Define the End Users Preferences and Issues among Residential Houses in the UAE: Citizens vs. Non-Citizens

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Abstract. One of the most desirable things for human beings is to own a house. Some governments, such as in the United Arab Emirates (UAE), have a system with different programs for their citizens to own the house. Generally and by applying one of the available programs, there are two ways to own a house in the UAE. The first way is to get a loan and buy a house that is already built (constructed house), and the second way is to get a loan and build a house on owned land (non-constructed house). The main purpose of this study is to define the citizens’ preferences between these two options, furthermore the issue based on these preferences and compare them with the non-citizens. Also, this study explores their perceptions of number of features that can be applied in their future house. The authors applied a Simi-structured interview targeting the current and potential house owners in Al-Ain city, UAE. The authors found that most of the participants prefer to build their own (non-constructed house) instead of buying a (constructed) one. Also, the most desirable features that the participants prefer are the ones they can benefit while occupying the house (i.e. flexibility to add or remove spaces, and flexibility to change the house elements).

1. Introduction
The housing industry plays a major role in community stability for any country. Moreover, houses are considered as the lowest and first level of needs in the Maslow’s hierarchy of human needs that is reflected an important role in human life [1, 2]. Therefore, any government should consider the importance of housing, and make sure that supply meets demand by providing financial institutions, or by providing affordable and adequate housing [2, 3].

The intention of the UAE government is to help citizens own their houses by two different options either by conducting several public housing projects, constructed houses, or by giving a loan and build houses, non-constructed houses, in different parts of the country. In recent years, the UAE citizens have started to use new designs and new technologies in their houses to be more suitable for their culture and satisfy their needs related to safety, health, security and quality [4]. However, there are a number of factors that affect the demand and supply of the housing industry that governments should consider. These factors include population growth, household growth, unequal distribution of dwelling units, and end user unemployment rate and their income level [2, 5, 6]. However, there are limited research about the end users preferences on the residential houses.

The aim of this study is to define the citizens’ preferences and issues among the two ways of owning a house, constructed house, and non-constructed house, and compare them with the non-citizens, focusing on Al-Ain city. Also, it will explore their perceptions among number of features that can be applied in their future house. These features will help to suggest a new and different construction method for the houses that will contribute to meet the UAE’s Vision 2030.
2. Literature review

The housing sector faces two main problems; the quantitative and qualitative problems. The quantitative problems relate to the provision (state or private) of houses that the government provide, which does not meet the housing demand. Whereas the qualitative problems relate to the type of the houses that does not meet the end user comfort, social, culture and religious needs. Both quantitative and qualitative problems affect the quality of their life in different ways and of course the quality will affect the satisfaction of the end user. However, there are two approaches to assess the quality of the building, which are objective and subjective approaches. The objective approach includes the evaluation of the physical characteristics, facilities, services and environment, which are widely used [7, 8]. However the subjective approach includes the evaluation perception, satisfaction and aspiration. In general, to improve the quality of houses, the government should understand the end user needs and their satisfaction. It is an essential method that helps planners, architects, developers, and policymakers to predict the future needs and requirements of the end user. Providing more houses and without considering their quality will not solve the housing sector problems [8, 9, 10].

Several studies shows that there are some factors that affect the end user satisfaction. One of these factors is related to the dwelling unit design, such as the layout of the floor plan and the distributions of the internal spaces like the living, dining, and bedrooms. Some of the end users do not prefer to buy a constructed house because of this factor. The floor plans and the layout of the constructed house does not meet their need and desire [8, 11, 12]. The other factor is related to the location of the dwelling unit and the nearby services, such as public facilities, social facilities, and environment and neighbourhood facilities, which also affect the end users decision to buy a constructed houses in areas that did not have the required services [8, 10]. However, when the end users decide to build the house in their own land non-constructed house, they will face other factors that are related to the construction industry [12].

3. Methodology

This study is applied a qualitative research method and collected data regarding the end users’ perception. The authors conducted semi-structured interviews, in the time between February 2019 and July 2019, focused in Al-Ain city. Three hundred and forty (340) participants were included in this study, with different demographic information. A comparison between citizens (30% of the total participants’ number) and non-citizens (70% of the total participants’ number) was applied in this study to find any differences among their perceptions. The authors asked the participants about their preferences regarding the house type constructed house vs. non-constructed house and the reasons behind their choice. Also authors asked the participants about their perception on a number of features that can be applied in their future non-constructed house (i.e. exact cost with clear and detailed design, fast execution within a few weeks, relocation of the house, flexibility to quickly change the elements of the house such as the walls, doors, and windows, also flexibility to quickly add spaces or remove spaces, and involvement with one party instead of number of parties before, during, and after execution). The authors used SPSS statistical software to conduct the results.

4. Results

There are two parts in this section. The first part includes the participants’ preferences regarding the house type and their reasons behind it, and the second part includes the participants’ perceptions on a number of features that can be applied in their future house.

4.1 House type preferences (constructed vs. non-constructed)

The authors asked the participants if they already own their house, and if they planning to own a house in the future. Around 28% of the citizens and non-citizens own their houses. However, 95% of the citizens are planning to buy or construct a new house in the future, while 90% of the non-citizens are planning to buy or construct a new house in the future. The reasons behind that is because some of participants do not own a house yet; some of them want this future house for their children, some of them want this future house for the second wife, and some of them want this future house for investment purposes. The authors believe that the remaining participants were satisfied with their
current house or they are not ready to buy or construct a house because they are still live with their parents or because they do not have enough money.

Furthermore, the authors asked the participants about the house type, specifically if the preferred a constructed house or (build their house on owned land) non-constructed house. The results show that 67.7% of the citizens and 58.1% of non-citizens preferred non-constructed house, which is the higher percentage (figure 1). However, there was no statistical difference between citizens (67.7%) and non-citizens (58.1%) in the rate of house type preferences, as demonstrated using chi-square test (p = 0.10). Therefore, citizens and non-citizens have similar desire and prefer to build their own house, non-constructed house, when they have the chance.

Chi-square test was performed to test the difference between the columns. The P-value = 0.10.

**Figure 1.** House Type Preferences (Citizens vs. Non-Citizens).

Furthermore, the authors asked the participants about their motivations and reasons for wanting to own a constructed house (figure 2). Some participants gave a number of reasons, while other participants gave a single reason. The highest motivation and reason for the citizens and non-citizens to buy a constructed house is its layout and appearance, with 48.5% and 39.8% respectively. However, the least motivation and reason for the citizens and non-citizens to buy a constructed house is for investment purposes, with 4.0% and 2.1% respectively.

**Figure 2.** Motivations and Reasons for Owning aConstructed House (Citizens vs. Non-Citizens).
One the other hand, the participants explained their reasons for preferring non-constructed house instead of purchasing a constructed one (figure 3). The most reason for the citizens and non-citizens to build a non-constructed house is the fixable design that meet their needs (i.e. number of rooms), with 57.6% and 36.9% respectively. However, the least reason for the citizens to build their own house, non-constructed house, is guaranteeing the house quality during execution, with 12.1%, while the least preferred reason for the non-citizens to build their own house, non-constructed house, is the unique layout and appearance, with 5.0%.

![Graph](image_url)

**Figure 3.** Motivations and Reasons for Owning a Non-Constructed House (Citizens vs. Non-Citizens).

### 4.2 Participants’ perceptions on the house features

Furthermore, the authors asked the participants about their perception on number of features that can be applied in their future non-constructed house. They focused on the following features: 1) knowing the exact cost with clear and detailed design before execution; 2) fast execution within few weeks; 3) flexibility to relocate the house from one land to another land; 4) flexibility to quickly change the house elements like the walls, finishes, doors, and windows; 5) flexibility to quickly add spaces (i.e. extra rooms) or remove spaces; 6) involvement with one party instead of number of parties before, during, and after execution.

The authors explained these features to the participants, and asked them if they were interested in applying them in their future house. More than 50% of the participants (citizens and non-citizens) were interested in all the features (figure 4). The feature that the citizens were most interested in was the flexibility to add or remove spaces, with 93.9%, while the feature that the non-citizens were most interested in was the flexibility to quickly change the house elements, with 89.6%. However, the feature that the citizens were least interested in was the involvement with one party during execution, with 65.7%, while the feature that the non-citizens were least interested in was the fast execution within few weeks, with 58.5%.
Figure 4. Perceptions on Features among Future Non-Constructed House (Citizens vs. Non-Citizens).

Looking to the results from different angle, the authors divided the features into three groups based on its time period of benefit. The first group is “the features before living in the house,” which includes fast execution within few weeks, involvement with one party during execution, and knowing the exact cost before execution. The second group is “the features during living in the house,” which includes flexibility to add or remove spaces, and flexibility to change the house elements. The last group is “the features after living in the house,” which includes flexibility to relocate the house.

Figure 5. Groups of Features Based on Its Time Period of Benefit (Citizens vs. Non-Citizens).

The results clearly show that citizens and non-citizens prefer more the group of features that they benefit from during living in the house, with 92.4% and 89.2% respectively. However, the other two groups of features are almost the same. Although, citizens and non-citizens prefer less the group of features that they benefit from before living in the house, with 66.4% and 62.1% respectively (figure 5).

5. Conclusion
Using semi-structured interviews from February 2019 to July 2019, this study examined and compared the preferences regarding the house type constructed house vs. non-constructed house among citizens
and non-citizens of the UAE, and the reasons behind their choice. Also, this study examined and compared perceptions regarding the number of features that can be applied in the future house among citizens and non-citizens.

The most valuable contribution of this study was the discovery that there is no difference between citizens and non-citizens among their preferences on the house features that they prefer, and the most the features they can benefit from while living in the house. For example, flexibility to quickly add or remove spaces, and flexibility to quickly change the elements of the houses. The study also revealed no significant difference between citizens and non-citizens among the house type; both of the groups prefer the non-constructed house. The study yielded the following findings:

- The highest motivation and reason for the citizens and non-citizens to buy a constructed house is its layout and appearance, with 48.5% and 39.8% respectively.
- The highest motivation and reason for the citizens and non-citizens to build a non-constructed house is the fixable design that meet their needs (i.e. number of rooms), with 57.6% and 36.9% respectively.
- More than 50% of the participants (citizens and non-citizens) are interested in all of the suggested features.
- The feature that most citizens were interested in is the flexibility to add or remove spaces, with 93.9%, while the most feature that the non-citizens interested in is the flexibility to change the house elements, with 89.6%.

The results revealed a good information to improve the construction method in the housing industry regardless of the location of the house and the surrounding services, which is not included in this study. The findings of this study could be used to guide the industry’s leaders and governments to apply a new and different construction method for the houses that contribute to meet the Vision 2030. Also, it could help researchers in the construction industry, or in other industries, to study the end users preferences and perceptions, in other locations, among the houses using similar questionnaire.

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6. References
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