

# **The Effect of Curb Appeal on the Property Value of a Single-Family Dwelling**

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## **Abstract**

The purpose of this study was to ascertain whether curb appeal has any effect on the property value of a single-family dwelling. Curb appeal in the study was defined as the visual appeal of the immediate outdoor environments of single-family, detached dwellings.

The curb appeal of a single family dwelling was measured by the level of maintenance of yards and use of territorial markers on the exterior spaces viewed from the street. Some known predictors of property value of a single-family dwelling, such as total built-up area, number of bedrooms and bathrooms, location, and lot size were included in the statistical model used for the study.

A sample of 112 single-family dwellings from 14 neighborhoods was randomly selected for the study in a university town in Texas, USA. Data related to all the variables included in the model was collected. Statistical techniques used for data analyses were Pearson's correlation and General Linear Model. Results indicated that at least one of the factors of curb appeal, measured using territorial markers, has a statistically significant effect on the property value of single family dwellings.

## **Keywords**

Curb Appeal; Property Price; Single-Family Dwelling; Territorial Marker

## **1. Introduction**

The action of buying or selling a house requires a reliable estimate of its value. People take into account both physical and environmental attributes of a house when they want to buy one. Physical characteristics include the size of the dwelling, number of bedrooms and bathrooms, location, and lot size; curb appeal variables include the quality of immediate outdoor spaces of the dwelling, measured using territorial markers, and degree of maintenance of front yard.

Landscape of private outside space is a very significant part of an urban environment. Well-designed and well-maintained private outside space of a single-family dwelling adds not only to the aesthetic aspects of the residence but also enhances the quality of a neighborhood. While both front and back yards are parts of the private outside space, generally front yards are visually accessible to outsiders. Curb appeal of a house is usually dictated by the quality of front yard.

Primary purpose of this study was, therefore, to empirically measure the effect of the curb appeal of a house, specifically the treatment of front yard, on the property value of single family dwellings in a university town in Texas. A secondary goal was to find out whether this effect continued to be statistically significant in the presence of physical attributes of a dwelling: number of bedrooms and bathrooms, total built-up area, location, and lot size.

It was hypothesized that:

- Property values of single family dwellings in a university town in Texas are affected by its curb appeal.
- Effect of curb appeal of a single family dwelling in a university town in Texas continues to be statistically significant in the presence of other physical attributes of the dwelling.

## **2. Review of the literature**

### **2.1 Curb appeal**

Curb appeal is the visual appeal of a commercial or residential property when viewed from the street side. This term is extensively used by real estate professionals as an indicator of initial appeal to prospective buyers of a property.

The term curb appeal includes the visual appeal of spaces that are public as well as private. Public spaces might contain places for recreation like public parks, specialty parks and forest land while private open spaces mostly consist of farms and yards (specifically, front yard of houses). Proximity of a property to these open spaces is a very important deciding factor for the buyers. This implies that the relationship of the residents with the dwellings and the surrounding outside open space is an important factor to be considered and an interesting field to explore (Lawrence, 1981).

Neumann (2005) suggests that direct benefits result when individuals experience the positive effects of open space as a result of their physical location. For instance, effective manipulation of an open space often produces an amenity that is capitalized into neighboring property values.

### **2.2 Importance of Curb Appeal**

A vast majority of American housing consists of single-family dwellings on private plots of land. Historically, the private outside space of these dwellings has been a tool in the hands of its residents for maintaining, adapting, modifying the immediate surroundings in ways that are satisfying to them. It not only provides a place for outdoor enjoyment, but also indicates the social standing of the resident. People feel a sense of accomplishment when their yards look equal to or better than their neighbors (Choudhury 2001). This, in turn, tends to increase the market value of the dwellings. If a house is on sale, most buyers form an opinion about it even before they step foot in the front door (Esajian, 2014).

Attributes of front yards that are generally considered as predictors of curb appeal include the quantity of space, maintenance level of yards, adequacy of such space for activities, and territorial personalization. Territorial personalization becomes tangible through embellishment of the spaces by the residents. Higher levels of such personalization, achieved through territorial marker components, are associated with increased level of residential satisfaction. Territorial markers include trees, shrubs, flower beds, sculptures, bird baths, fountains, and such other adornments. This process of personalization also results in improving the curb appeal of the houses. An increased curb appeal, in turn, possibly results in an increased property value.

An informal survey of real estate professionals by Rodriguez & Sirmans (1994) reveals that homes with visually attractive front yards are preferred to the ones with rather plain front yards. A presence of potted plants at front, flowers in the garden, updated shrubs with fresh mulch, and trees create visual interest (Esajian, 2014). Even though there is no formal premium to sellers of homes with “good views”, but quite often such homes sell for 5 to 15 per cent more than homes without “good views.”

A study by Sander *et al.* (2010) indicates that trees play a major role in determining property value in an urban environment. They used a hedonic property price modeling to estimate the effect of trees on or near the property in Ramsey and Dakota counties in Minnesota. The findings indicate that trees in and around a property result in an increase in its value ranging from \$836 to \$1,371. The study provides evidence that the presence of healthy shade trees contribute to a large extent to a home's "sell-ability" by adding to the curb appeal.

### **2.3 Measures of Curb Appeal**

Measuring curb appeal does not consist of simple calculation. It is a complex problem under which several factors have to be considered and measured in order to obtain a meaningful value. Personalization of one's immediate outdoor environment enhances the level of pride and, consequently, satisfaction with the property owner's residential environment as a whole. The use of territorial markers (such as bushes, flowerbed, trees, water fountain, bird bath, etc.) for such personalization is considered by some real estate professionals as considerably good measure of outdoor space quality (Choudhury & Trivedi, 2011).

Another measure according to real estate professionals is the maintenance level of yards. One of the main components of the yards of a single family dwelling is grass. Grasses have been utilized by people for generations to enhance their living environment. Beard & Green (1994) report that apart from many functional and aesthetic benefits, grasses also contribute to increased property values.

Curb appeal starts with condition of grass and landscaping in front of the house. A lush green and well-maintained lawn enhances its visual quality. A majority of American homeowners believe that investment in lawns increases property value. A study by Behe *et al.* (2005) shows that sophistication of landscaping of the yards has an effect on perceived sales prices. Proper and well maintained landscaping adds about 15 per cent to a home's value according to buyers (Roman Empire Landscaping, 2009). Garskof (2008) advises home-owners to turn the front yard to a "green carpet" for increasing property value.

## **3. Methodology**

### **3.1 Study Population**

The study population consisted of 112 single family dwellings in 14 randomly selected residential neighborhoods in a university town in Texas. Sixteen dwellings were randomly selected from each neighborhood.

### **3.2 Data Collection Procedure**

Data related to physical attributes of the dwellings was gathered from the database of real estate sites accessible online. Current property values of the units were also obtained from the same sites. Data on curb appeal attributes was gathered by personal visits to the sites. Use of territorial markers and levels of maintenance of front yards were observed and recorded during the visits. Photographs of the sites (with prior permission of the owners) were also taken to supplement personal observation.

### **3.3 Variables**

#### **3.3.1 Curb Appeal**

Territorial markers (TMARKER): This is the observed modification and adornment of the front yard by a household. This was measured through identification of territorial markers (trees, flowerbeds, bushes, bird

baths, fountains, etc.). In order to provide equal weightage, presence of each marker was given a value of 1. It was the sum of the value of all territorial markers present on the front yard.  
 Maintenance of front yard (MAINTAIN): This is the observed level of maintenance of the front yard. It was measured by observing the level maintenance on a five-point scale, ranging from 1 (very poorly kept) to 5 (very well-kept).

### 3.3.2 Physical Attributes of the Dwellings

Number of bedrooms (BEDROOM): It is the total number bedrooms in a single family dwelling. It was measured simply by counting the number of bedrooms.

Number of bathrooms (BATHROOM): It is the total number bathrooms in a single family dwelling. It was measured simply by counting the number of bathrooms.

Built-up area (AREA): It is the total built-up area of a single family dwelling. It was measured in square foot.

Lot size (PLOT): It is the size of property on which a single family dwelling has been constructed. It was measured in square foot.

Property price (PRICE): It is the appraised value of a single family dwelling along with the lot on which it has been constructed. It was measured in US Dollars.

Location (NHOOD): It is the neighborhood where a single family dwelling is located. This is category variable consisting of 14 locations. The locations were identified by numbers ranging from 1 to 14.

## 4. Analyses and Results

The data was analyzed using two statistical procedures: (1) Pearson's Correlation and (2) General Linear Model. Pearson's Correlation technique was used to test the first hypothesis: (1) Property values of single family dwellings in a university town in Texas are affected by its curb appeal.

The Pearson product-moment correlation coefficient is a measure of the linear dependence between two variables, giving a value ranging from 1 to 0, where 1 is a complete positive correlation, 0 is no correlation.

Results of the analysis are shown in Table 1.

**Table 1: Relationship between property price and curb appeal variables**

Correlation	Correlation Coefficient	Significance (p-value)
PRICE and TMARKER	0.308	0.001
PRICE and MAINTAIN	0.288	0.002

The results indicate that both the curb appeal variables have statistically significant relationship with property price. This means that property value is affected by the curb appeal of a single family dwelling.

A General Linear Model (GLM) was used to test the second hypothesis: (2) Effect of curb appeal of a single family dwelling in a university town in Texas continues to be statistically significant in the presence of other physical attributes of the dwelling.

GLM is an analysis of variance procedure in which the calculations are performed using a least squares regression approach to describe the statistical relationship between one or more predictors and a continuous

response variable. Predictors can be factors and covariates. The design may be balanced or unbalanced. GLM can perform multiple comparisons between factor level means to find significant differences. The following model was used for analysis:

$$\text{PRICE} = \beta_0 + \beta_1\text{BEDROOM} + \beta_2\text{BATHROOM} + \beta_3\text{AREA} + \beta_4\text{PLOT} + \beta_5\text{TMARKER} + \beta_6\text{MAINTAIN} + \beta_7\text{NHOOD} \quad (1)$$

Where

BEDROOM = the number of bedrooms,

BATHROOM = the number of bathrooms,

AREA = the total built-up area of a single family dwelling,

PLOT = the size of property on which a single family dwelling has been constructed,

TMARKER = the observed modification and adornment of the front yard by a household,

and MAINTAIN = the observed level of maintenance of the front yard,

NHOOD = a category variable identifying the location of a single family

dwelling,  $\beta_0$  = intercept, and

$\beta_1, \beta_2, \text{etc.}$  = regression coefficients.

Results of the analysis are shown in Table 2.

**Table 2: Results of General Linear Model analysis**

Source	F-value	Significance (p-value)
Corrected Model	30.906	0.000
Intercept	0.771	0.382
PLOT	0.466	0.497
AREA	47.907	0.000
BEDROOM	0.970	0.327
BATHROOM	10.066	0.002
MAINTAIN	0.137	0.712
TMARKER	4.479	0.037
NHOOD	14.889	0.000

R Squared = 0.865 (Adjusted R Squared = 0.837)

The model, which is derived from empirical data, needs to be checked for its predicative efficacy. A widely used measure for checking the predicative efficacy of a model is its coefficient of determination, or  $R^2$  value. Perfect relation is said to exist between the dependent and independent variables, if  $R^2$  is 1 and no relationship exists between the dependent and independent variables, if  $R^2$  is 0. Predictive efficacy of this particular model was found to be quite high with an  $R^2$  of 0.865, and an adjusted  $R^2$  of 0.837. This means that about 84 percent of the variances in property price are explained by the variables included in the model.

The F-value of the model was found to be 30.906 which is statistically significant at less than the 0.0001 level. It indicates that the model as a whole accounts quite well for the behavior of the predictor variables.

The results suggest that at least one of the curb appeal variables, territorial markers, has a statistically significant relationship with property price at a p-value of 0.037 level. It is reassuring to find that it remains significant even in the presence of other physical attributes of a single family dwelling.

As expected, all the independent variables belonging to physical attributes group (except bedroom) have statistically significant positive relationship with property price. The reason for the number of bedroom as not being identified as a predictor of property price is probably because the total built up area also acts as a proxy for this variable. It is also possible that a dwelling with a lower number of bedrooms may have a higher

built up area, if the bedroom sizes are large.

## 5. Conclusions

There are many factors that affect property value of a single family dwelling. They include both physical characteristics and quality attributes of a dwelling. The purpose of this study was to find out empirically the effect of private outside space quality of a single family dwelling property value. It was also investigated whether the quality of private outside space continued to be determinant of property value in the presence of other predictors of housing prices such as built-up area, lot size, and location.

The results of the study provide moderate support to the hypothesis that property values of single family dwellings are affected by their curb appeal. At least one of the measures of curb appeal, territorial markers, continues to have a statistically significant effect on property values in the presence of physical attributes of single family dwellings. The other measure, level of maintenance of private outside spaces, has a statistically significant correlation with property price as a stand-alone variable. However, it doesn't remain significant in the presence of other predictors of property price.

This study was limited to four residential neighborhoods in a university town in Texas, using a sample size of only 112 single family dwellings. In view of the small sample size, the findings of the study should be viewed with caution. Use of a larger sample size is advisable for future research in this area.

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