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AN EVALUATION OF GATED COMMUNITIES AS A PRODUCT: AN EMPIRICAL STUDY IN SULAIMANIYAH, IRAQ

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Abstract
This study aims to evaluate gated communities as a product from the customers' perspective. Garvin's 8 dimensions of product quality have been proposed as a survey questionnaire. 692 residents have been selected to conduct that survey. First, confirmatory factor analysis was performed to validate the questionnaire. Secondly, structural equation modeling has been proposed to evaluate the impacts of each product quality dimension on perceived quality. Finally, impact of perceived quality on satisfaction, repurchase intention and willingness to pay also have been evaluated. The seven determinants of evaluation for quality have explained 80 percent of the overall variance on perceived quality of houses in gated communities of Kurdistan Region. Moreover, it was seen that the serviceability was the most effective factor in the region which increased the perceived quality of the customers about gated communities. However, perceived quality was an important tool in the region to increase the satisfaction, repurchase intention and willingness to pay also.
Keywords: Gated Communities, Perceived Quality, Product Quality, SEM, Structural Equation Modeling.

1. INTRODUCTION

Gated communities are housing developments that have restricted access and separated from the rest of the city by a fence or a wall (Kovacs and Hegedus, 2014). Families and individuals select to live in these developments for assorted reasons such as security, recreational facilities, ethnicity and services…etc. Gated communities became a housing trend in various regions (Smigiel, 2014) in the world to supply convenient and adequate residents based on the willingness and expectations of the families and individuals. In Europe, gated communities emerged mainly for seasonal use, in east Asia and south Africa these developments emerged as a solution for ethnicity related problems and high crime rates (Breetzke, Landman, and Cohn, 2014) in US these gated communities mostly address urban elites…etc., these residential complexes are generally considered to be more luxurious and comfortable places to live.

There might be some questions need to be answered such as; Do the values provided in the concerning gated communities consistent or they show some changes based on expectations of householders? Or

how the house holders can be satisfied and may purchase one more house for their children or acquaintances in the future? What are the factors that affect the willingness to pay for the concerning residents? These questions are difficult to answer accurately without a market research. Beside this, the answers of these questions might be useful for the management of gated communities to manage the concerning gated community more efficiently. Further, due to the main objective of management of a gated community if profit, customer satisfaction, repurchase intentions of the customers for the next projects which might be constructed by the same company, and willingness to pay of the society for those projects, management of a gated communities need to know about the dimensions and parameters which influence those objectives. Beyond this, there are some main expectations of customers those need to be provided by management of gated communities. On the other hand, the answer of these questions can't be known without market research.

Thus, this study aims to evaluate the gated community developments in Sulaimaniyah, Kurdistan Region of Iraq as a product. Then the determinants that affect perceived quality, satisfaction, repurchase intention and willingness to pay of the householders for that product is evaluated. To do this, a survey questionnaire have been conducted. The dimensions of the survey have been abstracted from product quality article of Garvin (1984). The results of this research might be used by management of gated communities to improve the management efficiency not only in Sulaimaniyah, Kurdistan Region of Iraq, but all around the world. The factors which influence the perceived quality, customer satisfaction, repurchase intention, and willingness to pay may change but due to the explained variance of those dimensions were 80% for perceived quality, it proves that the usefulness of this questionnaire is very high for the gated communities

2. LITERATURE REVIEW

Gated communities are one of the emerging and trend topics in the recent years (Shamseldin, 2016; Hendrikx and Wissink, 2017; Deng, 2017; Zhao and Zou, 2017). It has been evaluated from social, economic, and political points (Hirt and Petrovic, 2011; Goix and Vesselinov; 2013; Wissink and Hazelzet, 2016; Sanders, 2014; Lai, 2016; Zhao, 2017). Gated community can be defined as a guarded place which is surrounded by walls or any kinds of borders to be secured and controlled by security guards (Lai, 2016). This place is shared by many different residents and householders. One of the reasons to live in these communities can be security (Gregory et.al, 2013).

Although most of the societies think that the gated communities are new concept of residence type, Adham (2005) has claimed that Fatimid Cairo was a gated city. Further, he says that the contemporary gated communities in Cairo are selected because they provide some advantages which a person cannot find inside the city. These advantages can be sequences as clean environment, special –most probably more civilized and/or homogenized- group of residents, green areas and parks (Roitman, 2005).

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According to Said (2013), gated communities are the places for prestigious and welfare. On the other hand, Csefalvay, (2011) has claimed that recently gated communities have become a manifestation of the revolt of the upper middle class against a grossly overcentralized government.

Kurdistan Region of Iraq is in the northern side of Iraq. Majority of the society is Kurdish. Beside Kurdish people, Turkmen and Arabic people are also living in the region. The regional map of the location is shown on the figure 1.

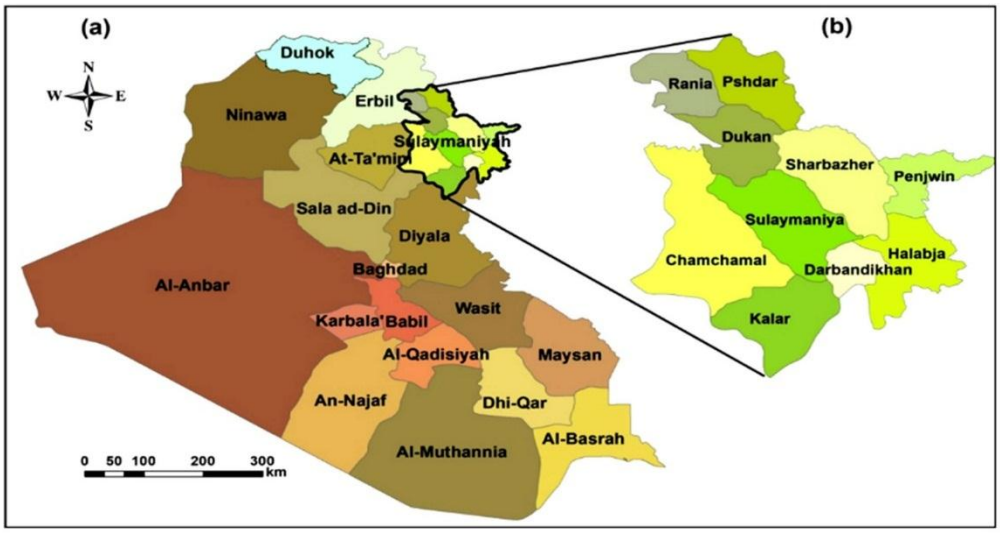

FIGURE 1 - MAP OF KURDISTAN REGION OF IRAQ AND SULAIMANIYAH (ZAKARIA ET AL., 2013)

Especially after the end of sanctions of United Nations on 2003 (Demir, 2014), gated communities have been built enormously. The reason might be renewing the Kurdistan Region. The number of the gated communities have increased more than 10 after 2008 in Sulaimaniyah, Kurdistan Region of Iraq.

The electricity supply is one of the main problems of the region. According to the predictions of Demir (2014), Kurdistan Region of Iraq was going to suffer in 2015 and 2016 more in case the government wouldn't either invest on electricity production or reduce the consumption down to an economic way by reducing the waste consumption. It is currently seen that the electricity is one of the biggest problems of the region. Beside this, the gated communities are the places where the electricity service is provided seven days and 24 hours by generators even in case there is no electricity in the remaining parts of the city.

The water, cleaning…etc. services also are observed not to be very sufficient in the region and needs to be improved. For these reasons, the gated communities are the places where most of the society are willing to live in. From this point, we have evaluated the houses inside gated communities of the region

as a product and determined the parameters which effect the customer perceived quality, satisfaction, repurchase intention, and willingness to pay.

Beyond these problems, the social, political, and economical change in the region forcing the society to a new life style (Muhlis, 2014). Muhlis (2014) has stated that "Due to this economical shift and the political and armed unrests in mid and southern Iraqi regions and in neighboring county Syria in recent years, the region has been exposed to the influx of large numbers of households coming to Erbil, from both within the Governorate, Iraq and from outside, looking for security, jobs, and housing." To support this, the author has determined that the number of families in Sulaimaniyah became 407,233 in 2014 while it was 365,959 in 2009. This increase shows how rapidly the population was increasing in the region.

Product quality can be considered as a part of total quality management concept (Sebastianelli and Tamimi, 2002). One of the main problems of failures in customer satisfaction might be lack of effective product evaluation (Juran, 1993; Goodman, Bargatze, and Grimm, 1994). From this point of view, we should define the product quality before measuring.

Product quality can be defined in five major approaches; transcendent, user-based, product-based, value-based, and manufacturing-based (Garvin, 1984; Sebastianelli and Tamimi, 2002). Garvin (1984;1987) stated that the user-based approach focused on the aesthetics and the perceived quality.

Transcendent approach of quality is a kind of subjective evaluation of quality which determines the innate beauty and excellence of a product (Garvin, 1984; Pirsig, 1992; Sebastianelli and Tamimi, 2002).

Manufacturing-based approach of quality is a kind of meeting pattern standards of quality with the real output. Gilmore (1974) has defined the manufacturing based quality as degree that an actual output conforms the pattern design or pattern standards of the concerning production.

Value-based approach of quality focusses on the price and cost of a product. This approach asks the conformance of optimum price and optimum cost of a product. Armand Fiegenbaum (1951), who is concerned as one of the important gurus of contemporary total quality management, has defined this approach as conformance of the customers' conditions.

Product-based approach of quality is about the number of extra features of a product which haven't been prices versus the number of features which have been priced (Gilmore, 197). To give an example, better quality of a rug can be evaluated by quality of weaving.

User-based approach of quality focusses on the customers or users of products. Edwards (1968) and Juran and Godfrey (1999) have defined this approach as degree that conforms of the customer expectations. From this point of view, conforming customers' expectations from the goods and services are vital.

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Product quality can be considered as some characteristics of an output which conforms the expectations of customers and a parameter which brings customer satisfaction and competitive advantage to a company that produces quality product (Zhang, Vonderembse and Lim 2003). Product quality has been studied 1980's more seriously and recently the researchers emphasize the needs of customers, conformance of customers' expectations, attributes of purchasing a product…etc. (Waller and Ahire, 1996; Draaijer, 1992).

Product quality is generally measured by people who uses the concerning product and evaluate (Bowen and Ford 2002). Due to the product quality is the knowledge that provided by users, it can be defined as conformance of customer expectations.

Product quality has been studied by many researchers (Hajjat and Hajjat, 2014; Holm, 2000; Sebastianelli and Tamimi, 2002;). Due to gated or guarded communities are types of product as constructions, there have been many researches proposed on construction field as product quality (Castledine and Bannister, 1996; Abdul-Rahman, 1997; Kam and Tang, 1997; Low and Omar, 1997; Low and Yeo, 1998; Shammas-Toma et al., 1998). On the other hand, none of these researches have been modeled to measure the product quality on construction sector by proposing Garvin's (1984) product quality dimensions which have been used by many researchers in this field (Curkovic et al., 2000; Larson, 1994; Millson and Wilemon, 2008, 2009; Charters and Pettigrew, 2006; Park et al., 2007; Prajogo, 2007). He has proposed 8 dimensions of quality such as;

1. Performance (in Gated Communities): Primary operating characteristics of a product. Performance of pipelines inside the city, sewage system of the city, performance of the electricity inside the city, performance of the water inside the city, performance of the IT services (T.V., internet, telephone…etc.) inside the city, heat and sound isolation performance in the houses, and performance of mechanical services of the gated communities.
2. Features: The secondary characteristics of a product that supplement its basic functions. They can be considered as existence of security in the city, fence or a kind of border around the city, sport facilities, car parking facilities, shopping facilities, existence of preinstalled features (kitchen, air conditioner, bath…etc.), and religion facilities (mosque, masjid…etc.)
3. Reliability: The product's probability of failure-free performance over a specific period. The items those can be considered in this dimension are reliability of the maintenance services in the city, overall standard and reliability of the apartments, standard quality of the painting among the apartments and houses, how standard and reliable the materials used for each house and apartments of the city, how standard and reliable the materials executed inside the house and the city.

4. Conformance: the degree to which a product's physical and performance characteristics meet design specifications. How building quality, security services, gardening, roads, and aesthetics fits the design that have been promised before purchase of the customers.
5. Durability: A measure of useful product life, the amount of use a customer gets from a product before it deteriorates or must be changed. The durability of the tiles, paintings inside the house and the city, durability of the materials used inside the house and the city, durability of the overall house can be considered in this dimension.
6. Serviceability: the ease, speed, competence courtesy of repair. Availability and the speed of the repairing services when something broken inside the house or city, how easy one can pay the electricity, water, ad any other kinds of bills inside the city without going anywhere outside, offering the warranty contract to the repaired and preinstalled materials and equipment, offering warranty contract to the overall house.
7. Aesthetics: How the product looks, feels, sounds, tastes or smells, a matter of personal preferences. How stylish the city and the houses inside the city, how modern the city and the houses inside the city, how exclusive the plan of the city and apartments, how aesthetics the gardening of the city, how aesthetics the materials chosen inside the city and the houses, how aesthetics the colors chosen inside the city and the houses.
8. Perceived Quality: quality based on image, brand name, or advertising rather than product attributes and, of course is subjectively assessed. Evaluation of the overall city, house, and the gated communities of the concerning brand in general. In this study, his dimensions of product quality have been proposed to determine the effects on satisfaction, repurchase intention, and willingness to pay.

Finally, those factors opened a new investment field in the region as gated community projects. As a result, there are more than 10 gated communities in Sulaimaniyah, Kurdistan Region of Iraq and still new projects are being constructed by investors.

Perceived quality has been a popular subject after total quality management spread out in Europe and United States of America (Quintal and Polczynski, 2010). Perceived quality is a subjective evaluation of customers about a product and it strongly effects the satisfaction and repurchase intention in many sectors (Erdogmus and Turan, 2012). Furthermore, the researchers (Heung and Cheng, 2000; Kozak and Rimmington, 2000; Caruana et al., 2000; Baker and Crompton, 2000) consider that perceived quality is a kind of warrantor of satisfaction of customers. For this reason, authors in this study has evaluated perceived quality as main dimension which effects satisfaction of householders who are the customers of gated communities.

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3. METHODOLOGY

Garvin (1984; 1987) have claimed that the aesthetics and the perceived quality are related to the user-based approach of product quality. But this might be a bit different in gated communities' case. To mention about the houses in the gated communities as a product, the perceived quality (user based) may include remaining 7 parameters as durability, performance, conformance, reliability, aesthetics, serviceability, and features. From this study aims to evaluate gated communities as a product by proposing product quality dimensions of Garvin (1984) to see the impacts of all those dimensions on the perceived quality of the houses inside the gated communities. Further, the effects of perceived quality of the gated communities on satisfaction, repurchase intention, and willingness to pay of the customers who are currently living in the concerning houses.

In this study, we have aimed to test the effect of durability, performance, conformance, reliability, aesthetics, serviceability, and features on the perceived quality of the customers. Secondly, effect of the perceived quality of the customers on the satisfaction, perceived quality and satisfaction on repurchase intention, finally, perceived quality, satisfaction, and repurchase intention on willingness to pay have been tested. The hypothesis of the research can be sequenced as;

H1a --> Impact of durability on perceived quality of householders in gated communities

This hypothesis is to evaluate the impact of durability, which includes the durability of tiles, paintings, materials, equipment, and overall durability perception of house holders, on perceived quality of them. By this way, the impact of durability on perceived quality have been aimed to measure.

H1b --> Impact of performance on perceived quality of householders in gated communities

It was thought that the performance of mechanical services, pipelines in the city, sewage in the city, electricity supplied in the city, IT (internet, television, telephone…etc.) in the city, sound and heat isolation in the city would be important for the customers' perceived quality. For this reason, the impact of performance has been evaluated.

H1c --> Impact of conformance on perceived quality of householders in gated communities

It would be important to understand if the overall building, security of the city, overall concerning gated community was conforming the customer expectations. For this reason, customers have been simply asked if the related products and services have conformed their expectations.

H1d --> Impact of aesthetics on perceived quality of householders in gated communities

It could be important to evaluate the impact of what the customers thought about how stylish the city and houses were, how modern the city and the houses were, how exclusive the city and the houses plan were, how nice looking the gardening, how nice the materials have been looked, how good the colors of the materials were. The impact of these features might be significantly important for the perceived quality.

H1f --> Impact of serviceability on perceived quality of householders in gated communities

The perceptions of the householders about reparability of the broken things in their houses and inside the city, easiness to pay bills inside the city, serviceability of the electricity problems, serviceability of the water supply problems, warranty to the fixed and/or purchased things…etc. have been evaluated and the impact of those perceptions on the perceived quality have been evaluated.

H1g --> Impact of features on perceived quality of householders in gated communities

By this hypothesis, the importance of features on perceived quality have been tested. The features mean extra advantages of the gated community such as existence of security, fence around the city, spot facilities, car parking facilities, shopping facilities, and religion facilities of the gated community.

H1h --> Impact of reliability on perceived quality of householders in gated communities

Reliability could be one of the parameters which effect the perceived quality of the customers. Reliability have been as reliability of the maintenance inside the house and the city, reliability of the security in the city, how standard the paintings of the houses were, how standard the materials and equipment used in the house and city were, and how standard the execution of the materials and equipment in the houses and the city were.

H2a --> Impact of perceived quality on satisfaction of householders in gated communities

Perceived quality has been perception of the householders about the quality of the houses and the related gated community, product and the services have been provided by the gated community. The perceived quality has been also mentioned in the literature part as one of the main parameters for the customer satisfaction. For that reason, this hypothesis for the gated communities have been tested.

H2b --> Impact of perceived quality on repurchase intention of householders in gated communities

Repurchase intention is an important issue for the managers of the gated communities to increase their market share. This intention might have been by increasing the perceived quality and/or satisfaction of the customers more.

H2c --> Impact of perceived quality on willingness to pay of householders in gated communities

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Perceived quality would be one of the important parameters for the willingness to pay also. Willingness to pay means the intention of the customers to pay the concerning amount to their apartments and flats.

H3a --> Impact of satisfaction on repurchase intention of householders in gated communities

When a customer is satisfied with the goods and services, they might repurchase the same product of service second and the third time. The difference between impact of perceived quality and the satisfaction have been tested by this way.

H3b --> Impact of satisfaction on willingness to pay of householders in gated communities

Satisfaction could be one of the important parameters for the willingness to pay. For this reason, the difference among impact of perceived quality on willingness to pay, impact of repurchase intention on the willingness to pay and the impact of the satisfaction on the willingness to pay have been tested.

H4 --> Impact of repurchase intention on willingness to pay of householders in gated communities

Repurchase intention could be one of the important parameters for the willingness to pay. For this reason, the difference among impact of perceived quality on willingness to pay, impact of repurchase intention on the willingness to pay and the impact of the satisfaction on the willingness to pay have been tested.

4. MODEL OF THE STUDY

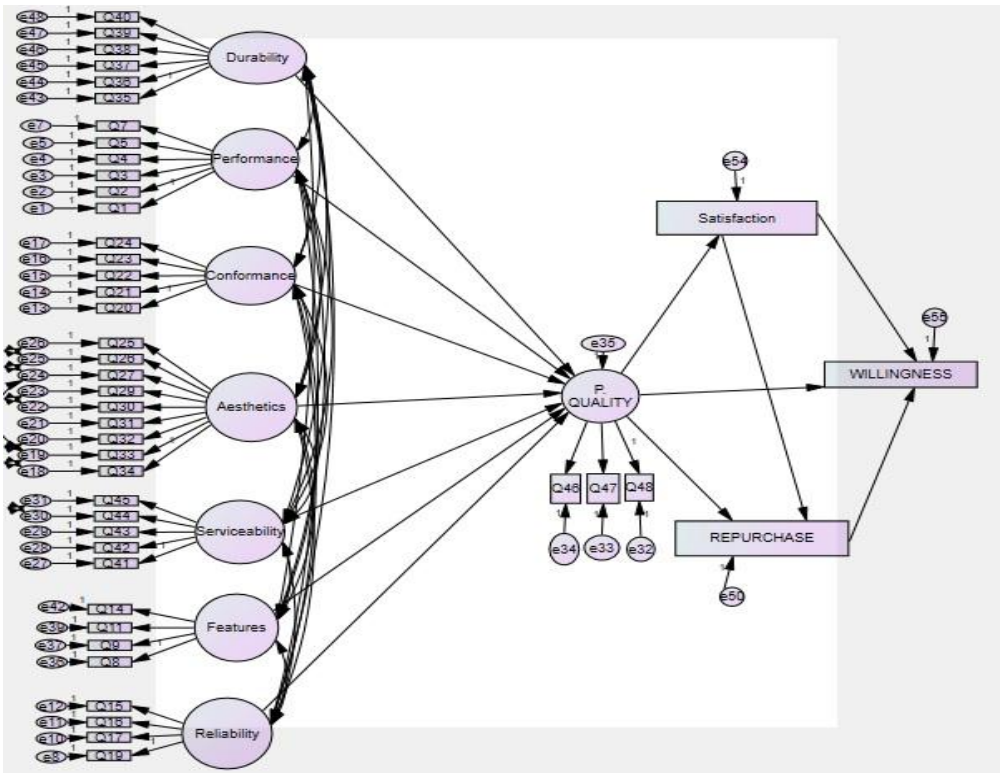

FIGURE 2 - THE HYPOTHESIS CAN BE MODELED AS IT IS SHOWN ON FIGURE BELOW

The target population in this study has been selected from a random group of each gated communities. Approximately 100 participants from each gated community have been selected to conduct the survey questionnaire.

The participants have been selected from 9 different gated community of Sulaimaniyah, Kurdistan Region of Iraq. Survey have been conducted 850 householders but 158 of the data have been removed from the analysis due to some various technical problems. Finally, 692 of the data was found to be adequate to be used for the further analysis

In this section, we performed a confirmatory factor analysis by proposing Maximum Likelihood extraction model on 7 factors and 39 questions. 8th factor which is called as perceived quality is not included due to it has been considered as a dependent factor in the theoretical framework of this research. In the study, it was aimed to test if the concerning group of measurements represents a scale and adequate when those items and dimensions come together (Straub et al. 2004; Saunders, 2000).

According to the procedures of confirmatory factor analysis, question 18 from reliability, questions 10,12, and 13 from features, question 6 from performance and question 28 from aesthetics dimensions have been removed because they didn't have 0.50 or above as factor load (Hair et al., 2006). Remaining items have shown sufficient factor load to represent the concerning factors.

It is known that the dimensions are expected to be the groups of items which represent a theoretical framework to collect data by and analyze that data. In this study, the product quality dimensions of Garvin (1984) have been proposed on gated community field.

First, model fit index values can be evaluated before factor loads and C.R. values of each item. Because the model fit indexes show how the concerning analysis fit and adequate. The results of the model fit values are shown on the table below;

TABLE 1 - MODEL FIT INDEX PARAMETERS FOR CONFIRMATORY FACTOR ANALYSIS

Model Fit Measure	Good Fit	Measured Value
Absolute Fit Measures		
RMR	≤0-1	0.05
GFI	≥0.90	0.95
AGFI	≥0.90	0.92
Incremental Fit Measures		
NFI	≥0.90	0.93
RFI	≥0.90	0.91
CFI	≥0.90	0.95
IFI	≥0.90	0.95
TLI	≥0.90	0.93
Parsimonious Fit Measures		
X2/df	≤3.00	3.038
RMSEA	≤0.05-0.08	0.054

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Evaluating the results of model fit indexes, it can be said that all the indicators are above the sufficient level of evaluation. It means that all the absolute fit measures, incremental fit measures, and parsimonious fit measures are at adequate levels.

Furthermore, it can be said that the results of confirmatory factor analysis are meaningful to evaluate. The results are shown on the table below;

TABLE 2 - CONFIRMATORY FACTOR ANALYSIS RESULTS

		EST.	STD. EST.	S.E.	C.R.	P
EST.	S.E.	C.R.	P			
Q1	Performance	0.93	0.71	0.05	17.86	**
Q2	Performance	0.79	0.54	0.06	13.46	**
Q3	Performance	1.00	0.75			
Q4	Performance	0.93	0.69	0.05	17.47	**
Q5	Performance	0.77	0.57	0.05	14.27	**
Q7	Performance	0.88	0.64	0.06	16.10	**
Q19	Reliability	0.82	0.63	0.06	14.58	**
Q17	Reliability	0.87	0.64	0.06	14.83	**
Q16	Reliability	1.00	0.74			
Q15	Reliability	0.92	0.65	0.06	15.01	**
Q20	Conformance	0.88	0.75	0.04	21.40	**
Q21	Conformance	0.92	0.78	0.04	22.64	**
Q22	Conformance	0.96	0.82	0.04	24.10	**
Q23	Conformance	1.00	0.80			
Q24	Conformance	0.97	0.82	0.04	24.24	**
Q34	Aesthetics	0.90	0.69	0.05	17.60	**
Q33	Aesthetics	0.97	0.75	0.05	18.85	**
Q32	Aesthetics	0.99	0.74	0.05	18.68	**
Q31	Aesthetics	1.00	0.72			
Q30	Aesthetics	0.91	0.73	0.05	18.43	**
Q29	Aesthetics	0.88	0.73	0.05	18.62	**
Q27	Aesthetics	0.95	0.79	0.05	20.14	**
Q26	Aesthetics	0.95	0.78	0.05	19.79	**
Q25	Aesthetics	0.93	0.75	0.05	19.07	**
Q41	Serviceability	0.99	0.77	0.05	20.82	**
Q42	Serviceability	1.00	0.78			
Q43	Serviceability	1.00	0.74	0.05	19.90	**
Q44	Serviceability	0.93	0.70	0.05	18.58	**
Q45	Serviceability	0.88	0.65	0.05	17.09	**
Q8	Features	1.00	0.69			
Q9	Features	0.99	0.67	0.07	15.32	**
Q11	Features	0.79	0.56	0.06	13.06	**
Q14	Features	0.78	0.55	0.06	12.72	**
Q35	Durability	0.89	0.75	0.04	22.26	**
Q36	Durability	0.92	0.81	0.04	24.92	**
Q37	Durability	0.95	0.82	0.04	25.44	**
Q38	Durability	1.000	0.83			
Q39	Durability	.990	0.69	.050	19.80	**
Q40	Durability	.858	0.71	.042	20.44	**

It can be seen on the table that most of the items on each dimension are above 0.6 and some of them are above 0.5. Thus, it can be said that the items represent the concerning dimension adequately.

These results show that all those items haven't been grouped coincidentally but to measure some theoretical frameworks. Further, the reliability analysis also performed to test the reliability of the dimensions. The table 3 shows about the results;

TABLE 3 - RELIABILITY ANALYSIS RESULTS

CRONBACH'S ALPHA FOR ALL THE SURVEY	N OF ITEMS			
0.957	39			
CRONBACH'S ALPHA OF PERFORMANCE	N of Items			
.810	6			
	Mean if Item Deleted	Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q1	18.3945	19.273	.617	.770
Q2	18.5506	19.660	.489	.800
Q3	18.1272	18.780	.667	.759
Q4	18.0072	19.101	.618	.770
Q5	18.2197	20.180	.503	.795
Q7	18.3757	19.670	.540	.787
CRONBACH'S ALPHA OF FEATURES	N of Items			
.709	4			
	Mean if Item Deleted	Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q8	11.5795	3.758	.544	.614
Q9	11.7847	3.692	.551	.610
Q11	11.9191	4.098	.455	.669
Q14	11.8974	4.127	.430	.684
CRONBACH'S ALPHA OF RELIABILITY	N of Items			
.754	4			
	Mean if Item Deleted	Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q15	6.7139	3.611	.483	.734
Q16	6.5708	3.374	.628	.653
Q17	6.6575	3.511	.561	.691
Q19	6.5939	3.663	.533	.706
CRONBACH'S ALPHA OF CONFORMANCE	N of Items			
.894	5			
	Mean if Item Deleted	Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q20	14.5925	15.475	.686	.883
Q21	14.4162	15.083	.735	.873
Q22	14.4841	14.832	.776	.863
Q23	14.4884	14.583	.745	.871
Q24	14.4697	14.906	.761	.867

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CRONBACH'S ALPHA OF AESTHETICS	N of Items			
.920	9			
	Mean if Item Deleted	Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q25	28.2009	44.523	.710	.911
Q26	28.2283	43.994	.764	.908
Q27	28.2110	44.233	.764	.908
Q29	28.2876	44.674	.722	.910
Q30	28.3092	44.318	.712	.911
Q31	28.3801	43.420	.692	.913
Q32	28.5087	43.504	.715	.911
Q33	28.5043	43.813	.713	.911
Q34	28.4682	44.629	.659	.915
CRONBACH'S ALPHA OF DURABILITY	N of Items			
.890	6			
	Mean if Item Deleted	Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q35	17.0694	21.416	.684	.874
Q36	16.9957	21.188	.749	.865
Q37	16.9725	21.037	.753	.864
Q38	17.0217	20.412	.785	.859
Q39	16.9364	20.022	.649	.884
Q40	16.9118	21.403	.657	.879
CRONBACH'S ALPHA OF SERVICEABILITY	N of Items			
.856	5			
	Mean if Item Deleted	Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Q41	13.7803	14.994	.672	.826
Q42	13.6864	14.916	.686	.822
Q43	13.7428	14.701	.669	.827
Q44	13.8338	14.584	.702	.818
Q45	13.9451	15.065	.623	.839

Table 3 shows about the results of the reliability analysis by proposing Cronbach's Alpha method. According to this method, each dimension must have minimally 0.7 of alpha level (Devellis. 2003; Mihail & Kloutsiniotis, 2016).

The results of analysis in this study shows that all the dimensions have adequate level of Cronbach's Alpha level and they are above 0.7. Furthermore, the reliability of the overall survey also has been analyzed and the result was 0.957. It can be concluded that the survey used for this study is reliable to be proposed on gated community field.

5. RESULTS AND DISCUSSIONS

In the previous section, measurability of the survey has been tested. Finally, it was seen that the survey that was used for this study is both adequate and reliable to test the hypothesis.

Moreover, the aim of this section is to test the effects of durability, performance, conformance, reliability, aesthetics, serviceability, and features on the perceived quality of the customers and secondly, effect of the perceived quality of the customers on the satisfaction, perceived quality and satisfaction on repurchase intention, finally, perceived quality, satisfaction, and repurchase intention on willingness to pay.

Structural equation modeling is a very effective model to determine the impact of concerning parameters on some outputs. The effectiveness of the model is because it is very sensitive to the model fit parameters. For this reason, structural equation modeling has been proposed to obtain the results of analysis.

Maximum likelihood method was proposed to measure the coefficients of the parameters on one another. Before evaluating the coefficients of each determinant, there are some model fit parameters which must be evaluated.

As it was evaluated in the confirmatory analysis section, in the structural equation modeling part also the model fit parameters must be evaluated. The table 4 below show the concerning results;

TABLE 4 - MODEL FIT INDEX FOR STRUCTURAL EQUATION MODELING

Model Fit Measure	*Good Fit*	*Measured Value*
Absolute Fit Measures		
RMR	≤0-1	0.49
GFI	≥0.90	0.94
AGFI	≥0.90	0.90
Incremental Fit Measures		
NFI	≥0.90	0.92
RFI	≥0.90	0.90
CFI	≥0.90	0.95
IFI	≥0.90	0.95
TLI	≥0.90	0.93
Parsimonious Fit Measures		
X2/df	≤3.00	2.70
RMSEA	≤0.05-0.08	0.05

Considering all the indexes on table above all the parameters and indexes are fit to evaluate the analysis results of the concerning hypothesis. It is known that RMR value must be between 0 and 1, GFI should be greater or equal to 0.90, AGFI should be greater or equal to 0.90 in order model to be fit based on absolute fit measures. Further, for a good fit of incremental fit measures, NFI, RFI, CFI, IFI, and TLI values must be equal or greater than 0.90.

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Finally, according to the parsimonious fit measures, X2/DF should be less than 5 or 3, RMSEA value must be between 0.05 and 0.08. When one looks at the table above, all the measured values are fit for each index. So, that the results of the model can be presented as;

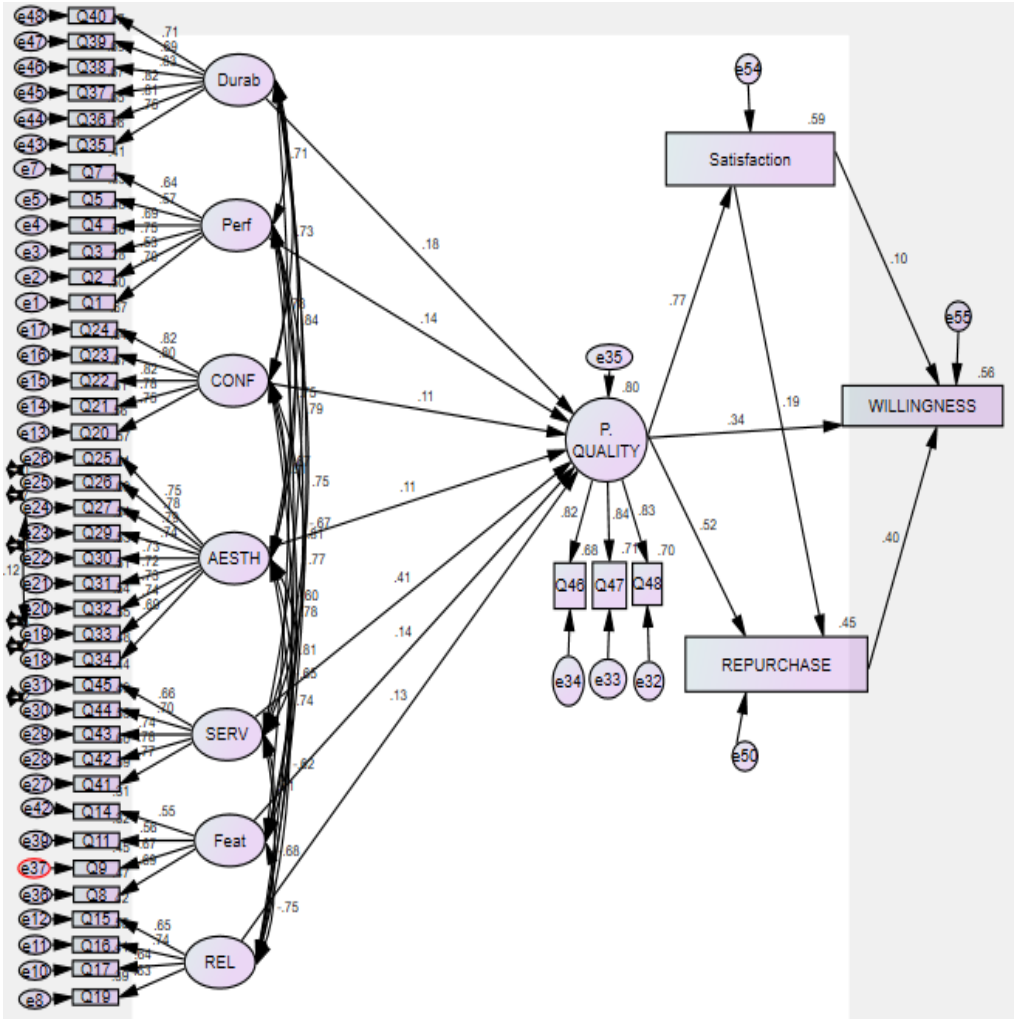

FIGURE 3 – RESULTS OF STRUCTURAL EQUATION MODELING

TABLE 5 - RESULTS OF THE HYPOTHESIS

	Hypothesis	*Standardized Estimates*	*C.R.*	*Accepted*
H1a	Durability ---> Perceived Quality	0.182	2.845	Yes
H1b	Performance ---> Perceived Quality	0.137	1.985	Yes
H1c	Conformance ---> Perceived Quality	0.110	1.972	Yes
H1d	Aesthetics ---> Perceived Quality	0.111	1.975	Yes
H1e	Serviceability ---> Perceived Quality	0.413	6.130	Yes
H1f	Features---> Perceived Quality	0.137	1.995	Yes
H1g	Reliability ---> Perceived Quality	0.127	1.982	Yes
H2a	Perceived Quality ---> Satisfaction	0.768	23.285	Yes
H2b	Perceived Quality ---> Repurchase Intention	0.517	9.934	Yes
H2c	Perceived Quality ---> Willingness to Pay	0.337	6.652	Yes
H3a	Satisfaction ---> Repurchase Intention	0.187	3.869	Yes
H3b	Satisfaction ---> Willingness to Pay	0.097	2.252	Yes
H4	Repurchase Intention ---> Willingness to Pay	0.400	11.286	Yes

These results show that all the dimensions have a significant impact on the perceived quality of the householders in gated communities. There have been seven dimensions which were expected to have some positive impact on perceived quality. It was seen that performance, serviceability, durability, conformance, aesthetics, features, and reliability have significant impact on the perceived quality of the householders in gated communities of Kurdistan Region of Iraq. Furthermore, those seven dimensions have explained 80% of the variance on perceived quality. It shows that the perceived quality in gated communities of Kurdistan can be explained by performance, serviceability, durability, conformance, aesthetics, features, and reliability of the gated communities. Beside these, serviceability dimension was the most influencing factor among all. The reason of this might be the lack of electricity, water supply problems, service and fixing problems of the broken things inside houses…etc. these kinds of services are already problematic in the region and this might why the customers care about the serviceability more than the reliability, durability, aesthetics…etc. Thus, it can be said that those parameters which have been proposed in the questionnaire have been effective to evaluate the perceived quality in gated communities. Customer satisfaction is already can be considered as an important tool on the repurchase intention. That is why the customers' satisfaction can be provided only when the product or services conforms their expectations. In this study, it was seen that the perceived quality has been main dimension to impact customer satisfaction. Perceived quality in gated communities have explained the variance of the customer satisfaction as 59%. Due to this percent is more than 50%, it can be said that the perceived quality is the most important parameter of customer satisfaction. Repurchase intention might be customer loyalty by another meaning. Many researches in the literature have already shown that the customer satisfaction is an important reason for repurchasing. This study also has proven that the customer satisfaction is a significant tool for repurchase intention. Beside this, it was seen that the perceived quality was more important dimension on repurchase intention than customer satisfaction. This means that the customers intend to repurchase more when they perceive the quality of the gated community rather than they are satisfied with it. However, perceived quality and customer satisfaction have explained 45% of the variance.

Willingness to pay of the society for the concerning gated community is one of the critical question for company owners. This way companies may increase their profitability. In the gated communities, willingness to pay of the society have been influenced by customer perceived quality, satisfaction, and repurchase intention. Beside this, repurchase intention has more impact on willingness to pay more than perceived quality and customer satisfaction. Secondly, perceived quality is an important dimension than satisfaction. Beside these, those three dimensions explained 56% of the variance. Location can be considered as one of the important reasons that the customer can be satisfied with, repurchases the house, willing to pay for that house. For this reason, we have elaborated the location effect on the

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satisfaction, repurchase intention, and willingness to pay in Kurdistan Region of Iraq. The ANOVA results are shown on the table below;

TABLE 6 - ANOVA RESULTS OF LOCATION EFFECT ON REPURCHASE INTENTION AND WILLINGNESS TO PAY

1- Impact of Location on the Repurchase Intention of the Customers				
(I) City Location		Mean Difference (I-J)	Std. Error	Sig.
City Center	Outside of the City	-.1356	.14848	.933
	Close to the shops	1.0026	.45891	.294
	Calm	.4768*	.17419	.039
Outside of the City	City Center	.1356	.14848	.933
	Close to the shops	1.1381	.45443	.189
	Calm	.6124*	.16201	.001
Close to the shops	City Center	-1.0026	.45891	.294
	Outside of the City	-1.1381	.45443	.189
	Calm	-.5257	.46347	.866
Calm	City Center	-.4768*	.17419	.039
	Outside of the City	-.6124*	.16201	.001
	Close to the shops	.5257	.46347	.866
2- Impact of Location on the Willingness to pay of Customers				
	(I) City Location	Mean Difference (I-J)	Std. Error	Sig.
City Center	Outside of the City	-.0650	.14239	.998
	Close to the shops	.5077	.56221	.949
	Calm	.5553*	.16124	.004
Outside of the City	City Center	.0650	.14239	.998
	Close to the shops	.5727	.56152	.914
	Calm	.6203*	.15882	.001
Close to the shops	City Center	-.5077	.56221	.949
	Outside of the City	-.5727	.56152	.914
	Calm	.0476	.56659	1.000
Calm	City Center	-.5553*	.16124	.004
	Outside of the City	-.6203*	.15882	.001
	Close to the shops	-.0476	.56659	1.000

The table above shows about the effects of the location. It can be said about the results that the location does affect the intention of the customers to repurchase a house or apartment from the concerning gated community or not. It was seen that city centers are perceived to be convenient for the society rather than calm places. Further, calm places are not appropriate places for the population. It means that the society like crowded and social places more than calm and silent locations. By another saying, householders would like to purchase one more house or apartment if the gated community located in the more social locations rather than a calm place.

Secondly, location affects the willingness to pay also. It has been seen that the willingness to pay of customers have increased when the gated community located in social locations rather than a calm place.

Finally, it was seen that the customers don't differentiate the location whether it is outside or inside of the city but they would like the location not to be a calm and silent place.

6. CONCLUSIONS

According to the results those have been obtained in the data analysis section, it can be said that durability, performance, conformance, reliability, aesthetics, serviceability, and features all have a significant impact on the perceived quality of the householders in gated communities of Sulaimaniyah, Kurdistan Region of Iraq. However, those dimensions have explained 80% of quality perceptions of householders. This is a very important amount of variance explained on that field. This research shows that the quality perception of the householders in gated communities are based on those factors 80%.

It was seen that serviceability dimension was much more important and had bigger coefficient value on the perceived quality than all other dimensions such as reliability, durability, performance…etc. This result shows that the serviceability I the most important factor that effects the quality perception of householders about the concerning gated community in Kurdistan Region of Iraq. As of the serviceability consisted of providing electricity supply while there is no electricity in the city, repairing the broken items inside house, easiness to pay bills inside the city, repairing the broken things inside the city, warranty contract to the house, warranty contract to the pre-installed items, etc. These results are very understandable when we think about the lack of sufficient services in the region.

According to these results, it can be said the management of gated communities in the region must care about the serviceability and other determinants of the perceived quality. However, the management of those gated communities should even increase the number and the quality of the services inside the concerning guarded communities. The consequent importance of the dimensions on perceived quality are; serviceability, durability, performance, features, reliability, aesthetics, and conformance, respectively.

The perceived quality has affected the satisfaction of the householders as much as 59%. That shows that the householders give a serious importance on the quality they perceive and they are as satisfied as the quality that they perceive is higher. It can be said in this case that the management of each city must increase the perceived quality of the householders which can be done mainly by increasing the serviceability inside the gated communities and this will provide satisfaction of householders from their houses and gated communities that they live.

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It was seen that repurchase intention was explained by perceived quality and satisfaction as 45 percent. Beside this, it was observed from the previous analysis results of this study that although both perceived quality and satisfaction have significant impact on repurchase intention, perceived quality has much more influence on repurchase intention regarding to the impact of satisfaction on repurchase intention. It shows that householders intend to repurchase a house from the same gated community because they perceive quality of product rather than they are satisfied of it.

Willingness to pay dependent variable has been explained by satisfaction, repurchase intention, and perceived quality all significantly as 56 percent. However, although repurchase intention has more impact than perceived quality and satisfaction, perceived quality has a close coefficient to repurchase intention and this shows that perceived quality plays a very important role on willingness to pay for concerning gated community as a householder.

Finally, it was seen that perceived quality is the most important weapon to increase market share of gated communities, satisfy customer demands, make them repurchase a house from that gated community, and increase willingness to pay for that house in a gated community of Kurdistan Region. To do this, the management of those gated communities in Sulaimaniyah, Kurdistan region of Iraq should evaluate their service capabilities and increase that capability as much as possible to increase their qualities. Later, they may work on the durability, performance, and features…etc. factors to conform customer expectations.

This research has been conducted in Sulaimaniyah, Kurdistan Region of Sulaimaniyah and contains 692 of participants. Although this number is enough to generalize the population to all Sulaimaniyah, the same research can be studied by conducting the survey to the other cities of Kurdistan Region of Iraq and by this way the demographic changes can be analyzed –if exists- by proposing ANOVA.

Another limitation of this research can be considered as variance of satisfaction, repurchase intention, and willingness to pay of householders to the concerning gated community. Although 59% of satisfaction, 45% of repurchase intention, and 56% of willingness to pay have been explained by concerning independent variables, especially repurchase intention can be restudied by adding some extra dimensions such as trust, location, demographic situation…etc. to increase the explained variance for it.

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