questions by ticking the appropriate choice This section of the survey contains a list of statements that ask about your opinion of the purchasing of real estate property in Dubai. Please check (x) the appropriate number you actually believe is closest to your response to each statement using the scale below, with 1 being 'strongly disagree' through to 5 being 'strongly agree'. There are no right or wrong answers, but please fill in only one response for each statement and please respond to all of the statements. If you need to change an answer, make an error and then circle your true response again. STRONGLY DISAGREE (1) Strongly Disagree STRONGLY AGRE (2) Disagree DISAGREE NEUTRAL (3) Neutral (4)Agree (5) Strongly Agree Factor 1: Attitude Buying property in Dubai is a beneficial decision Buying property in Dubai is a good idea Buying property in Dubai is a wise decision Buying property in Dubai is an admired decision Factor 2:Subjective norms 1 2 3 5 My family thinks that I should buy property in Dubai My family would want me to buy property in Dubai My family agrees with me to buy property in Dubai My family thinks that buying property in Dubai is a wise decision Factor 3: Perceived behavior control 1 2 3 4 5 I have enough opportunity in making a decision to buy property in Dubai (I have easy access to the market) I have enough time to make a decision to buy property in Dubai I have enough money to buy housing to buy property in Dubai I have enough skills and knowledge about real estate to make my own decision, If would like to buy a property in Dubai. I have complete control over buying a property in Dubai Factor 4: Intention to Purchase Real estate 1 2 3 4 5 will continue to buy property in Dubai in the future intend to buy property in Dubai frequently in the future plan to buy property in Dubai will try to buy property in Dubai want to buy property in Dubai