International Journal of Economics, Commerce and Management
United Kingdom Vol. VI, Issue 2, February 2018
http://ijecm.co.uk/ ISSN 2348 0386

FACILITIES, INCOME AND SECURITY LEVEL TO RESIDENTIAL PROPERTY VALUE IN BANDUNG, INDONESIA

Fery Agustianto
Master of Management Program, Faculty of Economics, and Business,
Padjadjaran University, Bandung, Indonesia
feryagustianto@yahoo.co.id

Benny Budiawan Tjandrasa
Department of Management and Business, Faculty of Economics and Business, Kristen Maranata University, Bandung, Indonesia
benny.tjandrasa@gmail.com

Sucherly
Department of Management and Business, Faculty of Economics and Business,
Padjadjaran University, Bandung, Indonesia
sucherly@fe.unpad.ac.id

Abstract

This research intended to determine the effect of education facilities, health facilities, income and security level to residential property value in Bandung, by using panel data on 27 housing complex in Bandung with the observation time of 2012 to 2016, the residential property divided into three small, medium and luxury types by using multiple regression analysis so it is known that educational facilities, health facilities, income per capita and security are very significant effect to residential property values for medium type, but for small and luxurious types, educational facilities are not give a significant effect to the residential property value and health facilities also do not give a significant effect on the residential property value on luxury type, while two other variables, income and security give a significant effect on the each type of residential property, with the income being the largest factor in the establishment of the residential property value.

Keywords: Residential Property Value, Panel Data, Facilities, Income Level, Security Level

INTRODUCTION

Problems in property appraisers, especially for residential, not on internal factors but on external factors, on internal factors can be easily seen that is by looking at the area of land, building area and type of building and building materials used, it can be directly conveyed in the form of value based on the price is applicable, but for external factors we cannot directly assess a residential because it is closely related to the environment that can increase or decrease the value of the residential.

Education and health facilities are required to be provided by the residential areas to support the activities of its inhabitants in meeting the basic needs of education and health, in this case housing developers who have large capital can build their own educational facilities and health facilities that are operated by private parties in the region settlements are built, but if they do not have a large budget to build the facility election location close to health and education facilities will also increase the residential property value. (Primaningtyas: 2012) in the presence of good facilities and adequate it will provide a positive value for consumers in case of shortcomings in other parts. With the more complete facilities offered, the more expensive the property tariff will be. Due to the limited land located in the city center, the housing moves far from the city's adequate public facilities but this does not reduce the value of the housing price even though the location is far from public facilities, The following data of public facilities education and health in Bandung:

Table 1. Number of Public Facilities for Education and Health in Bandung

Education Facilities	**Total**	**Total of Supporting Population (according to BSN Indonesia)**	**Must be available**	**Deviation of Education Facilities**
Kindergarten	739	1250 people	1,985	1246
Elementary School	1068	1600 people	1,551	483
Junior High School	288	4800 people	517	229
Senior High School	347	4800 people	517	170
HealthFacilities	**Total**	**Total of Supporting Population (according to BSN Indonesia)**	**Must be available**	**Deviation of Health Facilities**
Hospital	18	100,000 people	25	7
Public Health Centre	74	30,000 people	83	9

Source: Education and Health Office of Bandung and BSN, Year 2014

Can be seen from table 1, Bandung city has not met the standard number of educational facilities issued by BSN (National Standardization Agency). The number of educational facilities in Bandung as many as 2442 both public and private schools consisting of 739 kindergartens, 1068 elementary, 288 junior high school and 347 Senior High School/Vocational High School to meet the needs of 2,481,469 residents, so ideally Bandung should have 4570 schools. While for health facilities in Bandung has 18 public and private hospitals and 74 health centers for 2,481,469 residents, ideally Bandung Hurus has 25 hospitals and 83 public health centre.

According to (Natanael: 2015) director of PT Modernland Realty Tbk. Increase in property prices in stable economic conditions, the average increase in property prices ranges from 10% - 20% per year. Reinforced by (Firmansyah: 2015) Chairman REI West Java (Persatuan Perusahaan Realestate Indonesia) increase in property prices in Bandung city can reach 30% per year in certain areas, the development of residential in Bandung city now leads to east Bandung because in West Bandung has been solid, while the northern area for the recharge area and the south prone to flooding. This rise in housing prices cannot be pursued by an increase in people's incomes, in some cases of developing countries household income growth is not able to pursue an increase in house prices (Case and Shiller: 2003), given the very high housing prices for middle- and low-income people, home in cash one has to save for so long while the need for residential home cannot be delayed and if rent a house it will incur cost for residence but society do not have that house, so emerge of house financing scheme with mortgage credit scheme (KPR) to facilitate communities in owning residential homes. Below is the data of GDP growth per capita of Bandung:

Table 2. Gross Regional Domestic Product at Current Market Prices in Bandung City

	2012	**2013**	**2014**	**2015**
GRDP (in million)	119,632,250	129,005,462	138,958,094	149,566,785
GDRP Per capita (in million)	48.7	52.5	56.2	60.3
GDRP Growth per capita	**7.17%**	**7.70%**	**7.18%**	**7.17%**

Source: Central Bureau of Statistics Bandung, Year2016

Seen from GRDP per capita as indicator of society welfare level of Bandung from year 2012 until year 2015 the average growth between 7% - 8% which very far if compare with mean of increase of house price in Bandung city 10 - 20% in state stable economic conditions.

Factors that also determine the residential property valueare the level of security of the region, (Wei-Shong Lin et al: 2014) measures the level of security of property prices with the number of criminal cases occurring, especially in cases of murder, violence, theft of cars/

motorcycles, with the number of urbanization of the community to the city of Bandung in addition to increasing the number of population density, the high number of criminality in Bandung also increased, according to data BPS crime rate Bandung in the last three years as many as 5877 cases reported in 2012 and 4575 cases reported in year 2013 and increased by 2014 as many as 4889 cases, and during the year 2015 Bandung is the highest city crime rate in West Java Province compared with other districts / cities in West Java. But this doesn't lower interest in demand for residential properties in Bandunghe city so as to make property values in Bandung continues to increase.

LITERATURE REVIEW

Residential Property Value

Values can be defined as the meaning and meaning of an item, so it can be interpreted that something will be valuable when it has a greater benefit than what is sacrificed to get the item. According to (Rijasa, et al: 2014) the value is an estimate of the economic benefits of goods and services at a given time, the value of a property may also be interpreted from the price paid by the buyer to the seller, the buyer is willing to pay if it fits their expectations both now and in the future which will come, the higher the benefits or benefits provided by the property will increase its value after compared with the costs incurred to get a property.

Benefit of Residential Property

The benefit of one property especially for a residential property can be enjoyed by a person if the property is legally owned either permanently or temporarily, the residential property benefits other than a residence, it can also indirectly eliminate the costs incurred to rent a residence if a person has not had his / her own residence, the benefit may be interpreted through the rental income received from the property and the difference in the sale of the property with the initial purchase also becomes income for the owner. It is also revealed by (Prawoto: 2015) that the purchase of property is aimed to get the results / profits to restore the initial capital invested. The characteristics of these benefits can vary from one to another, which can be regular and periodic cash inflows as well as increased economic value and personal satisfaction of the owner. The way to measure the benefits also varies the most important is the amount of income earned each year by operating the property or the profits to be gained from the sale of the property.

Cost of Residential Property

According to (Hidayati and Harjanto: 2014) the costs for property divides into two namely direct and indirect costs, direct costs represent the cost of labor expenditures and materials used in

building activities including the profits taken by contractors, whereas indirect costs are expenditures other than labor and materials such as, architectural services, legal services and borrowing. And the direct and indirect costs are coupled with the cost of purchasing the plot of land to be used.

While the factors forming their own values according to (Wijito and Sindang: 2012) are:

1. (Demand). It is an analysis of the person / buyer, what they want / need, financial ability and willingness to pay as well as the availability of the product.
2. Utility. It is an advantage of a property and the extent to which a property can meet the needs and wants of potential buyers.
3. Scarcity. It refers to the relativity of the level of property suppliers that can meet potential buyers.
4. Transferability. Refers to property rights transferable from one party to another

Income per capita

Economic considerations relate to the financial capacity of each occupant of the market area and their ability to rent or purchase property, the per capita income ts is a picture of the welfare of a region so as to affect the demand for residential property the higher the per capita income level in a particular area the higher the purchasing power of the community to buy or pay the DP and the mortgage will be higher so increase the demand for housing, in accordance with the factor forming the value proposed by (Wijito and Sindang: 2012) then the more demand for a good will be high value of the goods. This is also expressed in research (Hui Jiang Sheng et al: 2013) per capita income positively affect the residential property value.

Security Level

House is a refuge for the inhabitants of unwanted human and environmental disturbances. the level of security in the residential area is a determinant factor in the selection of places to settle, the more cases of crimes that occur in certain areas the greater the risk of the population become victims of crime and vice versa fewer crime cases the lower the risk of the population become victims of crime in other words, the number of crime rates describes the level of security in the region, as revealed by (Wei-Shong Lin et al. 2014) in their research suggests that crime rates negatively affect the residential property value in the surrounding area.

Education and health facilities

The public facilities available within a certain area are indispensable in a residential area to support the daily activities of the residents. The availability of such facilities contributes to the

value of a property, the human needs of today are not just about eating and drinking, education and health are now a measure of decent living, the availability of facilities to meet these needs is a necessity in a settlement. It is also revealed by (Hui Jiang Sheng et al: 2013) in his research mentioning infrastructure facilities for primary and secondary schools and hospitals as being a very closely related facility in daily life of citizens. Therefore the availability of schools and hospitals in the city can increase the value of property.

RESEARCH METHOD

Research methods are divided into two types. First, to count for dependent variable of residential property value (y) by using benefit per cost comparison method, adopt concept of profitability index, second, the research method is an explanation research, where research aims to test mathematically about the relationship between variables in the hypothesis. The independent variable consists of education facilities (x1), health facilities (x2), income per capita (x3), security levels(x4).

Data Sources and Determination

The data taken in this research is panel data that is combination of cross section data which is 27 data of residential property in Bandung area and time series data from 2012 until 2016. While the type of data in this study is secondary data obtained by various agencies and data supply housing / brochures obtained from residential property developers. The secondary data is housing price of 27 samples of residential property in Bandung City in 2012 which can be obtained from brochures from property developers incorporated in the association of residential property developers in Indonesia or REI (Real Estate Indonesia) and also on the site *https: //infoperumahanbandung.com* next for the price development 2013 to 2016 researchers use data from the sale value of tax objects for land and buildings issued by the Regional Revenue Management Agency of Bandung (BPPD) so that in the price of such property starting from 2012 until 2016, after that the price is converted into value by including the cash inflow element (rental income and resale price in year t) at a certain time based on cost of capital (with average mortgage rate = 8%) and divided by initial investment (purchasing price).

For independent variables in the form of educational facilities is the number of kindergarten, elementary, junior high and high schools managed by the state and private sector around the area of the housing complex and for health facilities is the number of health center, Hospitals and doctors practice around complex area housing. As for income data per capita is the amount of income in the area around the housing complex is divided by the population. The data obtained from (BPS) Bandung Central Bureau of Statistics, and one other independent

variable is the level of security measured from the number of criminal cases in the area of the housing complex, the more cases of crime in the area around the housing complexes then the level of security will be lower and vice versa the less criminal cases in the area around the housing complex then the level of security will be higher this data obtained from the Police Town (Polrestabes) Bandung.

Dependent Variable

The value of residential property (Y) in this study is using the concept of value by comparing the benefits with the cost incurred so that the benefits gained property owners is the cost of rental gained and the difference in price at the seller of the house while the cost is the price at the time of purchase of the property. So to find the value of the property needs to be calculated as follows:

Properties Values= $\frac{\sum_{n=1}^{t}\frac{CF}{(1+r)^t}}{I_0}$

Where:

CF: present value of the amount of cash inflow (rental income and resale price in year t) at a certain time based on the cost of capital that has been specified.

r : Cost of capital (mortgage interest rate)

Io: Initial investment (purchasing price)

Independent Variable

Table 3. Independent Variable

Variable	Variabel Concept	Measurement	Scale
Educational facilities (x1)	the number of kindergarten, elementary, junior high and high schools managed by the state and private sector around the area of the housing year of 2012 - 2016	units	Ratio
Health facilities (x2)	the number of health center, Hospitals and doctors practice around complex area housing year of 2012 - 2016	units	Ratio
Income (x3)	income per capita is the amount of income in the area around the housing complex year of 2012 - 2016	Rupiah	Ratio
Security Level(x4)	the number of criminal cases in the area of the housing complex year of 2012 - 2016	The number cases	Ratio

Data Analysis Method

Multiple Linear Regression Analysis

The analysis model used in this study is multiple linear regressions with panel data that was adopted from some previous research by doing some adjustment. The research model as follows:

$$y = \beta_0 + \beta_1 x1_{it} + \beta_2 x2_{it} + \beta_3 x3_{it} + \beta_4 x4_{it} + e_{it}$$

Where,

y = Residential Property Value

β_0 = constanta;

x1 = Educational Facilities;

x2 = Health Facilities;

x3= Income Per Capita;

x4 = Security Level;

e = Error/Residual

This test must escape the deviation of assumptions of autocorrelation, normality, multicollinearity, and heteroscedasticity. The statistical criteria test in multiple linear regression analysis, t-statistic test, this test to know whether the independent variable partially has a significant influence on dependent variable.

RESULTS AND DISCUSSION

The effect of facilities, income and security on the residential property value in Bandung City in this study is divided into three, namely small, medium and luxury house type here is the estimation result of the research:

Table 4. Estimation Results

Variable	Coefficient (b)					
	Small House	Prob.	Medium House	Prob.	Luxury House	Prob.
X1 (Educational Facilities)	0.085	0.114	0.144*	0.091	0.11	0.239
X2 (Health Facilities)	0.296***	0,000	0.241***	0.001	0.101	0.191
X3 (Income Per Capita)	1.958***	0,000	1.908***	0,000	1.518***	0,000
X4 (Security Level)	-0.030***	0,000	-0.031***	0.003	-0.031**	0.026

Note : significant at 1% (***), at 5% (**) and at 10% (*)

Effect of Education Facilities on Residential Property Value

-Small House Type

Educational facilities have a value of coefficient b of 0.085 and probability value of 0.114, meaning that education facilities have a positive but not significant relationship to the value of small type House properties. With the value of coefficient b of 0.085 means that every 1 percent increase of educational facilities will increase the residential property value by 0,085 percent, meaning that the increasing number of educational facilities in the vicinity of the House complex will increase the residential property value. However, this variable is based on statistical value, does not significantly affect the residential property value, because residential with a small type usually located outside the city center away from the educational facilities and also small House type buyers are more concerned with the cheaper price rather than the availability educational facilities that exist near the house.

- Medium House Type

Educational facilities have a value of coefficient b of 0.144 and probability value of 0.091, meaning that the educational facility variables have a positive and significant relation on a = 10% to the value of medium type house properties. With the value of coefficient b of 0.144 means that every 1 percent increase in educational facilities will increase the residential property value by 0.144 percent, meaning that the increasing number of educational facilities in the vicinity of the house complex will increase the residential property value. Medium house type buyers are more concerned about the availability of educational facilities that are located close to the house area to save expenses, especially for educational facilities run by the government because it is cheaper than the facilities managed by the private sector.

- Luxury House Type

Educational facilities have a value of coefficient b of 0.110 and probability value of 0.239, meaning that education facilities have a positive but not significant relationship to residential property value. With the value of coefficient b of 0.110 means that every 1 percent increase will increase the residential property value by 0.110 percent, meaning that the increasing number of educational facilities in the vicinity of the house complex will increase the residential property value. However, this variable is based on statistical value, does not significantly affect the residential property value, because house with luxury type does not have to have educational facilities close to the house complex because they have excess advantages for transportation costs in reaching good education facilities and high quality, although they have to spend more on transportation and school fees. Resident's types of luxury house are more likely finding comfort and prestige in choosing a residential location.

Effect of Health Facilities on Residential Property Value

- Small House Type

Health facilities have a value of coefficient b of 0.296 and a probability value of 0.000, meaning the health facility variables have a positive and significant relation on a = 1% to the value of house property on a small type. With the value of coefficient b of 0.296 means that any increase of 1 percent of health facilities will increase the residential property value by 0.296 percent, meaning that the increasing number of health facilities in the vicinity of the house complex will increase the residential property value. Health facilities nowadays have been met in every area, ranging from doctor practice, public health center/ clinic to hospital. Moreover, practicing physicians will follow in areas where the occupancy rate is solid.

- Medium House Type

Health facilities have a b coefficient of 0.241 and a probability value of 0.000, meaning that the variable of the shooting facility has a positive and significant relation on a = 1% to the residential property value. With the value of coefficient b of 0.241 means that any increase of 1 percent of health facilities will increase the residential property value by 0.241 percent, meaning that the increasing number of health facilities in the vicinity of the house complex will increase the value of medium-type house properties. Similar to the simple house type, health facilities are now commonly found in every area, ranging from practicing doctors, public health center / clinic to hospital. Moreover, physicians practice will follow the areas where the occupancy rate is solid, in accordance with the characteristics of small and medium type house which is the high density of occupancy. This will attract doctors to open the practice and open the clinic to meet the needs of the surrounding community.

- Luxury House Type

Health facilities have a coefficient b value of 0.101 and a probability value of 0.191, meaning that health facilities have a positive but not significant relationship to the value of luxury type house properties. With the value of coefficient b 0.101 means that any 1 percent increase in healthcare facilities will increase the value of residential properties by 0.101 percent, in the luxury house type of health facilities is not an important factor because people living in their luxury type house tend to look for good quality healthcare facilities even though they are far from residential areas or they already have their own family doctor.

The Effect of Income Per Capita on Residential Property Value

- Small House Type

Income per capita has the value of coefficient b of 1.958 and probability value of 0.000, meaning variable income per capita have a positive and significant relation on a = 1% to the residential

property value. With a coefficient b of 1,958 means that every 1 percent increase in income per capita will increase the residential property value by 1,958 percent, meaning that the higher income per capita of the people around the house complex will increase the residential property value. Income per capita is the biggest factor affect the residential property value, because the higher income people will increase the demand for residential property, can be seen the value of coefficient b of 1.958 which means that when a 1% increase will increase the purchasing power of 1,958% twice as much in purchases for residential properties are now mostly done on credit (KPR) with a 30 percent down payment. Moreover, the need for habitation is a basic requirement, if not met will result in the cost to rent. So everyone will give priority to meet the needs of occupancy, plus the increase in house prices each year that also influence a person's decision in prioritizing the needs of occupancy.

- Medium House Type

Income per capita has a coefficient b value of 1.908 and a probability value of 0.000, meaning income per capita has a positive and significant relation on a = 1% to the value of medium house properties. With a coefficient b of 1,908 means that every 1 percent increase in income per capita will increase the residential property value by 1,908 percent, meaning that the higher income per capita of the community around the house complex will increase the residential property value. For the variable income per capita of each type of house is the same, it's the biggest factor in determining the residential property value.

- **Luxury House Type**

Income per capita has a coefficient b value of 1.518 and a probability value of 0.000, meaning variable income per capita has a positive and significant relation on a = 1% to the value of luxury type house properties. With the value of coefficient b of 1.518 means that every 1 per cent increases in income per capita will increase the residential property value by 1.518 percent, meaning that the higher income per capita communities in the vicinity of the house complex will increase the residential property value. For income per capita each type of house is the same as the biggest factor in determining the residential property value. But, in case of luxury house is slightly smaller than the type of simple and medium house because the type of luxury is not a priority in meeting the needs of occupancy.

The Effect of Security Environment on Residential Properties Value

- Small House Type

The security environment has a coefficient b of -0.030 and a probability value of 0.000, meaning that the security environment has a negative and significant relation on a = 1% to the value of small type house property. With a coefficient b of -0.030 means that any 1 percent reduction in

security environment or an increase in a crime case will decrease the residential property value by 0.030 percent, meaning that the lower environment of security in the area surrounding the house complex will decrease the residential property value.

- Medium House Type

The security environment has a coefficient b value of -0.031 and a probability value of 0.003, meaning that the security environment variable has a negative and significant relation on a = 1% to the value of medium type house property. With a coefficient b of -0.031 means that any 1 percent reduction in security environment or an increase in a crime case will decrease the residential property value by 0.031 percent, meaning that the lower security environment in the area surrounding the house complex will decrease the residential property value.

- Luxury House Type

The security environment has a b-coefficient of -0.030 and a probability value of 0.000, meaning that the security environment variable has a negative and significant relation on a = 1% to the value of luxury house property. With a coefficient b of - 0.030 means that any 1 percent reduction in security environment or an increase in a crime case will decrease the residential property value by 0.030 percent, meaning that the lower security environment in the area surrounding the house complex will decrease the residential property value.

CONCLUSION

Based on the findings, it can be concluded as:

1. Educational facilities are positively related and have a significant effect on the residential property value only for medium-sized housing, but do not significantly affect the housing of simple and luxury types.
2. Health facilities are positively related and have a significant effect on the residential property value for simple and medium type housing, while for the type of luxury housing does not significantly affected.
3. Income per capita is positively related and has a significant effect on the residential property value for all types of housing. And is the biggest factor in affecting the residential property value in this study, when compared with educational facilities, health facilities and security level.
4. Security levels are negatively related and have a significant effect on the housing properties for all types of housing, and give almost the same magnitude of effect on each type of housing.

5. Judging from the data of residential property values in Bandung in 2012 until 2016 that the average property will give more value or property value more than one that is in the third year after the initial purchase.

LIMITATIONS OF THE CURRENT STUDY

This research is only limited to see the residential property value from external factor, which is described in independent variable while internal factor not become the focus of research. Sampling used in this research only at Bandung city, Indonesia, so there may be difference with result of research elsewhere.

REFERENCES

Anastasia, F. Njo (2014). Penilaian Properti Di Surabaya Pada Perumahan Pakuwon Indah, Graha Famili, Dan Citraraya.Jurnal Teknik Arsitektur, Fakultas Teknik Sipil dan Perencanaan , 63-67

Case, K. E., & Fair, R. C. (2004). Principle of Economics. New Jersey: Pearson.

Caporale G. Maria, Alana Gil. A.-A. (2015). U.S. Disposable Personal Income and a Housing Price Index: A Fractional Integration Analysis. Journal Of Housing Research , 73-86.

Firmansyah, Irfan (2015). http://properti.bisnis.com/read/20150210/48/401114/ indeks-harga-rumah-di-kota-bandung-tertinggi-se-nasional. Diakses pada 4 april 2017

Gujarati, D. N., & Porter, D. C. (2009). Dasar – dasar Ekonometrika. Jakarta: Salemba Empati (Terjemahan).

Greg T. Smersh, Marc T. Smith and Arthur L. Schwartz Jr. (2003) Factors Affecting Residential Property Development Patterns.Journal of Real Estate Research.

Hidayati, & Harjanto. (2014). Konsep Dasar Penilaian Properti. Yogyakarta: BPFE.

Hui Jiang Sheng, (2013). The study of the factors affecting urban residential land price. Applied Mechanics and Materials , 357-360.

Maurice Ochieng Miregi, Prof. Alamdi Obere. (2014). Effects of Market Fundamental Variables on Property Prices in Kenya – A Case of Nairobi Residential Property Market. IOSR Journal of Economics and Finance (IOSR-JEF)Demetriou, Demetris. The Assessment Of Land Valuation In Land Consolidation Schemes. Land Use Policy 31 (2013) 336–346.

Hidayati, Wahyu and Budi Harjanto. 2014. Konsep Dasar Penilaian Properti : Edisi Kedua. BPFE-Yogyakarta.

MAPPI. (2015). KEPI dan SPI. Jakarta: MAPPI.

Natanael, Andy (2015) (http://properti.bisnis.com/read/20150703/107/449887/ harga-properti-kenaikan-20-per-tahun). Diakses pada 4 april 2017

Omboi Bernard Messah, A. (2011). Factors Influencing Real Estate Property Prices A Survey of Real Estates in Meru Municipality, Kenya. Journal of Economics and Sustainable Development , 34-53.

Prawoto, Agus. (2015). Teori dan Praktik Penilaian Properti, Yogyakarta: BPFE

Primaningtyas, Metta (2012). Pengaruh Aksesibilitas, Atribut Fisik, Kesehatan Lingkungan Dan Fasilitas Publik Terhadap Kepuasan Bermukim (Studi Kasus pada PT. Armada Hada Graha Magelang). Tesis , Universitas Diponegoro.

Rahadi, Raden Aswin, S. K. (2015). Factors influencing the price of housing in Indonesia. International Journal of Housing Markets and Analysis , 169-188.

Republik Indonesia. (1992). Undang Undang No. 4 tahun 1992 Tentang Perumahan dan Pemukiman. Jakarta: Sekretariat Negara.

Republik Indonesia. (2007). Undang Undang No. 26 tahun 2007 Tentang Penataan Ruang. Jakarta: Sekretariat Negara.

Republik Indonesia. (2011). Undang Undang No. 1 tahun 2011 Tentang Perumahan dan Pemukiman. Jakarta: Sekretariat Negara.

Rijasa, M. S,M. Mariada & Mayun, N. (2014). Analisis Penilaian Bangunan Rumah Tinggal Di Kota Denpasar. Jurnal Spektran.

Sergio Clavijo, M. J. (2011). The Housing Market in Colombia: Socioeconomic and Financial Determinants. SSRN , 33.

Siregar, D. Doli. (2004). Manajemen Aset . Jakarta: Gramadia Pustaka Utama.

Sugiama, A. Gima (2013). Manajemen Aset Pariwisata. Bandung: Guardaya Intimarta.

Sugiyono, 2013. Metode Penelitian Manajemen. Publisher : Alfabeta CV, Bandung.

Wei-Shong Lin, J.-C. T.-Y.-Y. (2014). Effects of socioeconomic factors on regional housing prices.International Journal of Housing Markets and Analysis , 30-41.

Wijito, L., & Sindang, E. (2012). Penerapan Model Hedonic Dalam Penentuan Nilai Tanah Sebagai Referensi Dalam Penilaian Barang Milik Negara Dan Harga Limit Lelang. Jakarta: Badan Pendidikan Dan Pelatihan Keuangan.

Xia Feng and Brad R. Humphreys : (2008). Assessing the Economic Impact of Sports Facilities on Residential Property Values: A Spatial Hedonic Approach, ASE/NAASE Working Paper Series, No. 08