PROCEDURE TO ALLOCATE UNITS IN A CONDOMINIUM IN AN URBAN RESETTLEMENT PROJECT: A SCIENTIFIC APPROACH

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Abstract

Many public and private sector projects provoke forced relocation of the population but fail to resettle people sustainably and thus to trigger their impoverishment. Studies also found that one root cause of such failures and impoverishment is the disposal of properties and the lack of financial support for relocation. Make a systematical way of allocating housing units in a condominium in resettlement projects using a scientific and analytical model of payment of compensation is the primary purpose of this article. The independent variables which affect to the market value of the existing lands, especially in Nawama Mawatha and Wekanda Road in Colombo 2 area, are considered, distance from the main road (accessibility), the shape of the land (regular or irregular) and availability of infrastructure and sanitary facilities (utilities). After collecting the market variables then weighted all these independent variables to run the multiple regression analysis to get the results of the study. The results of the study showed that the significant effect comes to the market value of the land is from the distance from the main road (accessibility) as it has the strong negative correlation with the market value.

Keywords: Urban Resettlement, Compensation Model, Market Value

Introduction

In the last decade, Colombo has been an area with massive urban regeneration programs. The public sector mainly exercised them. Mainly under this process, what the state does is, that they acquire lands with undeveloped settlements from low-income communities and resettle those low-income communities in multi-storied housing apartments. Further, it is said that there are currently over 50% of the Colombo city population lives in shanties, slums or dilapidated old housing schemes and those units covers 9% of the total land extent of the city So, to give them an upgraded physical, social and economic infrastructure in parallel to their housing development, the state may regenerate them in high-rise buildings with upgraded facilities. This procedure is mainly conducted by the Urban Development Authority on behalf of the state. Though they do this in a very high standard manner, there is a huge loophole which no one concerns. That is the scientific and reasonable allocation of dwelling units in high rise buildings when conducting the resettlement. What Urban Development Authority currently conducting is a Raffle Draw to allocate units. Which is a very unreasonable and non-scientific method? Yes, the majority of the low-income community might be Okay with that method because they think

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that the transparency is high when conducting a Raffle Draw. But it can end up being harmful to the people who had high property values. Even in the past, there have been incidents that people who had high property values get a low valued unit in the high rise building when regenerating due to the Raffle Draw system. So, to cover this loophole, a more systematic and reasonable method is needed by this article, a new model based on valuation practices for allocating units in a high-rise building when urban regeneration projects are explained.

The Objective of the Study

The purpose of this article is to generate a scientific and analytical model for the payment of compensation in urban resettlement projects for the lower community. Further, in the process of payment of compensation in resettlement projects in Sri Lanka, there is no scientific method to use. Currently, those relevant authorities use a very fundamental method like a raffle draw to selecting new housing units for the resettlement community, which is an unreasonable method on valuer point of view. Because the residents who had a high valued property could get a shallow valued housing unit in the high-rise building, to overcome this issue, it is better to allocate housing units based on its market value.

Literature Review

In the Resettlement Handbook of United Nations High Commissioner for Refugees (2011) is defined that resettlement means the "selection and transfer of refugees from a State in which they have sought protection to a third State which has agreed to admit them – as refugees – with permanent residence status. The status provided ensures protection against refoulement and provides a resettled refugee and his/her family or dependents with access to rights similar to those enjoyed by nationals. Resettlement also carries with it the opportunity to eventually become a naturalized citizen of the resettlement country." "Further, it argued that resettlement is served to three equally important functions. First, it is a tool to provide international protection and meet the specific needs of individual refugees whose life, liberty, safety, health or other fundamental rights are at risk in the country where they have sought refuge. Second, it is a durable solution for larger numbers or groups of refugees, alongside the other durable solutions of voluntary repatriation and local integration. Third, it can be a tangible expression of international solidarity and a responsibility-sharing mechanism, allowing States to help share responsibility for refugee protection, and reduce problems impacting the country of asylum''(Corbin and Hollins,2011).

Neelmani Jaysawal (2013) explained in his study that the resettlement is "a one-time event of physical relocation. The second, rehabilitation, is a long-time process that involves rebuilding people's physical and economic livelihood, their assets, their cultural and social links, and psychological acceptance of the changed situation. Rehabilitation is a process needed by both the Displaced People and the Project Affected Persons, and it must begin long before physical displacement or deprivation (Fernandes, Walter)."

May, Corbin and Hollins (2011) had done a study, under the title of 'Identifying Determinants of Residential Property Values in South London' and has identified some factors that affect to the residential property values, and they are as follows

I. House characteristics: Tenure of the Property (freehold or leasehold); Property type ((i.e. whether the property was detached - define as a free-standing residential building, semi-detached - defined as a pair of houses built side by side sharing a single sidewall, terraced - defined as a row of identical houses sharing sidewalls, or a flat - defined as self-contained housing unit occupying only part of a building); plot over-sail (i.e. whether the plot was directly over-sailed by HVOTL); House over-sail (i.e. whether the

house was directly over-sailed by HVOTL); and Plot tower (i.e. whether there was a pylon actually on the property).

II. Health and psychological factors: Distance to a centre line of HVOTL (DCL); Distance to the nearest pylon (DPY); and distance to railway lines (DRA).
III. Aesthetic factors: Only one variable was included here and corresponded to distance to a public park (DPK)
IV. Service opportunity factors: Only one variable was included here and corresponded to distance to Welling station (DWS).

Gwamna, Yusoff and Ismail (2015) also examined some determinants that affect to the land use and residential property value, and they are accessibility; fewer transport costs; more space; security and safety; public utilities and infrastructure; conducive living environment. Also (Ariyawansa & Gunawardhana, 2017) mentioned the need of establishing an acceptable set of standards for properties ensuring higher property values and higher user satisfaction especially in the residential property sector in Colombo - Sri Lanka.

Benjamin, Guttery and Sirmans (2004) examined some methods to do the land value estimations, and they are; the sales comparison method; the value extraction method; the residual land method; and the ground rent capitalization method.

Further, it is examined that factors affect to the rental values of the residential properties included bedroom; bathroom; the presence of car park; the number of parking spaces; dining, lounge; balcony; swimming pool; floor area; furnishing; services; garden; police presence; and security in a neighbourhood (Odubiyi, Ugulu, Oshodi, Aigbavboa, & Thwala, 2019).
According to the study done by Chaphalkar and Dhatunde (2016), show that some of the independent variables that affect to the market value of the property and they are; "locational, structural and environmental factors. In structural attributes, variables such as the size of the plot, floor area, age of the building, number of rooms, number of storeys, level of the unit and housing fixtures are often used. Variables such as accessibility to amenities or facilities and other public facilities represent the locational traits. Neighbourhood traits can be explained by variables such as quality of amenities and facilities, road quality, environment quality and the view from the property."

Though these studies give many factors that affected the property value, it should be slightly changed with compared to the lower community cluster in the Sri Lankan context.

May, Corbin and Hollins (2011) generated a model for calculated the residential property values in South London based on the factors mentioned above. The generated model is as follows:

$$LnP = \beta 0 + B1Lasehold + \beta 2Terraced + \beta 3Semidetached + \beta 4Flat + \beta\ 5Plot(house)Oversail + \beta 6PlotTower + \beta 7LnDCL + \beta 8LnDPK + \beta 9LnDRA + \beta 10LnDWS + \beta 11LnDPY + \sum\sum in\ \beta ij\ LnDi * LnDj$$

Further, under this article, it describes the above equation they created as: "All the distance variables were measured in metres. P represents house value, and LnX denotes the natural logarithm of variable X. The non-dummy variables (i.e. house values and distance variables) were all expressed as natural logarithms to capture non-linearity. Finally, the last cross term on the right-hand side of the equation was introduced to capture the interaction between the distance variables. In this formulation, Di and Dj are generic expressions of the variables in the set {DCL; DPK; DRA; DWS; DPY}. Interactions among variables were estimated employing cross elasticities." This model also does not estimate the distance of every determinant, which can be affected by the elasticity of property values.

Chaphalkar and Dhatunde (2015) have also generated a model for calculating the land value by using multiple regression analysis, and it is as follows;

Y=72.80+0.02*X1-9.08*X2-7.39* X3+6.17*X4 +0.008* X5-4.16* X6-7.32*X7 -13.96*X8.-5.00* X9+8.41*X10 -3.74*X11 -3.55* X12-8.42*X13 +15.15*X14

'Where Y= Market value 72.80= the regression constant (a0) is the Y intercept (i.e value of Y when X=0). X1= Built up area, X2= Plot shape, X3= Location, X4= Zoning, X5= Age of building, X6= No of story, X7= Condition of property, X8= Type of construction, X9= View from property, X10= Access road width, X11= Parking facility, X12= Nearness to amenities, X13= Nearness to facilities and X14= Internal transport facility.'

What is Multiple Regression Analysis and its Applicability for the Real Estate.
Benjamin, Guttery and Sirmans (2004) explained that multiple regression analysis ''. . . can be used to value a large number of properties quickly and economically, which helps explain its (growing) popularity with tax assessors.' Also (Ariyawansa & Gunawardhana, 2016) discussed the possibility of using linear regression to predict a land perch price (the dependent variable) from independent variables such as distance to the town centre, extent, and frontage etc.

Kokot and Gnat (Simulative verification of the possibility of using multiple regression models for real estate appraisal, 2019) implied that "modern technologies enable quick and easy model estimation with the use of virtually any quality of data. Naturally, it provokes property appraisers to use such models in the practice of real property valuation, particularly in mass appraisal, frequently without taking those issues into account. Consequently, the models obtained and applied in practice turn out to be of poor quality and, objectively speaking, should not serve as the basis for determining real estate value. The specificity of the real estate market and of the real properties themselves as objects traded in that market additionally exert a negative impact on the quality of the obtained models." So that is why Multiple Regression Analysis is applied for finding the market value in real estate point of view.

Methods

To generate the scientific and analytical model for the payment of compensation in resettlement process of the lower community in the Mix Development Project in Nawam Mawatha and Wekanda Road, 30 recent markets comparable of the given area have been taken into consideration.Having done an extensive study about the factors that affect the property values in the given area, we identified three criteria's that affect the property values in the proposed area. As most of the criteria's are qualitative, it badly affected the accuracy of the output gets from the regression analysis. To minimize that issue, those criteria's have categorized into subcategories and then weighted as follows

Table 1: Weighted Criteria's

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	17184168.730	5390466.187		3.188	.004
	Given in meters to the Main Road (X_1)	-7575.198	974.205	-.850	-7.776	.000
	Value for Suitability of Land (X_2)	.027	.342	.008	.079	.937
	The value that adds due to Infrastructure & Sanitary Facilities (X_3)	.021	.169	.014	.126	.901
a. Dependent Variable: Market Value per Perch						

Source: Analysis Data, (2020).

The market comparable are given in the Annexure 01.

This information helps to run the regression analysis in a very accurate manner, and it gives the output as follows;

Table 2: Output of Coefficients

Criteria	Categories to Weight	Weight	Rate
Accessibility	Highest Accessibility	5	0m – 10m from the main road
	High Accessibility	4	10m – 50m from the main road
	Moderate Accessibility	3	50m – 100m from the main road
	Low Accessibility	2	100m – 500m from the main road
	Lowest Accessibility	1	500m < from main road
Shape	Regular	2	Rs.13000000
	Irregular	1	Rs.11500000
Utility	High Facilitated Lands	3	Rs.16000000
	Moderate Facilitated Lands	2	Rs.13500000
	Low Facilitated Lands	1	Rs.11000000

Source: Analysis Data, (2020).

Derived Model

$$Y = a + bx1 + bx2 + bx3 + e$$
$$\mathbf{Y = 17184168.730 + (-7575.198* x1) + (.027* x2) + (.021* x3) + e}$$

Assumption:
Rs.10, 000,000 is added as the figure of extent as the extent is a criterion that directly incorporates with the value.

Application of the model

- Value of the property, if the property is located fronting to the main road (Distance is '0m' from the main road), regular shape and high facilitated land which means a superior land;

Y = 17184168.730 + (-7575.198* x1) + (.027* x2) + (.021* x3) + e

Y = 17184168.730 + (-7575.198*0m) + (.027*Rs.13,000,000) + (.021* Rs.16,000,000) + e

Y = Rs. 17,871,168.73 + e

Total Property Value for 0.1 Perch = Rs. 17871168.73 + (Rs.10,000,000*0.1P)

= Rs. 18,871,168.73 + e

Total Property Value for 1 Perch = Rs. 17871168.73 + (Rs.10,000,000*1P)

= Rs. 27,871,168.73 + e

Total Property Value for 10 Perch = Rs. 17871168.73 + (Rs.10,000,000*10P)

= Rs. 117,871,168.73 + e

Total Property Value for 100 Perch = Rs. 17871168.73 + (Rs.10,000,000*100P)

= Rs. 1,017,871,168.73 + e

Table 3: Application of the Model

Extent	Total Value	Per Perch Value
0.1 Perch	Rs. 18,871,168.73	–
1.0 Perch	Rs. 27,871,168.73	Rs. 27,871,168.73
10 Perches	Rs. 117,871,168.73	Rs. 11,787,116.87
100 Perches	Rs. 1,017,871,168.73	Rs. 10,178,711.69

Source: Analysis Data, (2020).

- Value of the property, if the property is located on 100m away from the main road, regular shape and high facilitated land;

Y = 17184168.730 + (-7575.198* x_1) + (.027* x_2) + (.021* x_3) + e

Y = 17184168.730 + (-7575.198*100m) + (.027*Rs.13,000,000) + (.021* Rs.16,000,000) + e

Y = **Rs. 17,113,648.93 + e**

Total Property Value for 0.1 Perch = Rs. 17,113,648.93 + (Rs.10,000,000*0.1P)

= Rs. 18,113,648.93 + e

Total Property Value for 1 Perch = Rs. 17,113,648.93 + (Rs.10,000,000*1P)

= Rs. 27,113,648.93 + e

Total Property Value for 10 Perches = Rs. 17,113,648.93 + (Rs.10,000,000*10P)

= Rs. 117,113,648.93 + e

Total Property Value for 100 Perches = Rs. 17,113,648.93 + (Rs.10,000,000*100P)

= Rs. 1,017,113,648.93 + e

Table 4: Application of the Method

Extent	Total Value	Per Perch Value
0.1 Perch	Rs. 18,113,648.93	–
1.0 Perch	Rs. 27,113,648.93	Rs. 27,113,648.93
10 Perches	Rs. 117,113,648.93	Rs. 11,711,364.89
100 Perches	Rs. 1,017,113,648.93	Rs. 10,171,136.49

Source: Analysis Data, (2020).

The above application measures clearly show that though this model is on a very fundamental level, the accuracy is somewhat high as the error is below 11.8%.

As this model is at an acceptable level, it is used to generate a value-based method to allocate housing units in a resettlement process in a high-rise building. First of all, all the residential units have been categorized into five categories based on the floor area of each unit.

- Less than 1 Perch
- 1.01 Perches – 2 Perches
- 2.01 Perches – 3 Perches
- 3.01 Perches – 4 Perches
- 4.01 Perches – 5 Perches

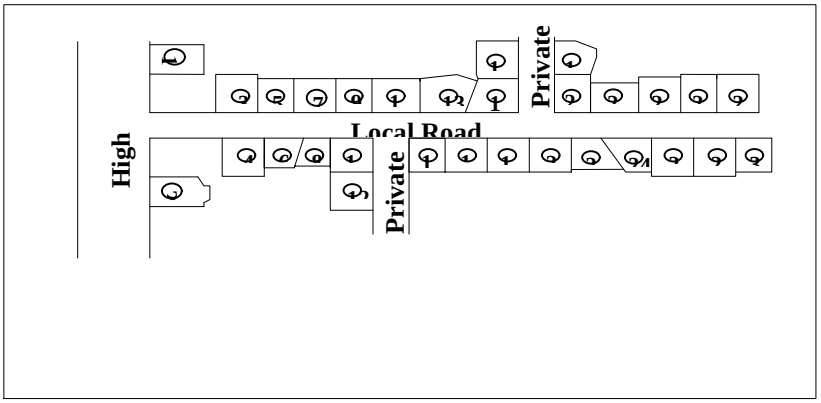
Then valued each unit in each extent category based on its location to maintain equality among allocation of units to the residents in the apartment blocks.

Here it is considered a hypothetical figure to show out the variation of the value of the existing properties. When considering the 0 Perch – 1 Perch category, assuming that there are 30 units included under this category and for these 30 units we are expected to give 1.44 perch apartment unit for each existing unit. The sketch of these hypothetical land plots are as follows;

Assumption:

All the lands are under the freehold interest, and all the buildings in each plot of land are identical

Figure 1: The Sketch of the Hypothetical Land Plots



Source: Author, (2020).

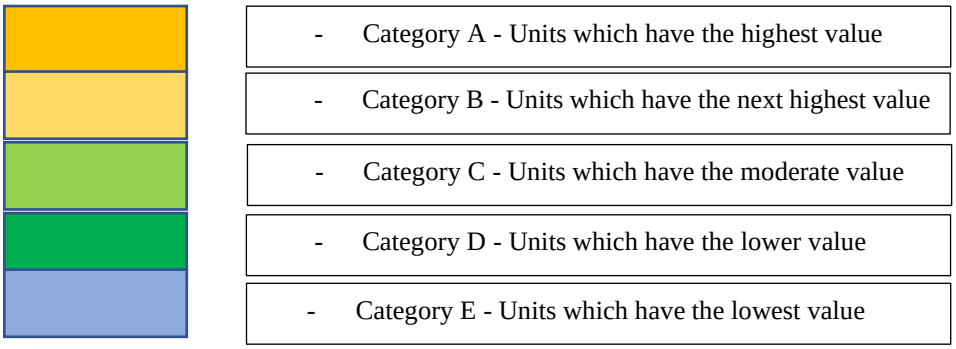
After considering the factors, values of the properties from the model mentioned above can be seen in Annexure 02.

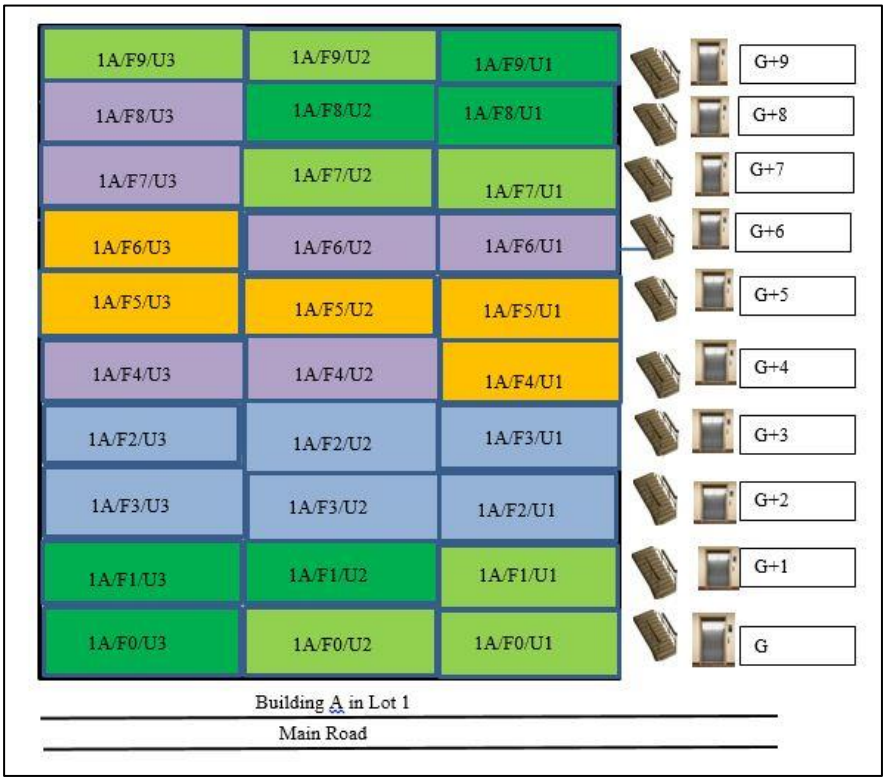
Next Rank, all the Existing Land Plots Based on its Land Value.

Reallocating

Assume that it is planned to regenerate these people in an apartment which comprised of 10 stories and each story consisted of 3 housing units and every housing unit have equal facilities. Further, each story has a staircase and an elevator for accessibility. Here housing units also have been divided into five categories based on its unit value. Categorization and the categorized units with a sketch of the apartment is as follows:

Figure 2: Sketch of the Hypothetical Apartment





Source: Author, (2020).

In general terms, some can argue that the values of ground floors are high because it has the easiest and the highest accessibility. So, the value will decrease when the higher the floor number is. This argument is correct when it comes to commercial properties because, in commercial properties, the most important factor is accessibility. However, when it comes to residential purpose, accessibility is not the only factor that needs to consider. Perfect views, calm and peaceful environment, high level of privacy is some of the other factors we need to consider when valuing. If those factors are considered, then one can argue that the top floors have the highest values. But what if a fire situation occurs in the apartment. So, to getting into a safe position will be challenging even the apartment has a better fire extinguishing system. Also, what if an electrical failure occurs. The persons in the upper floors must use more time and effort to get to the ground floors. So, the accessibility is not at the highest level.

Nevertheless, when considering the middle floors, they have all these benefits together. The risk when a fire occurs is low compared to upper flows. It has better accessibility compared to upper flows. Middle floors have better views, calm and peaceful environment, high level of privacy compared to lower floors. So, we can conclude that the middle floors in an apartment have the highest values.

Regenerating

Here it is regenerate these people based on their existing land value. Further, it means that the person who has the highest current property value can select the housing unit according to his preference under the highest value category. Then the next person who has the next highest value in his existing land can select a housing unit from the remaining housing units under the

highest value category, and this process goes on for each category in the same manner. Units come under each category and suitability of chosen a unit can be seen in Annexure 03.

Results and Discussion

By running a correlation analysis, it helps to see the relationship between the depended variable (market value of per perch) and the independent variables (Distance from the Main Road, Shape of the Land and Value that add due to Infrastructure & Sanitary Facilities) of the respective study and output is as follows:

Table 5: Output of the Correlation Analysis

Source: Analysis Data, (2020).

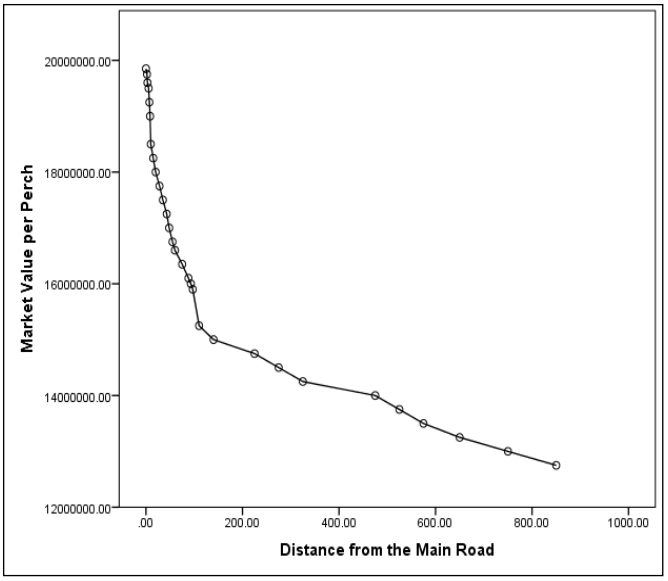
Correlations					
		Market Value per Perch	**Distance from the Main Road**	**The shape of the land**	**The value that adds due to Infrastructure & Sanitary Facilities**
Market Value per Perch	Pearson Correlation	1	-.856**	.141	.290
	Sig. (2-tailed)		.000	.457	.120
	N	30	30	30	30
Distance from the Main Road	Pearson Correlation	-.856**	1	-.158	-.326
	Sig. (2-tailed)	.000		.405	.079
	N	30	30	30	30
The shape of the Land	Pearson Correlation	.141	-.158	1	-.098
	Sig. (2-tailed)	.457	.405		.605
	N	30	30	30	30
Value that add due to Infrastructure & Sanitary Facilities	Pearson Correlation	.290	-.326	-.098	1
	Sig. (2-tailed)	.120	.079	.605	
	N	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

As a finding that comes out from this study, the above factors proved that the three interdependent variables which are the distance from the Main Road (Accessibility) have the strong negative correlation with the market value per perch; Shape of the land has the weak positive correlation with the market value per perch, and Infrastructure and Sanitary Facilities (Utilities) has the moderate positive correlation with the market value per perch.

As the above factors clearly show that highest relationship is with the variable of 'Distance from the Main Road (Accessibility)', the below graph proves why it gets the negative correlation with the dependent variable (market value per perch), and it shows that as a reason it is because when the distance from the main road get high, then the market value of per perch get decreased.

Figure 3: Skewness of the Highest Related Independent Variable



Source: Author, (2020).

Further, some more results that got through out the study shows that the primary independent variable (Distance from the main road) has a positive skewness which means that means is higher than the median and mode. Median is in the middle, and mode is lower than the median, and its error distribution among all three independent variables is symmetrical.

Conclusion

Through this study, it has generated a scientific model for allocating housing units in a high-rise building in the resettlement project in a very systematical way. It is proved that the significant effect to the market value of a property, mostly which situated in the area of Nawam Mawatha and Wekanda road (part of Colombo 02) comes from the level of accessibility or distance to the land plots from the main road. As this area is highly commercial than having 0.5P is also very valuable, and that value may significantly change between properties which are situated fronting to the main road and properties which are situated far away from the main road. It is showed that, after the factor of distance from the main road, buyers might be more concern about the utilities available within the property. As it has the moderate relationship with the market value of the land, it means that this factor has a moderate influence to the market value of the land and due to that having fulfilled with the necessary utilities is enough to have a high demand with high accessibility. Buyers may do not more concern about the shape of the land in these areas. So, the effect for the demand is shallow, but the regular shape of lands has some value more than the irregular shape of the lands. As a whole, by resettlement, this lower community in a reasonable scientific and systematic manner may lead to high satisfaction among dwellers so that the failures of projects get minimized.

Recommendations

As this model is in the first stage of its creation, it is limited only for the freehold lands which located within the Colombo 02 area, to apply this model for the leasehold lands and properties situated in any area, a further adjustment should be made to this model. This model has an error which is lower than the 11.8%, by doing further developments to this model may get more accurate results than now.

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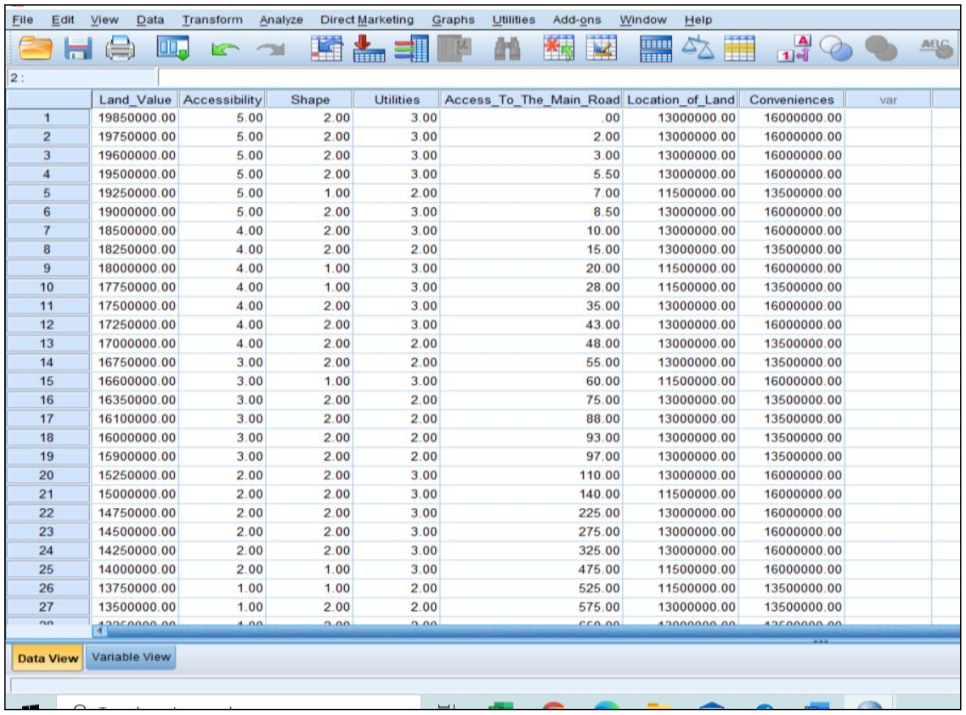
ANNEXURES

Annexure 01

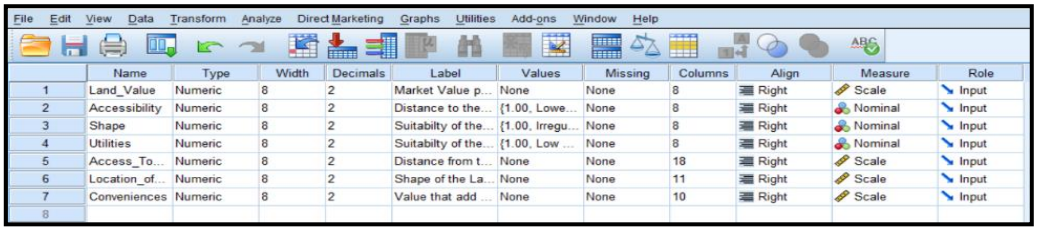
Figure 4: Market Comparable



	Land_Value	Accessibility	Shape	Utilities	Access_To_The_Main_Road	Location_of_Land	Conveniences
1	19850000.00	5.00	2.00	3.00	.00	13000000.00	16000000.00
2	19750000.00	5.00	2.00	3.00	2.00	13000000.00	16000000.00
3	19600000.00	5.00	2.00	3.00	3.00	13000000.00	16000000.00
4	19500000.00	5.00	2.00	3.00	5.50	13000000.00	16000000.00
5	19250000.00	5.00	1.00	2.00	7.00	11500000.00	13500000.00
6	19000000.00	5.00	2.00	3.00	8.50	13000000.00	16000000.00
7	18500000.00	4.00	2.00	3.00	10.00	13000000.00	16000000.00
8	18250000.00	4.00	2.00	2.00	15.00	13000000.00	13500000.00
9	18000000.00	4.00	1.00	3.00	20.00	11500000.00	16000000.00
10	17750000.00	4.00	1.00	3.00	28.00	11500000.00	13500000.00
11	17500000.00	4.00	2.00	3.00	35.00	13000000.00	16000000.00
12	17250000.00	4.00	2.00	3.00	43.00	13000000.00	16000000.00
13	17000000.00	4.00	2.00	2.00	48.00	13000000.00	13500000.00
14	16750000.00	3.00	2.00	2.00	55.00	13000000.00	13500000.00
15	16600000.00	3.00	1.00	3.00	60.00	11500000.00	16000000.00
16	16350000.00	3.00	2.00	2.00	75.00	13000000.00	13500000.00
17	16100000.00	3.00	2.00	2.00	88.00	13000000.00	13500000.00
18	16000000.00	3.00	2.00	2.00	93.00	13000000.00	13500000.00
19	15900000.00	3.00	2.00	2.00	97.00	13000000.00	13500000.00
20	15250000.00	2.00	2.00	3.00	110.00	13000000.00	16000000.00
21	15000000.00	2.00	2.00	3.00	140.00	11500000.00	16000000.00
22	14750000.00	2.00	2.00	3.00	225.00	13000000.00	16000000.00
23	14500000.00	2.00	2.00	3.00	275.00	13000000.00	16000000.00
24	14250000.00	2.00	2.00	3.00	325.00	13000000.00	16000000.00
25	14000000.00	2.00	1.00	3.00	475.00	11500000.00	16000000.00
26	13750000.00	1.00	1.00	2.00	525.00	11500000.00	13500000.00
27	13500000.00	1.00	2.00	2.00	575.00	13000000.00	13500000.00
28	13250000.00	1.00	2.00	2.00	650.00	13000000.00	13500000.00
29	13000000.00	1.00	1.00	3.00	750.00	11500000.00	16000000.00
30	12750000.00	1.00	2.00	1.00	850.00	13000000.00	11000000.00
31	.	.	.	.	.	.	.
32							

Source: Author, (2020).

Figure 5: Variable View of the Dataset



	Name	Type	Width	Decimals	Label	Values	Missing	Columns	Align	Measure	Role
1	Land_Value	Numeric	8	2	Market Value p...	None	None	8	Right	Scale	Input
2	Accessibility	Numeric	8	2	Distance to the...	{1.00, Lowe...	None	8	Right	Nominal	Input
3	Shape	Numeric	8	2	Suitabilty of the...	{1.00, Irregu...	None	8	Right	Nominal	Input
4	Utilities	Numeric	8	2	Suitabilty of the...	{1.00, Low ...	None	8	Right	Nominal	Input
5	Access_To...	Numeric	8	2	Distance from t...	None	None	18	Right	Scale	Input
6	Location_of...	Numeric	8	2	Shape of the La...	None	None	11	Right	Scale	Input
7	Conveniences	Numeric	8	2	Value that add ...	None	None	10	Right	Scale	Input
8											

Source: Author, (2020).

Annexure 02

Table 6: Values of the Existing Properties

Plot Number	Extent	Accessibility (Meters)	Shape	Facility	Property Value (Rs)
01	1	0	Regular	High	34,054,168.73+e

02	1	0	Irregular	High	33,649,168.73+e
03	0.5	5	Regular	Moderate	28,491,292.74+e
04	1	5	Regular	Moderate	33,491,292.74+e
05	1	9	Regular	Moderate	33,460,991.95+e
06	0.4	9	Irregular	High	27,580,991.95+e
07	0.7	12	Regular	High	30,963,266.35+e
08	0.3	12	Irregular	High	26,558,266.35+e
09	0.5	20	Regular	High	28,902,664.77+e
10	0.6	20	Regular	High	29,902,664.77+e
11	0.7	40	Regular	High	30,751,160.81+e
12	1	40	Regular	High	33,751,160.81+e
13	1	60	Irregular	Moderate	32,669,656.85+e
14	0.5	55	Regular	High	28,637,532.84+e
15	0.8	70	Irregular	High	31,118,904.87+e
16	0.8	70	Regular	High	31,523,904.87+e
17	1	90	Regular	High	33,372,400.91+e
18	0.5	90	Regular	High	28,372,400.91+e
19	0.7	120	Irregular	High	29,740,144.97+e
20	0.8	110	Regular	High	31,220,896.95+e
21	0.6	200	Regular	High	28,539,129.13+e
22	0.6	200	Irregular	High	28,134,129.13+e
23	0.5	350	Regular	High	26,402,849.43+e
24	0.45	400	Irregular	Moderate	24,594,089.53+e
25	0.8	510	Regular	Low	27,140,817.75+e
26	1	600	Regular	Low	28,459,049.93+e
27	0.6	610	Regular	High	25,433,297.95+e
28	1	700	Regular	High	28,751,530.13+e
29	1	750	Regular	High	28,372,770.23+e
30	0.5	1000	Regular	High	21,478,970.73+e

Source: Author, (2020).

Annexure 03

Table 7: Comparison of Values of Hypothetically Existing Units with Hypothetically Proposed Housing Units

Rank	Existing Plot Number	Related Housing Units
01	1	A
02	12	A
03	2	A
04	4	A
05	5	A
06	17	B
07	13	B
08	16	B
09	20	B
10	15	B
11	7	B
12	11	C
13	10	C

14	19	C
15	9	C
16	28	C
17	14	C
18	21	C
19	3	D
20	26	D
21	29	D
22	18	D
23	22	D
24	6	D
25	25	E
26	8	E
27	23	E
28	27	E
29	24	E
30	30	E

Source: Author, (2020).