FACTORS AFFECTING CUSTOMERS' SATISFACTION ON BUYING RESIDENTIAL APARTMENTS

Shafig AL-Haddad, Princess Sumaya University
Abeer AL-Abbadi, Princess Sumaya University
Ibrahim AL-Haddad, Eötvös Loránd Universit
Mwfeg Haddad, Albalqa Applied University

ABSTRACT

The objective of this study is to investigate the factors affecting customer's satisfaction on buying residential apartments and to find out the effect of the quality of indoor and outdoor environments on the customers' buying behavior. The study uses survey responses received from customers to examine the main factors that may affect their satisfaction. A convenience sample of 401 survey responses received from customers. A regression test was used to analyze and examine the effect of buying residential apartments and customer satisfaction and the impact of indoor and outdoor quality. The results of this study found that there is a positive impact which means that any improvement in the indoor and outdoor factors will increase the demand of purchasing residential apartments, and there is a positive impact which explained that any upgrading and raising on outdoor factors will increase the purchasing of residential apartments.

Keywords: Customer Satisfaction; Residential Apartment; Buying Behavior; Covid-19; Jordan.

INTRODUCTION

Real estate in Jordan has significant importance in the growth of the economy. It offers many jobs and opportunities due to the demand for industrial goods such as concrete, steel, stones, paint, cement, interior needs like furniture and suchlike. Recently, the contribution of real estate reaches around 2% of Jordanian GDP. In return, the real estate sector experienced a decline of around 17.9% per year in 2017. This turnover in economic growth creates many opportunities for entrepreneurs to restructure their ideas in the real estate sector. This increase in the economic scope makes real estate expand. On the other hand, the middle class of the Jordanian population has stability in income; this point raises the demand for residential apartments instead of independent houses.

The migration of families from the villages to the capital Amman also increases the demand for residential apartments. Due to the employment opportunities in the capital and the variety of income sources, the real estate has grown. This situation leads to renting and buying of residential apartments, which in turn derives the residential apartments demand. Recently, many types of research have shown the attributes of a customer of willingness to purchase residential apartments. These attributes mainly include internal factors and external factors such as location, price, overpopulation, ventilation, humidity, an internal division of the apartment, and so on. When these attributes are understood clearly, it increases the customer's willingness to purchase a residential

apartment and encourage them to invest in the real estate sector. Thus, increase the overall growth of the real estate sector in Jordan.

Recently, there has been a high number of empty apartments in Amman that are up for sale, but the demand is at a low level due to the global pandemic caused by the Covid-19 virus. This created a gap between the real estate levels of supply and demand. Since the aim of this study is to examine the factors that affecting customers satisfaction on buying residential apartments, and according to the nature of two of the researcher's work with former customers that have previously bought at least one apartment, the need to explore two factors that can affect the customer satisfaction and consequently affect the quality of the apartments.

Purchasing a house or an apartment is a significant decision that people make, and it requires gathering a lot of data and information regarding its specifications (Hua Kiefer, 2007). Marketing plays a big role in the success of any business. This study concentrates on the factors that affect purchasing a house or an apartment; this type of research has not much been investigated in the Jordanian market, especially in real estate. This type of businesses depends on many factors for purchasing, from investigations and field survey, researchers classified some of the important factors affecting the decision to buy a house or an apartment and they are form, views, decoration, entrance, design, finishing, price, advertising, credibility, reputation, income, interest, apartment area, conversion and taxes. (Haddad et al., 2011).

Customer satisfaction is an important factor in the development of the construction process and customer relationship. Construction enterprises face-increasing competition, greater attention continues to be placed on customer relationships, and satisfied customers. Customer satisfaction might enable construction enterprises to differentiate themselves from their competitors and create sustainable advantage. Satisfaction has become one of the issues for construction enterprises in their efforts to improve quality in the competitive market place.

The researchers focus on customer's satisfaction with residential apartments and what are the main preferences based on the attributes of the apartments of the Jordanian residential apartments market. This study focuses on the main requirements and needs that affect their willingness to purchase a residential apartment. The researchers have considered the main attributes that affect the customers' satisfaction both indoor or outdoor factors, and it considers as a key of the main characteristics of the willingness of purchasing a residential apartment or a building. The paper also tries to identify the main factors that affect the preferences of customers for choosing a residential apartment in Jordan. The paper discusses the main factors that have a significant impact on customers' satisfaction either indoor or outdoor environmental quality and examines the overall satisfaction. It relates to the argumentation and theories on preferences of residential apartments comfort.

This study seeks to answer the following questions:

What are the outdoor factors that affect customer satisfaction in purchasing residential apartments?

What are the indoor factors that affect customer satisfaction in purchasing residential apartments?

How satisfied are the customers with purchasing residential apartments?

The objective of this study is to investigate the customer's satisfaction with the residential apartments and discuss how the quality of indoor and outdoor environment affect the customers buying behavior, due to the interaction between the customers and the apartment and the distinctive knowledge, makes the customer aware of the apartment performance. The main objective of this

study is to investigate the overall satisfaction of customers on buying residential apartments and their perception of the residential apartment's quality and factors that may cause customers dissatisfaction.

The importance of this study can be summarized by the effect on the benefits of the Jordanian economy considering that real estate plays an important role in the economy and society today. The greater demand for real estate justifies the need for better quality residential apartments. Thus, real estate companies will apply the recommended approach derived from the results of this study and will raise the level of residential apartments. Engineers association will be guided on what should be their performance in the building process. For the researcher, this study will discover new critical points in the building construction process that affect purchasing a residential apartment that many researchers were not able to discover. This study tested the indoor and outdoor environment that has a positive effect on the apartment's values. Several previous studies did not mention the direct impact of the apartment's characteristics on customer satisfaction; many factors affected customer satisfaction, to control preference for the residential apartments. This paper will present the main measurements that residential buyers evaluate when they are looking for an apartment to buy.

LITERATURE REVIEW

Many research papers and studies have been trying to recognize what is the scenario of the real estate sector especially the residential apartments and which characteristics that customers prefer when they purchase a residential apartment, and what the demand pattern is in the purchasing process of a residential apartment. This paper has tried to identify the main factors for housing attributes or the framework of the housing to understand the preferences and the multiple choices that customers need when they purchase a residential apartment. Soodan and Pandey (2016) mentioned in their research that there are different emotional chords of consumers targeted by marketers to generate sales and effectively the marketing program.

Customer citizenship behavior and customer participation behavior on social media platforms positively affect the rendering of innovative products, and an increase in social co-creation activities, as moderator, or mediator positively affects customer citizenship behavior on product innovativeness, and the effects of customer participation behavior on product innovativeness (Moghadamzadeh et al., 2020).

Customer satisfaction for the residential apartments from the construction aspect, Milion et al. (2017) found out the troubles that face the customers have a big impact on their satisfaction; and, the interview method in collecting data about the troubles of residential apartments is not reliable. The analyzed data showed that no important correlation between the overall customer's satisfaction with the building design and quality. These data can be an indicator to target specific characteristics and features that will raise the overall satisfaction of customers if they apply the recommendation to be a guide to the construction companies to improve the quality of the construction process.

The customer satisfaction of a residential apartment in Hong Kong, Hui & Zheng (2010) found that the main factors that affect customer satisfaction are management and service quality, they also noticed that the quality of service affects customer satisfaction more than management quality. Customer satisfaction is influenced by service quality more than any other variable; many citizens observed that all the factors work in parallel to characterize the correlation variables from

an empirical perspective, and some of the factors should be taken into consideration by housing companies and focus on the facilities.

The key element to reach the customer's satisfaction is understanding what the customer's needs are. The insight of this study is to provide a new perspective on the relationships between management quality, service quality, and customer satisfaction. For the first time, it divides the Flexible Manufacturing System (FMS) into two interrelated groups, which indicate two latent variables (management quality and service quality). Then explained the Search Engine Marketing (SEM), a new approach that was used as a tool to represent the relationships between latent and observed factors. The new contributions of this study are to raise the overall understanding of those two relationships that affect customer satisfaction. (Gupta & Malhotra, 2016).

Concerning the factors affecting buying real estate in Amman, Haddad et al. (2011) found that Jordanian people adopt the main constructs when buying residential apartments, including "aesthetic, economic, marketing, geographic, and social constructs". The study found that respondents would adopt the main constructs when buying residential apartments, including "aesthetic, economic, marketing, geographic, and social constructs". On the other hand, the study concluded that there were significant differences in decision making regarding buying residential apartments according to the sample gender. This study revealed that there were no significant differences according to the marital status or educational level. This study had notable practical implications for researchers and practitioners in the field of real estate. It might help individuals and decision-makers in the organization to select suitable apartments that could satisfy their requirements. The constructs of this study could be used as a practical framework when an organization or an individual would buy an apartment. Moreover, findings of the study regarding demographic characteristics had considerable practical use mainly for real estate organizations to draw their attention to the demographic factors that might affect the decision.

Grum (2017) in his study entitled the Impact of facilities maintenance on user satisfaction tried to categorize the characteristics of customers according to demographics such as gender, age, ownership of the apartment, location, lifestyle, how much they pay when they face a housing problem and the overall satisfaction with the residential apartment where they live. The hypothesis that they followed expressed significant satisfaction. The main aim of the study was to specify the degree of customer satisfaction regarding the living situation and the degree of how they maintain their facilities, this degree of customer satisfaction based on many factors like environmental, economic, social, political, etc.

Gupta and Malhotra (2016), in their study entitled, determining customers' preferences for housing attributes in India most of the citizens in Delhi prefer low-rise residential apartments regarding their income sources. Customer buying behavior is affected by multiple variables, such as family size, marital status, or the purpose of buying a residential apartment, these factors play a significant role in the Indian context. Most of the companies' planning will launch residential apartments and focus on more specific details such as apartment design, apartment size, and try to build a residential apartment with three levels instead of four, six, or residential complex. The biggest segment of the population prefers low price residential apartments.

Lundgren and Wallentin (2016) in their study entitled, measuring unobservable factors in residential developments: a structural equation approach added good value to the residential apartment's literature. It specialized in renting residential apartments and clarified the relationship between noises with the perceived high standard for the residents, the main approach that they

have followed in collecting data was straightforward; it was a qualitative data collection method about potential renters of residential apartments. Their approach recommended by Liao et al. (2015) who suggested confirmatory measurement analysis as an approach to understanding the unobservable factors that affect customer renting behavior and his choices in selecting his residential apartment. However, the results showed that a few unobservable factors had an important effect on the overall customer perception and satisfaction. Their hypotheses were concerned with the factor structures in their structural model that detects a statistical significance of the relationships in the structural model.

Study of factors affecting customer satisfaction for residential flats in Surat and Ahmedabad city in Gujarat Region of India, Piyush et al. (2016) found out the factors that affect customer satisfaction for residential apartments and flats. The research seeks to focus on the analysis of the factors affecting customer satisfaction specifically for residential apartments and flats. This study had been applied in two cities of the Gujarat of India- Surat and Ahmedabad. This research is very important to find out the factors affecting customer satisfaction in the construction industry. Factors identified relative important index (RII) suggested carrying out the ranking of the above factors.

Factors influencing the home-purchase decision of buyers of different types of apartments in India, Sundrani (2018), investigated factors that influence the buying of an apartment, 284 respondents from buildings located on the outskirts of Pune city participated in the survey for this study. 10 factors were considered. The study finds out that price is significantly the most important factor for buyers, followed by product, and then followed by location.

Identifying the preference of buyers of single-family homes in Dammam, Saudi Arabia, Mohanna & Alqahtany (2019) aimed a study to find out the preferred characteristics of consumer buyers of single-family homes in Saudi Arabia with a concentration on the city of Dammam. An interview where had been used with 177 owners of single-family homes who purchased between the period of 2010 and 2017. The results of this study found that homes were divided into three types: villas, detached duplexes, and semi-detached duplexes, and more than 75% of the owners purchased their homes through loans from either banks or the government. The researchers found that "the advantages of the detached duplex, particularly its privacy level, over other types of single-family homes induce homebuyers to choose this home type".

Varolgüneş (2019) in his study evaluation of vernacular and new housing indoor comfort conditions in a cold climate- a field survey in eastern Turkey This comparative research aims to study the differences between vernacular and new houses in terms of indoor occupant satisfaction and visual comfort in Turkey with cold climatic conditions. This study-determined had used a survey applied to vernacular and new houses. The data gathered from the respondents and the questionnaire was mainly designed for three objectives: first acquiring general information about houses; second, acquiring general information about occupants and the third is inquiring about the physical comfort satisfaction of the occupants.

The researcher found out that the data obtained, occupant satisfaction was higher in vernacular houses than in new houses.

The research titled Impact of macroeconomic indicators on housing prices, Hutson et al. (2019), aims to investigate the influence of five major macroeconomic factors, namely crude oil price, 30-year mortgage interest rate, consumer price index, Dow Jones industrial average, and unemployment rate, on housing prices over time. The finding concluded that housing price interest

rates have significant effects on housing prices, this indicates that current changes in house prices influence people's expectations of future prices.

Gokmenoglu and Hesami (2019) in their study entitled real estate prices and the stock market in Germany: an analysis based on hedonic price index. This research aims to investigate the relationship between these two markets to provide valuable insight into the process of portfolio optimization and security selection. "This research tested the long-run relationship between residential prices and stock market index in Germany for the period of 2005-2017. The study used the Hedonic House Price Index as a proxy for real estate prices and DAX30 as a proxy for stock prices. Moreover, three additional variables, namely, consumer confidence, credit availability, and supply of mortgage loans, are incorporated as control variables to assess the robustness of the results". The results of this study indicate that there is a relationship between stock prices and real estate prices, and there is no diversification benefit from allocating stock and real estate assets in a portfolio.

Nejati et al. (2011) found that the subjective norms on purchase in the Middle East affect the ecological purchase intentions which directly resulted in a significant purchase behavior while the influence of attitude towards the environment on these purchases' intentions was not as significant.

The contribution of the study is that according to the best knowledge of the researchers, this research is the first study in Jordan to handle this issue, the researchers faced a problem that the customer does not have good technical expertise that helps them to precisely point out the troubles in the units and its construction. Many variables affect these troubles and one variable can cause big trouble, like the features of the building area, the regulations of the constructions, the customer's situation, the techniques used in the construction process, and the geographical location of the building. As a result, some troubles cause negative effects in this sample, but it is not valid for other projects and the researchers cannot expect these negative effects in other construction projects. However, if the construction companies followed the approach mentioned in this paper, it would lead their projects to a significant improvement in its process and it is the first study in Jordan that empirically investigates the factors affecting customer satisfaction on buying residential apartments and finding the effect of the quality of indoor and outdoor environments on the customers' buying behavior. The results of this research will be useful and helpful to the real estate sector and communities in the planning of building apartments for the next years to match the wants and needs of the Jordanian and foreign customers.

THEORETICAL FRAMEWORK

This part showed the theoretical framework model of study variables and gave details for each one of the variables to build the main research recommendation. This study surveys the significance of customer satisfaction and the main factors that affect customer satisfaction with buying behavior. Figure 1 shows the independent variables (outdoor factors, indoor factors), and the dependent variable (customer satisfaction), and displays the effects of the outdoor and indoor environment on customer satisfaction.
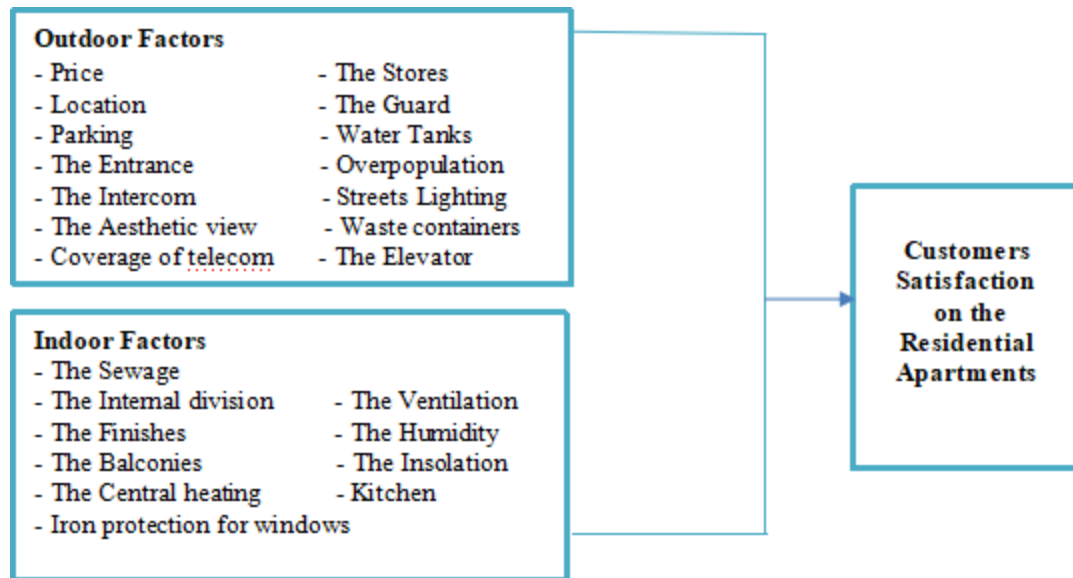
Outdoor Factors
- Price
- Location
- Parking
- The Entrance
- The Intercom
- The Aesthetic view
- Coverage of telecom

- The Stores
- The Guard
- Water Tanks
- Overpopulation
- Streets Lighting
- Waste containers
- The Elevator

Indoor Factors
- The Sewage
- The Internal division
- The Finishes
- The Balconies
- The Central heating
- Iron protection for windows

- The Ventilation
- The Humidity
- The Insolation
- Kitchen

Customers Satisfaction on the Residential Apartments

FIGURE 1

THEORETICAL FRAMEWORK

Research Hypotheses

HO1: There is no statistically significant effect of outdoor factors (Price, location, parking, the entrance, the intercom, the aesthetic view, coverage of telecom, the stores, the guard, water tanks, overpopulation, street lightning, waste containers, the elevator) on customer's satisfaction in buying residential apartments at (α ≤ 0.05)

HO2: There is no statistically significant effect of indoor factors (The sewage, the internal division, the finishes, the balconies, the central heating, iron protection for windows, the ventilation, the humidity, the isolation, kitchen) on customer's satisfaction in buying residential apartments at (α ≤ 0.05)

RESEARCH METHODOLOGY

Research Type

The study adopts both descriptive as well as analytical approaches to carry out the research results. The study investigates the internal and external factors affecting customer satisfaction in buying residential apartments. The study is also an analytical study in a way because it analyses the relationships between the variables proposed.

The population of the Study

The population of the study consists of all people who bought an apartment in Amman, in the last six months.

Sample of the Study

The sample of this study is a convenience sample. It is a type of sampling where the first available primary data source is used for the research without additional requirements, it includes owners of the apartment in the northern part of the city of Amman. This sampling method involves getting participants wherever you can find them and typically wherever is convenient, according to Sekaran & Bougie (2009) if the population size is bigger than 222640, the sample size will be 384. The researchers distributed 450 questionnaires through construction companies which then delivered the questionnaires to their existing customers who had purchased apartments through them. The construction companies collected the responses which were then forwarded back. The responses number was 409 responses, 8 were removed due to incomplete answers, and the rest of the 401 were used for analysis.

Tools and Measures of the Study

The questionnaire was developed after considering and choosing the related and suitable studies and measuring tools from the literature to develop a questionnaire that covers all the variables in this research according to the Likert scale with modifications that can match the content and subject of this study. Whereas, the responses are in five categories, each given a value as follows: strongly agree, agree, agree or disagree, disagree, and strongly disagree. Their values were 5, 4, 3, 2, and 1 respectively.

The analysis based on 401 survey responses received from a convenience sample of customers, which leads us to make a quantitative approach in the analysis of this paper and, therefore, starts by examining the data collected through surveys to find out the customer's satisfaction levels of residential apartments toward buying behavior of an apartment in Amman, Jordan. Means and multiple regression analyses were used to examine the effect of outdoor and indoor factors on the satisfaction of buying residential apartments.

Questionnaire Validity

Before distributing the questionnaire, it was reviewed by some Ph.D. holders in the fields of engineering and business, who related directly to the topic of the study. Their valuable notes had taken into consideration to approve the validity of the questionnaire. The researchers used SPSS to analyze data, mean, standard deviation, and multiple regression which then was used to investigate and test the hypotheses.

STUDY FINDING, ANALYSIS AND DISCUSSION

Normality & Skewness Tests

Skewness and Kurtosis tests were used to test the normality of the data. These tests conducted through SPSS to indicate the normality of the research data, the analyses showed that the skewness varied between (-0.788 to -0.455) whereas the Kurtosis varied between (-1.114 to 0.750). This indicates a normal distribution of the data (Joanes & Gill, 1998).

Reliability

Cronbach alpha utilized to estimate the reliability of information gathering instruments and their internal matchmaking, which can be determined as an internal matchmaking coefficient. On the other hand, the value of Cronbach's alpha must be > 0.70 to be agreeable (Sekaran, 2003). The testing of reliability for all variables in the current research was (0.96) which is highly reliable; it observes that all value was high and gives a high level of matchmaking. Outdoor variable = 89%, Indoor variable = 90% and Satisfaction variable = 85%.

Multi Collinearity Statistics Test

Before starting the process of analyzing the data collected and validating the hypotheses of the study, it was necessary to verify that the data were suitable for correlation analysis. Multicollinearity testing was used to test the validity of the study tool. All variables must be free from multicollinearity. The results of the analysis illustrate the absence of a multicollinearity problem, the Variance Inflation Factor (VIF) was found to be less than 5, the results indicate that the VIF is within strict internationally recognized recommendations such as Rogerson (2001), who recommended maximum value of five.

Means and Standard Deviation of the Research Variables

The researchers analyzed the data by testing the mean and standard deviation for each variable individually. Mean considered high, medium, or low according to the following values: (1 to 2.33) low mean value, (2.34 to 3.66) medium mean value, (3.67 to 5) high mean value. Below is a summary of the means and standard deviations of each variable (Table 1).

TABLE 1				
THE PARTICIPANTS' AGREEMENT REGARDING OUTDOOR FACTORS, INDOOR FACTORS AND CUSTOMER SATISFACTION				
Factors	**N**	**Mean**	**Std. Deviation**	**Rank**
Outdoor Factors	401	3.119	0.747	Medium
Indoor Factors	401	3.064	0.844	Medium
Customer satisfaction	401	3.116	0.612	Medium

It seems that the general mean of all statements associated with customers' satisfaction on the outdoor factors is (3.119), which explained a medium agreement. Additionally, the standard deviation value is (0.747), which is normal and explained convergence on the participants. Moreover, the general mean of the overall statement associated with customers' satisfaction on the indoor factors is (3.064), which reflects a medium agreement. Additionally, the standard deviation value is (0.844), which is normal and explained convergence on the participants. Besides, the customer satisfaction of buying a residential apartment is (3.116) which reflects medium customer satisfaction on buying a residential apartment. In general, the sample attitude toward the statements was reflecting medium agreement toward the purchasing residential apartments.

The Outdoor Factors that Affect Customer Satisfaction in Purchasing Residential Apartments

To answer the first question, the multiple linear regression and F test utilized to test the impact of the independent variable (outdoor factors) on customer satisfaction the purchasing residential apartments; Table 2 and Table 3 display the acquired outcomes of the effect of outdoor factors on customer satisfaction of purchasing residential apartments. The R-value (0.787). R^2 points out that (61.9%) change in the purchasing residential apartments explained that outdoor factor and the other remains proportion (38.1%) explained by other factors. The value of F is (44.815), which is more than the tabulated F. And the sig. value is (0.000) less than the significant level ($\alpha \leq 0.05$), therefore the researchers reject the null hypothesis and conclude that there is a statistically significant effect of outdoor factors on customer satisfaction in buying residential apartments at ($\alpha \leq 0.05$).

TABLE 2

THE EFFECT OF OUTDOOR FACTORS (TOGETHER) ON CUSTOMER SATISFACTION OF PURCHASING RESIDENTIAL APARTMENTS

Variables	R	R^2	Adjusted R^2	Std. Error	Sig.
Constants	0.787	0.619	0.605	0.384	0.000

TABLE 3

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	92.643	14	6.617	44.815	0.000[b]
	Residual	56.997	386	0.148		
	Total	149.640	400			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Elevator, Location, Overpopulation, Price, Store, Telecom comp, Guard, Parking, Street slighting, Water tank, Entrance, Aesthetic, Waste Container, Intercom

Table 4 gives in detail the significance level of each concern in the outdoor variables as previously mentioned. There are no statistically significant effects of the barking, entrance, intercom, water tank, 0verpopulation, street lightening, and elevator at the level of $\alpha \leq 0.05$. On the other hand, there are statistically effects of the Price, location, guard, aesthetic, store, telecom companies, and waste container at the level of $\alpha \leq 0.05$.

TABLE 4					
THE EFFECT OF OUTDOOR FACTORS ON CUSTOMER SATISFACTION OF PURCHASING RESIDENTIAL APARTMENTS					
Model		Unstandardized Coefficients		Standardized Coefficients	*t*	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.214	0.090		13.438	0.000
	Price	0.079	0.020	0.146	3.988	0.000
	Location	0.043	0.022	0.078	1.970	0.050
	Parking	0.016	0.021	0.032	0.771	0.441
	Entrance	-0.039	0.027	-0.070	-1.406	0.160
	Intercom	0.038	0.027	0.080	1.419	0.157
	Guard	0.063	0.023	0.131	2.742	0.006
	Aesthetic	0.098	0.026	0.191	3.754	0.000
	Store	0.060	0.020	0.125	3.010	0.003
	Water tank	0.026	0.026	0.044	1.007	0.314
	Telecom comp.	0.099	0.021	0.194	4.604	0.000
	Overpopulation	0.035	0.022	0.063	1.625	0.105
	Streets lighting	0.037	0.026	0.068	1.416	0.158
	Waste Container	0.054	0.026	0.106	2.042	0.042
	Elevator	0.019	0.021	0.039	0.935	0.351
a. Dependent Variable: Satisfaction						

The Indoor Factors that Effect on Purchasing Residential Apartments

To answer the second question, the multiple linear regression test utilized to test the effect of the independent variable (indoor factors) on the dependent variable (customer satisfaction of purchasing residential apartment); Table 5 and Table 6 display the outcome of the correlation between indoor factors and the customer satisfaction. The R-value (0.801) refers to the effect of

the independent variable (indoor factors) on the dependent variable (customer satisfaction of purchasing residential apartments). R^2 for purchasing residential apartments shows that 64.1% change in the purchasing residential apartments explained by indoor factors, and another remains proportion (35.9%) explained by other factors. The value of F is (69.667), which is more than the tabulated F. And the sig. value is (0.000) less than the significant level ($\alpha \leq 0.05$), therefore the researchers reject the null hypothesis and conclude that there is a statistically significant effect of indoor factors on customer satisfaction in buying residential apartments at ($\alpha \leq 0.05$).

TABLE 5

CORRELATION BETWEEN INDOOR FACTORS AND CUSTOMER SATISFACTION OF PURCHASING RESIDENTIAL APARTMENTS

Variables	R	R^2	Adj. R^2	Std. Error	Sig.
Constants	0.801	0.641	0.632	0.371	0.000

TABLE 6

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	95.935	10	9.593	69.667	0.000[b]
	Residual	53.705	390	0.138		
	Total	149.640	400			

a. Dependent Variable: Satisfaction

b. Predictors: (Constant), Kitchen, Balconies, Central heating, Ventilation, Finishes, Iron protection, Sewage, Internal division, Isolation, Humidity

To answer the second question, the multiple linear regression test utilized to test the effect of the independent variable (indoor factors) on the dependent variable (customer satisfaction of purchasing residential apartment); Table 5 and Table 6 display the effect of the indoor factors and customer satisfaction. The R-value (0.801) refers to the effect of the independent variable (indoor factors) on the dependent variable (customer satisfaction of purchasing residential apartments). R^2 for purchasing residential apartments show that 64.1% change in the purchasing residential apartments explained by indoor factors, and another remains proportion (35.9%) is explained by other factors. The value of F is (69.667), which is more than the tabulated F. And the sig. value is (0.000) less than the significant level ($\alpha \leq 0.05$), therefore the researchers reject the null hypothesis and conclude that there is a statistically significant effect of indoor factors on customer satisfaction in buying residential apartments at ($\alpha \leq 0.05$).

STUDY FINDINGS

The findings of the study concluded on an agreement of the factors affecting customers' satisfaction of buying residential apartment statements and variables that might influence their level of satisfaction.

- There is a statistically significant effect of outdoor factors on customer's satisfaction of buying residential apartments at ($\alpha \leq 0.05$), and this result goes in line with Hui & Zheng (2010).
- There is a statistically significant effect of indoor factors on customer's satisfaction in buying residential apartments at ($\alpha \leq 0.05$).
- There is good customer satisfaction in buying a residential apartment in Amman.
- There are statistically significant effects of the price, location, guard, aesthetic, store, telecom companies, and waste container at the level of $\alpha \leq 0.05$, and this result goes in line with Hutson et al. (2019), Sundrani (2018) and Gupta & Malhotra (2016) about the price effect, and goes in line with Sundrani (2018) about price and location.
- There are statistically significant effects of the balconies, finishes, humidity, ventilation, sewage, isolation, and kitchen at the level of $\alpha \leq 0.05$.
- There are no statistically significant effects of the barking, entrance, intercom, water tank, overpopulation, street lightening, and elevator at the level of $\alpha \leq 0.05$.
- There are no statistically significant effects of the internal division, central heating, and Iron protections at the level of $\alpha \leq 0.05$.

RECOMMENDATIONS

The study suggests the following recommendations:

- The residential real estate contract should consider the top-most preferences to the main factors that customers theorize in their decision-making procedure before their active deal residential apartments.
- The real estate companies should take into consideration the cost and the price of the flat and apartment.
- The real estate companies should concentrate on providing balconies, and consider the finishes, humidity, ventilation, sewage, isolation, and kitchen.
- The residential real estate contractor should focus more on external and internal factors that attract customers to decide on holding apartments.
- Make more research that supports more samples and compares market factors between different locations.

REFERENCES

Gokmenoglu, K., & Hesami, S. (2019). Real estate prices and the stock market in Germany: an analysis based on hedonic price index. *International Journal of Housing Markets and Analysis*, *12*(4), 687-707.

Grum, B. (2017). Impact of facilities maintenance on user satisfaction. *Facilities*, *35*(7/8), 405-421.

Gupta, V., & Malhotra, G. (2016). Determining customers' preferences for housing attributes in India. *International Journal of Housing Markets and Analysis*, *9*(4), 502-519.

Haddad, M., Judeh, M., & Haddad, S. (2011). Factors affect buying the real estate an empirical investigation in real estate in Amman. *Research Journal of Applied Sciences, Engineering and Technology, 3*(3), 234-239.

Hua Kiefer, M.A. (2007). *Essays on applied spatial econometrics and housing economics*. PhD Thesis, Ohio State University, USA.

Hui, E., & Zheng, X. (2010). Measuring customer satisfaction of FM service in the housing sector: A structural equation model approach. *Facilities*, *28*(5/6), 06-320.

Hutson, M., MacDonald, I., & Lin, C. (2019). Impact of macroeconomic indicators on housing prices. *International Journal of Housing Markets and Analysis*, *12*(6), 1055-1071.

Joanes, D., & Gill, C. (1998). Comparing measures of sample skewness and kurtosis. *Journal of the Royal Statistical Society: Series D (The Statistician)*, *47*(1), 183-189.

Liao, F., Farber, S., & Ewing, R. (2015). Compact development and preference heterogeneity in residential location choice behaviour: A latent class analysis. *Urban Studies, 52*, 314-337.

Lundgren, B., & Wallentin, F. (2016). Measuring unobservable factors in residential developments: a structural equation approach. *Journal of European Real Estate Research*, *9*(3), 250-272.

Milion, R., Alves, T., & Paliari, J. (2017) Impacts of residential construction defects on customer satisfaction. *International Journal of Building Pathology and Adaptation*, *35*(3), 218-232.

Moghadamzadeh, A., Ebrahimi, P., Radfard, S., Salamzadeh, A., & Khajeheian, D. (2020). Investigating the role of customer co-creation behavior on social media platforms in rendering innovative services. *Sustainability*, *12*(17), 1-21.

Mohanna, A., & Alqahtany, A. (2019). Identifying the preference of buyers of single-family homes in Dammam, Saudi Arabia. *International Journal of Housing Markets and Analysis*, *13*(2), 165-184.

Nejati, M., Salamzadeh, Y., & Aidin Salamzadeh, A. (2011). Ecological Purchase behaviour: insights from a Middle Eastern country. *International Journal of Environment and Sustainable Development, 10*(4), 417-432.

Piyush, R., Bhatt, R., & Pitroda, J. (2016). Study of factors affecting customer satisfaction for residential flats in Surat and Ahmedabad city in Gujarat Region of India. *International Research Journal of Engineering and Technology*, *3*(3), 1-8.

Rogerson, P. A. (2001). *Statistical methods for geography*. London, SAGE Publications.

Sekaran, U. (2003). *The research method for business: A skill approach*. John Willey and Sons, Inc, New Jersey.

Sekaran, U., & Bougie, R. (2009). *Research methods for business: a skill building approach*. PhD Thesis, John Wiley and Sons University, United States.

Soodan, V., & Pandey, A. C. (2016). Influence of emotions on consumer buying behavior: A study on FMCG purchases in Uttarakhand, India. *Journal of Entrepreneurship, Business and Economics*, *4*(2), 163-181.

Sundrani, D. (2018). Factors influencing the home-purchase decision of buyers of different types of apartments in India. *International Journal of Housing Markets and Analysis*, *11*(4), 609-631.

Varolgüneş, K. (2019). Evaluation of vernacular and new housing indoor comfort conditions in a cold climate-a field survey in eastern Turkey. *International Journal of Housing Markets and Analysis, 13*(2), 207-226.