An investigation of the factors affecting the rental value of houses in Colombo district

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Background

Colombo is the capital and the commercial district of Sri Lanka where most of the offices, popular local and international schools, and factories are located. Therefore it has the highest population density and a significant percentage of people are living in rented houses. There are many reasons for living in rented houses. The demand for rented houses is increasing rapidly and therefore the prices of rented houses too are increasing. The house owners and those who are seeking houses for rent can use these results to decide the value of their rented house.

The main objective of this study was to find out the factors that affect the monthly rental value of a house in Colombo district. Data were collected during the period of November 2010 to March 2011. Weekend Sri Lankan news papers, telephone interviews and local web advertisements were referred to collect data. Simple random sample of size 890 was used in the study. Only the houses with rental values between Rs. 5,000 and Rs. 40,000 were considered because houses with rental values below Rs. 5,000 may not have had many facilities while luxurious houses with more facilities exceeded rental value Rs. 40,000.

Dieter (2007) investigated the housing rental rate elasticity of aggregate consumption in the Organization for Economic Co-operation and Development (OECD) countries. They investigated the impact of changing housing rental rates upon aggregates consumption based on yearly data for 18 OECD countries observed between 1970 and 2004.

Methodology

SPSS software was mainly used to analysis the data. Graphical and tabular methods were used to identify the main features of the data. The distribution of the rental value was found to be positively skewed. Therefore, a gamma model was initially fitted for the data. A multiple regression model was fitted for the log value of rental value, which is approximately normally distributed. Multicollinearity among the predictor variables was checked using Variation Inflation Factor (VIF) values. After considering the main effects, effects of the interaction terms were tested using general linear model. A residual analysis and a normal P-P plot were used to identify the distribution of residuals. The adequacy of the selected model was checked using the residual plots and the coefficient of determination (R^2) of the model.

Results and Findings

Rental value of 31% houses lies between Rs. 10,000 and Rs. 15,000 and percentages of houses with rental value between Rs. 15,000-19,999 and higher than Rs.20,000 are 24% and 26% respectively. 88% of houses are single storey houses while only 2% houses are three storeys. Average rental value of a single storey house is Rs. 14,500 whereas for two and three storey houses, Rs. 27,000 and Rs. 32,000 respectively. 28% houses have two bedrooms while 35% of houses have three bedrooms. Average rental values of house with one, two or three bathrooms are about Rs. 9,500, Rs. 12,900 and Rs. 22,000 respectively. Average distance from the house to the nearest town is 1.5km (45%). The minimum and the maximum distances to the town are 40 m and 7 km. Average land size of a house available for rent in the Colombo district is about 15P. When there is parking facilities available with house, land is not an important factor. Large land areas are very rare in the selected area. Average floor area of a rented house in Colombo district is 1268 sqft. Advance payment is found to be not affecting to the rental value. For the majority of houses, a six month advance payment is expected but only for a smaller percentage, an advance payment for a maximum of two years is expected.

According to the multiple regression model number of storeys, number of bed rooms, number of bath rooms, distance to nearest town, distance to main road, floor area and the interaction term of Area* Bed room were affected the rental value. R^2 value of the final model is about 71%. The final model is as follows.

$$\text{Rental\_Value} = Exp\left[\begin{array}{l} 8.61 + 0.15\,Storey + 0.21\,BedRm + 0.16\,BathRm - 0.1\,DisTown \\ \qquad -0.18\,DisMainRd + 0.0003\,FloorArea - 0.00064\,BedRm * FloorArea \end{array}\right]$$

From the model it is clear that rental value increases with the number of storeys, number of bedrooms, number of bathrooms, and area, while it decreases with distance to town and distance to main road.

Conclusion

Advance payment months and land size do not affect the rental value. Number of storeys, number of bedrooms, number of bathrooms, distance to town, and distance to main road and floor area affect to the monthly rental value. A person can find a rented house for an average of Rs. 16,000 in the Colombo district. A renter or a house owner can use the above factors when finding or renting houses.

References

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