

Considerations for Integrating Sustainable Attributes into Property Valuation

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Abstract: Sustainable property is a property that takes into account the environmental sustainability. In Indonesia, there has not been a lot of sustainable properties; however, its awareness keeps growing. The value of sustainable property may differ from conventional property because of their different attributes. This study aims to integrate sustainable attributes into property valuation. This is useful for development of appraisal profession in Indonesia. Depth interviews were conducted on Green Building Council Indonesia, sustainable building managers, and appraisals. The results of this integration can be used by the appraiser or valuer to recognize the impact of each attribute on the property value and valuation approach to be undertaken.

1 INTRODUCTION

Sustainable development is development that can meet needs of present generations without harming the needs of future generations. Sustainable property or sustainable building is constructed with a higher urban planning, functional, creative, and technical quality. Sustainable property is a property that is built by paying attention to the productive harmony between humans and nature and fulfilling economic, social and other requirements from the present generation to the future generation. Nalewaik and Venters (2008) suggest that sustainable property is usually realized in green buildings with eco-friendly design.

The green property or green building aspects used for the Greenship Valuation of Green building Council Indonesia (GBCI) are appropriate site development, energy efficient and conservation, water conservation, material and cycle resources, indoor and health comfort, and building environment management. Since this property emphasizes the appropriate site development aspect which is in line with the concept of highest and best use, it should have higher value.

Investment is the placement of funds at this time hoping to generate profits in the future (Fachrudin and Fachrudin, 2016a). Investment in sustainable can increase the value of property and

provide financial benefits (Fachrudin and Fachrudin, 2017a). Owner of green building will have their savings from the lifecycle building and the cost of its maintenance (Fachrudin and Fachrudin, 2016b). In a financial standpoint, the economic dimension is very important; thus, the focus is on long-term economic success of long-term property performance (Frank, 2010).

The appraisers need to be aware that buildings built in accordance with buildings that meet certain green building standards may be more valuable than buildings without green standards (Guidry, 2004). If market participants favor sustainable property, this should be reflected in market value (Lorenz and Lützkendorf, 2008).

Market valuation needs to estimate market data. The appraisers must pay attention to the sustainable property features if they affect the competitive position of the asset. The appraiser have a role to reflect this benefit so that the valuation report does not indicate a misleading price (Lorenz and Lützkendorf, 2006).

Warren and Myers (2012) states that there needs to be a consistent development of ranking tools to help appraisers be able to evaluate buildings in the same basic way. The appraisers do not contribute to speculating on value but to speculating about what is possible or impossible for certain assets in the future. The appraisers need to be aware

Sustainability Attributes	Impact on Property Value	Valuation Approach
public transportation, bicycle paths, landscaping, favorable climate, and rainwater management	Income producing properties will be favored by tenant. The risk of this property is also low; thus, it affects the discount rate. This may result in higher net operating income, reduced vacancy, and more stable cash flow.	
Energy efficiency and conservation, consists of electricity meters, measurement of energy efficiency, the presence of natural lighting, ventilation, and the presence of renewable energy	This energy efficiency will produce lower operating cost and the result is higher net operating income.	Income approach
Water conservation, consists of water meters, water calculations, water recycling systems availability of alternative water sources, and rainwater harvesting	Water efficiency will produce lower operating cost and the result is higher net operating income.	Income approach
Material resource and cycle, consists of fundamental refrigerant, building and material reuse, environmentally processed product, certified wood, prefab material, and regional material.	The use of environmentally friendly materials is healthier and can be appreciated by tenants; thus, it is increasing revenues. The use of reuse and regional materials can save transportation costs; thus, the cost is lower.	Cost approach Income approach

Sustainability Attributes	Impact on Property Value	Valuation Approach
Indor health and comfort, consists of outdoor air introduction, CO2 monitoring, environmental tobacco smoke control, chemical pollutants, visual comfort, outside view, thermal comfort, and acoustic level	A comfortable and healthy atmosphere is highly favored by tenant; thus, it can increase the rental value and age of the building can be longer. These two things ultimately increase the value of the property.	Income approach
Building environmental management, consists of basic and advanced waste management, pollution management, proper commissioning, submission of green building data, fit up agreements, and occupant satisfaction surveys.	A good building environment management will produce a good environment; thus, the tenants favor and extend the life of the building and it increases the rental value.	Income approach

The result of the depth interview with the valuers indicates that sustainable property offers sustainable attributes only as a facility and most have not dared to give a rental price or a higher selling price than conventional property. The results of the depth interview suggest inputs for each valuation approach described below.

Market approach can be conducted, but the comparison data is very limited, and it is difficult to find comparative data which is really identic with the property being valued. If there seems to be identical, it is necessary to have a discussion with the owner of the comparison data.

Cost approach can be conducted if the sustainable property is considered at the stage of under construction. Valuers need to know the type of materials used and its cost.

In cost approach, it needs to do a cost benefit analysis. To meet the green specification, it is necessary to add additional costs and benefits to be obtained. This analysis includes incentive considerations that reduce initial costs, as well as

depreciation estimation whether there is a difference of depreciation using green components with the conversation component. In addition, it needs to note the functional and economical declines which may be affected by this green feature as well as building endurance.

Income approach may be conducted but the appraisers need to develop reasonable and acceptable assumptions for the market in preparing its cash flow projection. The appraisers must conduct an interview with the client to know the operational cost.

The appraisers also need to specify the valuation aspects that can be done, namely the inspection stage as one of the stages in the valuation process, appraisers must understand the physical concepts of sustainable property building such as the materials used, the building technical design, the concept of spatial function arrangement, etc. At the data collection stage, data processing, and the preparation of working papers, appraisers must be able to calculate the additional value due to the application of the sustainable property in the market.

The concept of sustainable property valuation is still relatively new and will experience many developments. Therefore, what needs to be made later is the deployment guide in applying valuation as a reference rather than as technical standards and the Indonesia Valuation Standards. This guide is expected to include the sources that can be referred to.

4 CONCLUSIONS AND SUGGESTION

Sustainable property can increase revenue as well as cost and risk so that in the income approach it will increase the value of the property. Market approach can be conducted, but the limitation is the difficulty of finding similar comparable data. In cost approach, the valuer must understand the type and price of the materials used.

Appraisers need to update their knowledge on sustainable property. Gradually, the appraisal association should conduct research and make the deployment guide in applying sustainable property valuation.

The challenge is application and further development of methods to gather, process, and present information related to property. Appraisers also need to ensure clients to understands the risks and opportunities related to the sustainability of the subject property.

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