

## **PEDESTRIAN STREET SHOPPING CONCEPT AS SUSTAINABILITY BASED COMMERCIAL AREA IN SELF SUSTAINED AREA IN SURABAYA**

*Ayu Dwi Aryani<sup>1, \*)</sup>, Happy Ratna Santosa and Vincentius Totok Noerwasito<sup>2)</sup>*

*1\*) Department of Architecture, Institut Teknologi Sepuluh Nopember  
Kampus ITS Sukolilo, Surabaya, 60111, Indonesia  
e-mail: ayudwiaryani06@gmail.com*

*2) Department of Architecture, Institut Teknologi Sepuluh Nopember*

### **ABSTRACT**

Awareness of sustainable development today is no longer a choice but it has become requirement. It has been realized by self-sustained area developers in Surabaya. However, application of the principle of sustainability is still very limited, for example in commercial space of the area. One concept of commercial area that can meet the demands of the sustainability concept is pedestrian shopping street. This study aimed to develop concept criteria of sustainable pedestrian shopping street. The method used in this study is qualitative method. Data required is collected from consumers questionnaire, developers questionnaire and literature review. The collected data is then processed with triangulation method. The results of this study indicate that pedestrian shopping street elements which can be conceptualized in order to be able to meet the goal of this research are parking space, accessibility, tenant mix, layout and commercial space atmosphere.

Keywords: concept, commercial area, pedestrian street shopping, sustainability

### **1. INTRODUCTION**

Nowadays, awareness of sustainable development is no longer optional, but becomes a demand in development (Keeping and Shiers, 2003). Sustainable development aims to create and maintain environmental, economic and social systems prosperity (Folke et al, 2002). It has been recognized by the self-sustained region developers in Surabaya. However, the implementation of sustainable concept is still limited, especially in the commercial area of the region.

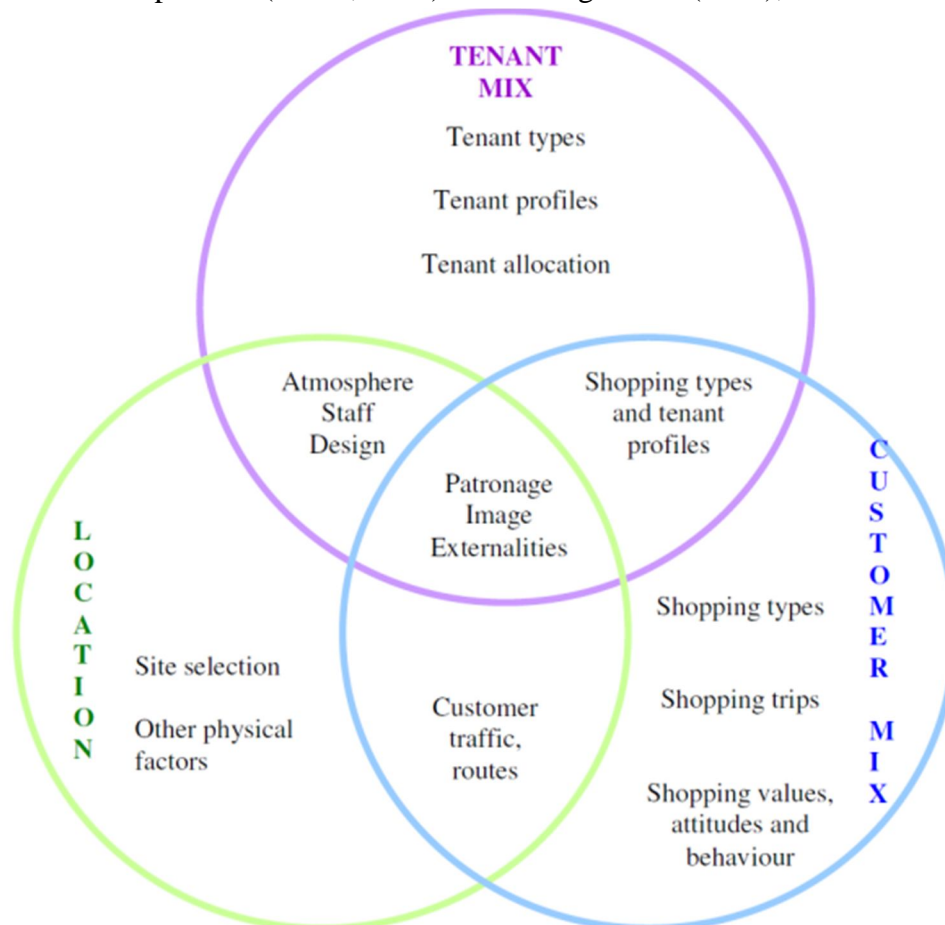
One solution that can be applied to overcome this problem is to apply the concept of pedestrian street shopping. Pedestrian street shopping is sustainable commercial area due to its environmentally friendly (Koike et al, 2001). In addition, the concept of pedestrian shopping street is also socially sustainable because it can improve human interaction with the surrounding space (Jou, 2011). This interaction then raises retail activities that meet sustainable economic aspects (Bates, 2013). These three aspects can be categorized into fully sustainable if it can survive in the long term. This is because not all pedestrian shopping streets can withstand. For example, in America, only 11% pedestrian shopping streets succeeded, while the other 89% fail or switch function (Judge, 2013).

This study aimed to discover the concept criteria of pedestrian shopping street which not only meets the sustainability of economic, social and environmental but also can survive in the long term as a commercial area in self-sustained area in Surabaya. Thus, the pedestrian shopping street can be a concept of sustainable commercial area holistically.

## 2. LITERATURE REVIEW

### 2.1 Pedestrian Street Shopping as Commercial Area

As a shopping center where there is a trading activities, the role of pedestrian shopping street as commercial areas need to be considered in the planning of pedestrian shopping street. In this study, the results of research is the concept of pedestrian shopping street is the paradigm of the commercial area as a product (Reikli, 2012). According Reikli (2012), a commercial area will have



good image and good business resilience when noticed three things: location, customer mix and tenant mix. This is illustrated in Figure 1.

Figure 1. Shopping Center's General Model (Source: Reikli, 2012)

Reikli (2012) is supported by Teller and Reutterer (2008) who distinguish factors affecting patronage shopping centers in 3 groups:

- Factors associated with the site: accessibility and parking space
- Factors associated with the tenant: a mix of retail tenants, the value of retail and non-retail tenant mix
- Environmental factors: orientation, environment and atmosphere

Teller and Reutterer (2008) found that these factors do not only describe the strength of a shopping center, but also determine the sustainability and the dimensions of the situation of the shopping center. Consideration of the concept pedestrian shopping street based shopping center paradigm intended that this concept can be economically sustainable. It is because of these factors focus on the value of pedestrian shopping street as the shopping center and the value offered to

consumers, both products and property. Thus, the pedestrian shopping street can have a sustainable consumer and tenant.

## 2.2 Pedestrian Street Shopping as Public Space

Discussion of pedestrian shopping street as a public space intended that the resulting output concepts able to make visitors feel comfortable for social interaction. It affects the social sustainability of a pedestrian shopping street. Based on the study of public space according to Carr et al (1992) and Bates (2013), there are some elements of the public space which are important in planning a pedestrian shopping street. These elements are:

1. Convenience; including climate, visual comfort, psychological and social comfort, and facilities of public space
2. Relaxation; includes a supporting element of relaxation and atmosphere of public spaces
3. Active involvement; through a public space
4. passive involvement; includes sequences, landscape and natural elements
5. The invention; including physical appearance and the diversity of human activity
6. Physical, symbolic and visual accessibility
7. Freedom of action; supported with the appropriate layout for some activities
8. Flexibility of public space
9. Meaning

## 2.3 Sustainability Indicators of Activity Center

In its role as a center of retail activity, the sustainability of a pedestrian shopping street can be assessed based on the criteria in Table 2.4 (Goodman, 2008):

Table 2.4 Sustainability Assessment Criteria Activity Center

| No | Category | Criteria  |
|----|----------|---|
| 1  | Social   | a) Increase eligibility (safety, comfort, convenience and aesthetics) area<br>b) Increase the opportunities for social interaction and provide care to the community<br>c) Contribute to the nature, culture and history of the area<br>d) Making services and facilities more accessible to everyone<br>e) Having a good relationship to the surrounding environment (construction, land planning and landscape)<br>f) Meet the needs of every segment of the population<br>g) Maintain or improve transportation options for everyone<br>h) Maintaining and improving public health |
| 2  | Economic | a) Contributing to competitiveness that benefits the wider community<br>b) Promoting urban form that minimize land use and transport<br>c) Improving the efficiency of land use and infrastructure<br>d) Improving the movement of goods and logistics business<br>e) Increase business and employment opportunities  |

|   |                  |  |
|---|------------------|--|
| 3 | Environ-<br>ment | a) Encourage the development of urban transport systems that can reduce pollution from fossil fuel use and greenhouse gas<br>b) Improving the design and layout of buildings energy efficient<br>c) Maintain natural ecosystems in the area and protect the integrity of the natural environment<br>d) Limiting the amount of waste generated<br>e) Improving water conservation<br>f) Control the noise |
|---|------------------|--|

Sumber : Goodman (2008)

### 3. METHODOLOGY

#### 3.1 Research Design

This research used qualitative method, specifically triangulation analysis. Triangulation analysis would be between consumers consideration, developer consideration and the indicators of sustainability.

#### 3.2 Participants

Chosen participants are 71 consumers of commercial area in self-sustained area in Surabaya and its developer. From consumers, authors would like to know the consumer's behaviour (customer mix) and what kind of retail should be open (tenant mix). On the other hand, developer questionnaire would be about the developer's consideration in developing a commercial area.

#### 3.3 Measures and Procedures

Data from consumer questionnaires were processed using descriptive statistics. To identify trends in consumer behavior, researchers used semantic differential scale. To identify the type of retail according to consumers, researchers used the mean value calculation. Furthermore, the consumer's data and the developer's data collaborated with sustainability indicators into triangulation table. The result of the triangulation will be the concept that appropriate for consumers, realistic for developers and meet the demands of sustainability principles.

### 4. RESULT AND ANALYSIS (FINDING AND DISCUSSION)

#### 4.1 Consumer Consideration

In this aspect, there are some indicators that will be explained. These indicators include the characteristics of general shopping characteristics, shopping value, shopping attitudes, shopping behavior and shopping habits.

##### a. General Shopping Characteristics

In general shopping characteristic indicators, there are sub-indicators that can explain how the characteristics of the general consumer spending. Sub indicators include consumer demographic, socio-economic conditions, and behavior.

Consumer demographics seen of age, gender, size of groups of visitors, and visitors citizenship. In terms of age, visitors dominated by age group 15-25 years with type of work dominated by private sector employees and students. Visitors dominant education are high school and undergraduate level and dominated social economic class B (SEC B) with the level of expenditure of Rp. 1,800,001 - Rp. 3,000,000 per month. With such an economy class, consumer loyalty to particular product is still relatively low.

##### b. Values, Attitudes and Shopping Behaviour

Shopping value is divided into two types, namely utilitarian and hedonic (Reikli, 2012). Based on the results of the questionnaire, the consumer has value that is more likely hedonic shopping. Shopping values and attitudes are in line with the shopping behavior of consumers who tend to shop / visit the commercial area as a venue for socialization.

c. Shopping Habits

Based on the analysis, consumers shopping habits including shopping convenience and comparison shopping. Convenience shopping is a type of shopping where consumers are more focused on products rather than brands and usually applies to items that need to be quickly and frequently (Reikli, 2012). So that consumers usually choose the closest shopping. Comparison shopping is a type of shopping where consumers want to buy a certain product, but do not have a benchmark for the brand so they will tend to compare similar items from multiple stores (Reikli, 2012).

d. Tenant Mix

Based on the results of the questionnaire, food outlets, department stores, entertainment / community and restaurant / cafe are kind of outlets that will be visited frequently. While kind of retail that might be visited are general merchandise, clothing stores, shoe stores, hobbies, book and gift shop, and household goods. Types of retail that still rarely visited are health / beauty services, jewelry stores, and sport goods store.

4.2 Triangulation Analysis

Triangulation analysis performed with arranging the consumer characteristics, developer consideration and indicators of sustainability into a table. Triangulation analysis is described in Table 2.

Table 2. Triangulation Analysis

| Consumers Consideration   | Developer Consideration   | Theory (Sustainable Indicators and Public Space Theory)  | Concept Criteria   |
|---|---|--|--|
| Parking space: parking concept that meet the consumer needs is centrally and separated parking yet close with commercial center. Therefore, parking activities will not interfere pedestrian activity | <ul style="list-style-type: none"> <li>To accomodate the pedestrian street shopping, the parking space should be at one area in order to avoid traffic congestion during dinner hours and weekend.</li> <li>Basement parking as the concept of parking area for pedestrian street shopping</li> </ul> | <ul style="list-style-type: none"> <li>Improving the efficiency of land use and infrastructure.</li> <li>Distance from the public transport stop to public space should not exceed 5 minutes walk</li> </ul> | The parking spaces are made centrally in the basement in order to conserve land use and facilitate an easy entry to visitors. The road to the parking area is designed through the outside retail facade so that motorists can still see the contents of pedestrian shopping street. |

|  |  |  |   |
|--|--|--|---|
| <p>Accessibility: consumers need comfortable pedestrian street, where consumers can run safely, smoothly and easily. In addition, retailers have a reasonable distance from the car park and easily reached.</p> | <p>Procurement of walkway in the commercial area</p> <p>Linear circulation patterns with loop form</p> | <p>Easy access to every segment of the population. Access includes physical access, visual and symbolic.</p> | <p>Visual accessibility done by revealing a small portion crowds in the commercial area and legible retail facade. Physical accessibility can be improved with walkway, linear circulation, ease parking achievement and attainment to the entrance / exit of commercial area. Symbolic accessibility can be done by placing gatehouse which is not</p> |
|--|--|--|---|

Table 2. Triangulation Analysis

| Consumers Consideration   | Developer Consideration  | Theory (Sustainable Indicators and Public Space Theory)   | Concept Criteria   |
|---|--|---|--|
|   |  |   | <p>visible from the outside so that potential customers do not feel reluctant to enter into a commercial area.</p>   |
| <p>Retail tenant mix: retail tenants that may often visited by consumers is restaurant, food stores, department store, community center and entertainment and cafe.</p> | <ul style="list-style-type: none"> <li>• The number of new shop units developed limited. It is aimed at reducing a retail competitor in the commercial area of the block.</li> <li>• Some units are designed bigger or smaller. It is intended that the tenants can choose the type of shop that fits their business lines.</li> </ul> | <p>Buildings diversity that create physical and economic diversity that support active street life.</p> | <p>Tenant arrangements done by grouping the retailers by type of business line. Tenant placement pattern that appropriate is cluster pattern because it can enable customers to shop with comparison shopping model.</p> |



|   |  |   |   |
|---|--|---|---|
| <p>Layout: based on shopping attitudes, shopping value, shopping strategies and shopping habits of consumers, layout must accomodate both shopping and social activies.</p> | <p>Procurement of some plaza to held events and to attract consumer and tenants.</p> | <ul style="list-style-type: none"> <li>• Freedom of action with the layout settings for certain activities in order to not disturb another visitors.</li> <li>• Public space flexibility where public space is flexible to the meet the needs of the user.</li> <li>• Improve the design and layout that can reduce pollution and save energy.</li> </ul> | <ul style="list-style-type: none"> <li>• The layout of the pedestrian shopping street with the type of continuous or exclusive mall.</li> <li>• Community activity is an activity that allowed the 11-20 scale. It is based on a community scale that followed the consumer and disturbance considerations.</li> <li>• Plaza has flexible uses that can be converted in accordance with the ongoing event.</li> </ul> |
|---|--|---|---|

Table 2. TriangulationAnalysis

| Consumers Consideration   | Developer Consideration  | Theory (Sustainable Indicators and Public Space Theory   | Concept Criteria   |
|---|--|--|--|
| <p>The atmosphere and environment: Atmosphere commercial area needed consumer is relaxed atmosphere that can be created by some elements and landscape support. The relaxation element can be vegetation, gardens and water elements such as fountains.</p> | <p>The presence of refreshing and community functions in the commercial area, the pedestrian shopping street has three zones with different levels of relaxation is a quiet zone, crowded and intermediate</p> | <ul style="list-style-type: none"> <li>• Increase equitable relaxation for all visitors from all segments of the population with regard supporting elements of relaxation and atmosphere.</li> <li>• Passive involvement that has good relations with the surrounding environment; includes sequences, landscape and natural elements</li> </ul> | <p>There is a commercial area zoning based on the level of noise. It is aimed to each visitor is not disturbed by the activities of other visitors. Those zonesare crowded zone, intermediate and relaxation zone.</p> |

Concept criteria that meets the principles of economic sustainability is a concept retail arrangement, parking direction and retail profile grouping. It is because those concept make the

property and product consumer can meet their needs easily. Of the environment, the concept of basement parking concept is environmentally friendly because it can save land use and improve environmental quality as pollution does not enter into a commercial area. Socially, the presence of the plaza and relaxation element is an element that can meet the needs of social interaction and the interaction of the surrounding environment.

## CONCLUSION

Concept criteria that supports a sustainable pedestrian shopping street in the self-sustained area in Surabaya is placement of parking spaces in the basement so the parking area become centralized and easy to access from center of the commercial area. In terms of accessibility, concepts that drawn up are easy achievement, exposure of little crowd in pedestrian shopping street, walkway, legible facade and placement security post which is not visible from the outside, but is easily found from the inside. In addition, there is retail setting with cluster pattern to facilitate consumer shopping activity. To accommodate shopping activities, pedestrian street shopping also provide community area in the form of a plaza for visitors held activities / events. To accommodate the needs of every segment of visitors, the commercial area is divided into 3 zones: zone crowded, intermediate and relaxation zones.

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