International Business Management 11 (6): 1343-1347, 2017
ISSN: 1993-5250

Sustainable Property Application from Various Perspectives

Hilma Tamiami Fachrudin and Khaira Amalia Fachrudin
University of Sumatera Utara, Medan, Indonesia

Abstract: Sustainable property is an action and initiatives to reduce the negative impact in the environment. Sustainable property is usually realized in the form of green building with eco-friendly design. This study aim is to find the implementation of sustainable properties in Medan City from various perspectives, namely: developers, architects, architecture academicians, house owners, appraisals, Medan municipal officials and tax academicians. The research method is qualitative method with in-depth interview technique. Samples are 14 respondents, two respondents for each group, namely developers, architects, architecture academicians, appraisers, house owners, Medan municipal officials and tax academicians. The analysis was done by descriptive and inductive conclusions. The results showed that there was awareness for implementing sustainable property but faces obstacles in its implementation. This is because sustainable property requires substantial investment, lack of demand for sustainable design, lack of ability to create designs with the concept of sustainable, less in-depth understanding about the concept of sustainable as well as the lack of binding regulations and lack of incentives. In the practice of property valuation in Medan City this concept is not an important consideration that influence the property value. Government is expected to implement appropriate regulation and give an incentives for sustainable property development.

Key words: Sustainable property, green building, perspective, investment, incentive, expected

INTRODUCTION

Sustainable property is property which paid attention to the environment. Sustainable property has a good benefit in the long term but need a big cost for the investment. Sustainable property is ussually realized in the form of green building or building with eco-friendly design (Nalewaik and Venters, 2009). Sustainable property pay attention to the suitability place, water efficiency, energy and atmosphere, internal environment quality, material, inovation and design. Application of sustainable property will be applied if there is awareness willingness, ability and support from the government. The value of the green building will be higher than the conventional building because the green buliding has higher rent and lower vacancy rate and also operational savings (Institute for Market Transformation and Appraisal Institute (IMT, 2013). Related to the sustainable property value the viewpoint of appraisals or valuers who assess are worth noticed, whether they are able to conduct an assessment of sustainable property or not. For that this research needs to be done in order to know sustainable property of various viewpoints from those who act, namely developers, architects, academicians, appraisers, house owners, Medan municipal officials and tax officials. This research result will be useful to give the sugestion for the governement.

Sustainable property: Sustainable plan and green concept will be successful by a good architectural concept and the plan from many aspects. Sustainability concept has an important role for the government, common public and real estate sector (Cajias and Piazolo, 2013). Generally, sustainable property realized in the green building which has eco-friendly concept and give comfortable feel and healthy for the residents (Nalewaik and Venters, 2009). The research of architecture could influence some aspects because involved by many diciplines directly or indirectly. Plan for building with eco-friendly concept is a process with the aim to get a good building.

Lorenz and Lutzkendorf (2008) explained about characteristics and attributes of sustainable building and the impacts those are. Flexibility and adaptability. Sustainable building can decrease risk because sustainable building is more flexible and adaptable so that can be spared from the obsolescence. Sustainable building is more likely in the market. Energy efficiency and saving in water usage. Sustainable building can make the eficiency from energy dan water costs so those all can decrease business interruption risks. Use of eco-friendly and healthy building products and material. The use of material and eco friendly and healthy products will decrease the litigation risk related to the construction workers and the building occupants. High functionality in the connection with comfort and health of user and

Corresponding Author: Hilma Tamiami Fachrudin, University of Sumatera Utara, Medan, Indonesia

Table 1: Sustainable design features, benefits and impacts on valuation input parameters

Sustainable design features	Benefits	Impacts on
Flexibility and adaptability	Reduction of risks through changes in market participant's preference and through restricted usability by third parties	Capitalization/discount rate; rent projection in discounted cash flow analyses
Energy efficiency and saving in water usage	Reduction of risks through changes in energy and water prices; improved marketability; reduced business interruption risks	Operating costs; capitalization/discount rate; rent projection in discounted cash flow analysis
Use of environmentally friendly and healthy building products and materials	Improved marketability; reduction of litigation risks and of being held liable for paying compensation to construction workers and building occupants	Capitalization/discount rate
High functionality in connection with comfort and health of user and occupants	Reduction of vacancy risks or of losing the tenants, improved marketability	Capitalization/discount rate; market rent
Construction quality; ease of conducting maintenance, servicing and recycling activities	Lower repair and maintenance costs; improved marketability	Operating costs; market rent
Compliance with/over compliance with legal requirements in the areas of environmental and health protection	Reduction of risks from increasingly stringent legislation	Capitalization/discount rate
Reduced impacts on the local and global environment	Image and reputation gains for owners	Capitalization/discount rate

Lorenz and Lutzkendorf (2008)

occupants. Functional connection, comfortable and sanify can decrease the risk of tenant's vacancy. Quality of construction, systematic maintenance and market acceptance will decrease risk of the change of the value in the property. Compliance with/over compliance with legal requirements in the areas of environmental and health protection. The fulfillment of legal needs for environtmental and health protection will decrease the risk of a strong improvement related to legislations for example high repair costs or loss in property value. The advantage of sustainable property stated by Kats (2003) that minimal increases in upfront costs about 2% to support sustainable design would on average, result in life cycle savings of 20% of total construction costs, assumed conservatively to be 20 years. Nevin and Watson (1998) calculated that the market value of residential homes increase by US$ 20 for every US$ 1 decrease in annual utility cost and that cost-effective energy efficiency investments do appear to be reflected in residential housing market values.

Sustainable property and property valuation: Valuation is a work process of an appraisal in giving written opinion about the economic value in certain times (Indonesian Society of Appraisal or MPPI (2015). Lorenz and Lutzkendorf (2008) said that property valuation represents the major mechanism to align economic return with environmental and social performance of property assets. Thus, valuation and valuers play a crucial role within the struggle towards sustainability in property and construction. The traditional valuation methods consists of sales comparison method, investment method discounted cash flow analysis, cost method, profits method and residual method (Lorenz and Lutzkendorf, 2008). Appraisals in Indonesia usually use the traditional valuation methods to value the building. There are three approaches in this method namely sales comparison approach, cost approach and income approach.

According to Lorenz and Lutzkendorf (2008) in sales comparative method the primary task of the valuer is to carry out comparative analysis which involves quantitative and/or qualitative techniques in order to derive appropriate adjustments to get the value indication of the property.This method works best when a sufficient amount of comparable sale prices is available and when the characteristics and attributes of these sales prices and the subject property can be appropriately specified. The difficulty when the valuer is trying to reflect sustainable property are the difficulty to find comparable sale prices of properties that exhibit sustainable design features and the difficulty to identify the physical characteristics and attributes of the subject property as well as of the comparable sales that indicative of their degree of sustainability.

The cost method approximated the value of property by estimating the construction costs of property. The valuer assesses the market value of the raw land (by applying the sales comparison approach), adds to this value the cost of rebuild the new building which could perform the function of the existing structure and makes adjustments to allow for obsolence and depreciation of the existing building relative to the new hypothetical unit.

Lorenz and Lutzkendorf (2008) give the explanation about sustainable design features, benefits and impacts on valuation by using the income approach model as contained in Table 1.

Sustainable property and tax: The government support can be a financial incentives, especially in property tax incentives which has been widely adopted by some of

commonwealth countries all around the world including Spanyol, Romania italy, Bulgaria the United State of America, Canada, Malaysia and India (Shazmin *et al*., 2016) in an effort to encourage and foster the growth of green building at a local level. There are three types of property tax assessment incentive models including exemptions, reductions and rebates.

MATERIALS AND METHODS

The method that used in this study is qualitative method. The data collection was done with structured interview to the related parties with the number of respondents are 14 with two respondents for each group, namely developers, architects, architecture academicians, appraisers, house owners, Medan municipal officials and tax academicians. This study was done in Medan City, Indonesia. The things that becoming a concern in the submitted questions are about the importance of sustainable property the factors which must be exist in sustainable property the benefit of sustainable property the obstacles in realizing sustainable property concept and the related regulation with application of sustainable property concept. The analysis performed in descriptive inductive conclusion to explain things which delivered by the respondents.

RESULTS AND DISCUSSION

The analysis result which obtained from each group of respondents can be seen below.

Developers: Developers found that sustainable property concept is important to apply to design of the property. The application of sustainable concept in the property generally requires a large amount of investment. Developers must provide appropriate land, arranging the building orientation in accordance toward the sun, using eco-friendly material, providing sufficient open space, providing clean water sources, wastewater treatment, rain water shelter, waste management, etc. Developers are ready to do the things that mentioned before, especially if there are many demands but the required cost is also quite large. If the building cost is high then the selling price of the properties will rise. This thing will be an obstacle to the developers.

Architects: According to the opinion of architects, sustainable property design is very important that must respect the nature but still functional. But, architects served only to design while the location have determined by client. The various of problem related to design will be find such as building orientation, aperture, open space the materials used, lighting and comfortability in the room. Wastewater treatment and resources of clean water are important things in the building with sustainable concept. Architects have ability and willingness to apply sustainable concept in their design but sometimes that thing is not in line with the client's desire. In the clients opinion the application of sustainable concept requires high cost such as use of sertificated woods, paint which CO2 emission-free, provision of rain water shelter, provision of wastewater treatment, etc. But actually there are some eco-friendly material that have a low cost such as bamboo. If architects and clients have the same desire to apply sustainable concept to their property then it can find ways to press the development cost.

Architecture academicians: Architecture academicians argued that sustainable concept is the answer to various design issues that related to environment now a days. Global warming issue became one of the causes emergences idea of sustainable concept. Some concepts which related to sustainable include ecological concept, green concept, biological building concept, etc. The application of these concepts can be done partially or overall. In the academic world this concept already thaught and some students assignments have applied this concept in their project design. Even some of the design competition organized by various parties also emphasized the concept of sustainable design that they held. Freedom of expression and exploration on the design using the concept of sustainable, green and ecological well contained with the designs of students. In addition the topic of sustainable research has been done on students and lecturers. This indicates that in the academic world, sustainable concepts already taught and applied to the design and research.

Appraisers: According Appraiser or valuer interviewed, green assessment should be done by a separate institution the assessor will use it in the process of value conclusion. In comparisson sales approach will be difficult to find comparable data and perform adjustment because how different green features on various properties. For the cost approach do not have cost data yet. But in income approach some variables may be affected those are discount rate or capitalization rate and rent projection. A good sustainable property features will reduce the risk that lowering discount rate or capitalization rate. The good image and reputation will increase rent income producing property. To be able to implement sustainable property assessment the assessors need a training, guidelines and standards.

House owners: House owners stated that they did not have a good understanding about the concept of sustainable on the design of their property. They had heard about the concept but because they do not understand it then it does not apply in the design of their property. From the information they have got the concept is related to environmentally sustainable. The house should be designed in suitable land the orientation of the house should be facing North and South have a green open space, maximize lighting and natural airing, using eco-friendly materials, use clean water sources, providing wastewater treatment and separating organic and inorganic waste. They argue that if the concept is applied to their homes it will require an additional fee. In addition, they need a help from the architect to actualize it. If you buy a house from developers, sustainable concepts are not applied in the design of the house so the owner had to add themselves with the concept of sustainable design. In fact, if the developer sell the house with the concept of sustainable then the buyer will be interested to buy it.

Medan municipal officials: The governement in Jakarta and Surabaya city already have a regulation to build the green building but in Medan there is only a regulation of green roof for shophouse and has not done well. Enforcement of green roof regulation is still weak.

Green building should be supported by green behavior of the residents and realization of sustainable property should begin from education the existence of the champion from the government who make a move, commitment and insentive. The regulation is a part of commitment itself.

Tax academicians: Based on interview with two tax academicians resulted that there are two functions of tax, those are budgeter function and regulation function. Budgeter function is the tax function to increase country's revenues. Regulation function is the tax function to support the government programs such as flats, electric car, homestated asean games athletes and textbooks.

The principle of tax incentive must give benefits to the country in term of revenue, economic and human behavior. Example low custom duties on imported goods is expected to lead the growth of the domestic economy so that private consumption will increase. In the long term this will lead to reduced on imported goods it means that people's behavior change from buying more imported goods into buying domestic productions. Sustainable property is better serve to be requirements in property development than stimulated with giving a reward. Incentive will only be done by the government if there is a profit from the government, example if the government requires many researchers that absorbed with the existing of particular technology. If there is no direct benefit to the government then the incentive will not be given. To build an eco-saving or eco-friendly could be proposed to recieve tax incentives if there is a multiplier effect. The existing regulation for tax incentives is for strategic industries.

The realization of tax incentive for sustainable property in Indonesia is currently no. Someday it likely to be realized if sustainable property has become an important government program; If equipment factory support sustainable property and the property forming materials have been regarded as a strategic industry and have a multiplier effect or there is mandate from the president of the republic of Indonesia.

CONCLUSION

Sustainable concept becomes important to be applied in the design. This concept is not only applied in residence and also in public building even cities. The government, private, public, academics and practitioners already understand and realize the importance of implementing the concept of sustainable property and cities. Private parties such as developers soght to apply the concept of sustainable concept on their property. Society as property owners also want their properties using sustainable concepts. Academics feel that this concept is important and provide teaching and understanding to their students. Practitioners feel they need to be trained or to find out more and more about the concept of sustainable property and ready to make it happen on their design. Appraisal or valuers need training, guidelines and standars of sustainable property assessment. The governement make regulations which relating to effort to realize sustainable concept on the property and the city. Medan can look for the champion who constantly persuades the realization of sustainable property and modeled regulation in Jakarta that is already better. The importance of regulation is existence of firmness in estabilish rules and incentives.

ACKNOWLEDGEMENTS

This research is funded by Competitive Grant Fund from The Indonesian Directorate General of Higher Education, Ministry of Research, Technology and Higher Education, 2015 and 2016. Special thanks to the Director of Society Research and Services.

REFERENCES

Cajias, M. and D. Piazolo, 2013. Green performs better: Energy efficiency and financial return on buildings. J. Corporate Real Estate, 15: 53-72.

IMT., 2013. Green building and property value-a primer for building owners and developers. Institute for Market Transformation, Washington, USA.

Kats, G., 2003. Green Building Costs and Financial Benefits. Mass Technology Collaborative, Boston, Massachusetts.

Lorenz, D. and T. Lutzkendorf, 2008. Sustainability in property valuation: Theory and practice. J. Property Investment Finance, 26: 482-521.

MPPI., 2015. [Indonesian appraisal code of conduct and Indonesian assessment standards]. Masyarakat Profesi Penilai Indonesia (Mappi), Jakarta, Indonesia.

Nalewaik, A. and V. Venters, 2009. Cost benefits of building green. Cost Eng., 51: 28-34.

Nevin, R. and G. Watson, 1998. Evidence of rational market valuations for home energy efficiency. Appraisal J., 4: 401-409.

Shazmin, S.A.A., I. Sipan and M. Sapri, 2016. Property tax assessment incentives for green building: A review. Renewable Sustainable Energy Rev., 60: 536-548.