Street Vendors’ Activity Space in the Residential, Public Space (Case Study: Tirto Agung Park, Semarang)

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Abstract. Public space as a facility that accommodating community social activities has become one of the important aspects in terms of enhancing people’s lives in the scope of residential and settlements, which include active parks. Tirto Agung Park, as an active park located close to the residential area in Banyumanik Sub-District, Semarang City, becomes a place visited by many people to accommodate recreational, entertainment, and sports activities purposes. Therefore, Tirto Agung Park became a location/space/place for street vendors to grow and develop their activities. Street vendors often use existing public spaces such as inside the park, roadsides, and sidewalks for their activities. This condition often makes a spatial utilization conflict between street vendors and the main activities in Tirto Agung Park. Hence, it is important to identify the street vendors’ activity space in Tirto Agung Park as a public space for a residential community in Banyumanik Sub-District. The purpose of this research is to identify the livability of street vendors’ space based on their behavior in its location. This research uses quantitative methods by conducting surveys through questionnaires by applying disproportionate stratified random sampling techniques. The results of this study explain the space availability of street vendors’ activities in Tirto Agung Park, including the types of street vendors’ activities, types of activities around street vendors, space forms, activity time, access, natural elements, space security, and parking space.

Keywords: residential, public space, space availability, space livability of street vendors’ activities
1. Introduction
To create safe and livable residential areas and to reach the Sustainable Development Goals 11 related to creating cities and human settlements inclusive, safe, resilient and sustainable by 2030, it is necessary to provide a public space which is safe, attractive, inclusive, pedestrian-oriented, and can be accessible by everyone [1]. Referring to the Charter of Public Space [2] that public space is a public good which can be used and accessed publicly; enjoyed by everyone freely and not profit-oriented [3]. In addition, public space is a critical element of improving individual and social welfare in the form of park, roads, sidewalk, square, and open space [4]–[6].

Park as one of public space in a residential area is a vital facility to accommodate community activities, such as a place for recreational, entertainment, and exercise purposes and also serves to enhance social, mental, and physical welfare of the community [7]. The existence of the park in a residential makes many people come to visit and do some activities in the park. By the number of visitors in the park, it will attract street vendors to do trade activity which is the activity support of the main events in the park. Street vendors' do trade activity in and around the park to meet the needs of visitors in the park in accordance with the character of street vendors which has the nature of approaching consumers by cutting or blocking the visitors’ path to their destination [8] [9]. Generally, street vendors activities as one of activity support [10] do their activity in public spaces make visitors more pleasant to do their activities in the park because they can buy the goods they need from street vendors easily while doing their activities [11]. Shirvani (1985) explained that space livability is a place that can please the visitors to do their activities which suit the character of the movement and the user. Livability measurement based on access; natural elements; space security; and parking spaces [10] [12]. However, street vendors’ activity often regarded as an element out of place [13]–[15] which use public spaces to trade inside the park, sidewalks, and roadsides thereby reducing the effectiveness of public spaces and causing spatial utilization conflicts [16] [17].

Globally, street vendors in various countries also experience the same problems, such as street vendors in Lima-Peru and Accra-Ghana, who are doing their trade activity in public spaces thereby reducing the effectiveness of public spaces [18] [19]. This condition happened in Tirto Agung Park too, which located in Banyumanik Sub-district, Semarang City. Tirto Agung Park is an active park that is located close to residential areas in Banyumanik Sub-district. The existence of street vendors’ activity inside the park, sidewalks, and roadsides around the park as a public spaces cause spatial utilization conflicts, and it turns the park which is a place for community activities become not livable. The trading activities carried out by the street vendors in these public spaces caused changes in the space function that should be, such as sidewalks that should be pedestrian ways and the roadsides that should be a space for vehicles to stop when in an emergency condition becomes street vendors’ space to trading. This is why this research was conducted to identify the livability of street vendors’ space in Tirto Agung Park based on their behavior in its location.

2. Methods
The approach in this study using quantitative methods with explanatory descriptive based on deductive thinking to define street vendors’ convenience to the space livability based on their behaviors in Tirto Agung Park which is visited by many Banyumanik Sub-district residents. Data collected through questionnaires, interviews, and observations, with the street vendors who traded inside the park, on the sidewalks and roadsides as respondents of this study. There is variety merchandise between one street vendor and another in Tirto Agung Park (e.g., the number of street vendors who sell processed food are not as same as the number of street vendors who sell non-food items), so the populations of street vendors are not proportional yet stratified. Hence, the sampling technique of this research used disproportionate random sampling, which is a sampling technique for a population with layered members but less proportional [20] [21].

3. Street Vendors’ Activity Space in Tirto Agung Park
This analysis was conducted to identify the livability of street vendors’ space or location in accordance with the street vendors’ perception which shows their behavior in its location, so they can carry out their activities safely and pleasant based on the consideration that the main activities in Banyumanik Sub-district would attract them to utilize the space at these particular locations i.e., inside Tirto Agung Park, on the sidewalks and roadsides around this park. Street vendors’ activity space will be explained based on suitability of street vendors’ activities with the place, space forms, activity time, and the conformity of activities with place conditions in Tirto Agung Park.

3.1. The Suitability of Street Vendors’ Activities with the Place in Tirto Agung Park
The dominant activity in Banyumanik Sub-district which is residential area arise educations, offices, trades and services activities, and also activities in Tirto Agung Park to accommodate entertainment, recreation, and sports activities, which can be referred as an internal activity linkage. This condition attracts the street vendors as a complementary linkage to do their activities in Tirto Agung Park.

Variations in this activity relate to the types of merchandise offered by street vendors, mostly fast food and non-food items (eg, toys, clothing, prepaid telephone numbers, "odong-odong", toy car rentals, and fishing toys). It relates to the street vendors trading activities, which are displaying their goods, serving consumers, prepare or process the goods before it is given to the buyer, renting out the goods which intended to the street vendor who rents out odong-odong, toy car, or fishing toy, so that these activities dominate the street vendors’ activities at this location. The type of merchandises offered by street vendors are closely related to the type of trading place used by street vendors [8] [9], resulting in space requirements as described by Shirvani (1985) that the activity requires a container and the character of the container must suits well with the character of the activity being contained. Street vendors’ activities in Tirto Agung Park which mostly sell processed food and some vendors sell non-food items are divided into six types of trading facilities, which are a motorcycle, table, cart, tent cart, car, and kiosk. These types require spaces ranging from 4 m² to 15 m² so the street vendors in Tirto Agung Park can do their activities comfortably. Mostly, street vendors in Tirto Agung Park are using table and motorcycle with additional baskets or cabinet on the right and left of their motorcycle, and both types require a space of at least 4 m². For street vendors who use carts requires a space of at least 6 m² to 9 m²; for those who use tent carts requires a space of at least 9 m² to 12 m²; for those who use car requires a space of 12 m²; and last but not least, for those who trade in kiosks that have been provided in the park requires a space of 15 m² (see in Figure 1). These measurements are wide enough for each type of street vendors’ trading facilities, so they considered that their place right now is snug enough to accommodate their activities.
The findings of this study indicate that street vendors consider that there is enough space, whether within the park, on the sidewalks and roadsides around Tirto Agung Park for them to do their activities. It can be concluded that street vendors will adapt their trading facilities to the existing space conditions as long as they can approach the consumers, regardless of the actual function of space, for instance the use of sidewalks as the pedestrian spaces and roadsides for vehicles’ stop-space in an emergency situation is disturbed by street vendors’ activities, and it causes users who should be using this space are not able using this space as they should. Hence, it can be explained that street vendors’ activities in Tirto Agung Park have an impact on the changes of the main function of each public space, except for the kiosk at the development land of the park because these facilities are already provided in the park.

3.2. The Space Forms of Street Vendors in Tirto Agung Park with Real or Unreal Boundaries
Street vendors in Tirto Agung Park are sell processed food and non-food items which influenced to their activities which mostly displaying their goods, serving the consumers, and prepare or process the goods before it is given to the buyer. On the previous discussion, the street vendors considered that there is enough space which can be utilized for their activities. On the other hand, the types of goods and street vendors’ activities also affect the form of space needed. The form of space needed is a space with a real or unreal boundaries [12] [22] which relates to the space availability in the public space as described by Laurens (2004) and Lang (1987), that the limitation of an activity’s place is to show the limit where a behavior stops, with real or unreal boundaries. The type of delimiter tailored to the needs or the characteristics of the activity. This form of space to adjust to the activities of street vendors, in addition
to the assessment of the availability of places in the public space, the street vendors can take advantage of places in the public space with a form of space in accordance with its activities.

The dominance of street vendors in Tirto Agung Park stated that their form of space for trading has no real boundaries which are open, no massive or permanent boundaries for about 91.9% and it only applied by the street vendors who trade inside the park, on the sidewalks and roadsides, because their space boundary is only by their trading facility (table, motorcycle, cart, etc.). The street vendors who trade at the kiosk in the development land of the park have a real boundary (for about 8.1%) because these kiosks are indeed provided for street vendors (see in Figure 2). The street vendors who do not have real boundaries in its location have the advantage of being reachable and easily seen by customers, so they are able to get consumers as much as possible. The locations of the street vendors who trade on the sidewalks and roadsides are strategic because it is easily accessed from the consumers who passed by the roads of Tirto Agung and Durian Raya. For those who have real boundaries in its location actually had the advantage of giving a comfortable space for consumers, so they are not disturbed by other activities around. However, because of its less strategic location, the street vendors who sell in the kiosks do not have as many consumers as other street vendors in Tirto Agung Park.

Figure 2. The space forms of street vendors in Tirto Agung Park

3.3. The Activity Time of Street Vendors in Tirto Agung Park

Street vendors in Tirto Agung Park are located inside the park, on the sidewalks and roadsides, also on the development land of the park. It happened because there are various activities in the park such as entertainment, recreation, and sports activities and it causes many visitors to come to the park. The operational time of street vendors is following the visitors and residents’ activity time, for instance, the time of leaving from home to school or office and vice versa. It also applies to other visitors or residents mobilization activities towards other principal activities.
The variety time of street vendors’ activities, i.e. 6 AM–9 PM; 9 AM–9 PM; 11 AM–10 PM; 3 PM–10 PM; 4 PM–10 PM; and 4 PM–midnight (see in Figure 3), which relate to the supply of daily needs of surrounding residents or visitors of this park. Activity times of street vendors in this park are following the rhythm of people’s activity time. Based on the result, it can be explained there is congeniality between street vendors’ activity time and the activity time of the area, and street vendors can use these space in accordance with the activity time of local residents. Meanwhile, it is explained by McGee and Yeung (1977) that the activity time of street vendor follows the rhythm and time or life characteristics of the residents and surrounding communities. So the activity time of street vendors in Tirto Agung Park is following the activity times of residents and visitors in the area.

**Figure 3.** The activity time of street vendors in Tirto Agung Park

### 3.4. The Conformity of Street Vendors’ Activities with Place Condition in Tirto Agung Park
This part discusses the suitability of street vendors’ activities with space livability, which consists of aspects of access, natural elements, space security related to activity location’s permits, and parking spaces. According to Shirvani (1985), convenience measured by the quality of the place. On the other hand, the comfort quality of the place is tailored to the characteristics of the activity and user behavior [22], [23]. The convenience measures of each aspect are based on:

a. Access, explaining to reach the object easily, then the object should be easy to see and easy to achieve [10];

b. The natural elements, explaining the shade and brightness cause a sense of comfort for its users, and a comfortable place of shade and light attracts people to use it as a gathering or activity place [23];

c. Space security (permission), is the use of places permitted by government regulations, making sense of security and comfort for space use [10]; and

d. Parking space, Shirvani (1985) explains the availability of parking spaces, allowing users to park their vehicles is a convenient element for space users.
The result of this research shows that the street vendors in Tirto Agung Park sell two types of products, which are processed food and non-food items. Based on the results, it can be explained (see in Figure 4):

a. Access, visitors can easily access the street vendors and not hindered by other buildings or activities, so they can easily be seen and reached from the side of the road and from up and down the vehicle. It explained the street vendors consider this place convenient to the place of activity. This condition is related to the character of street vendors who are approaching the consumers by the cut or block their paths [9].

b. Natural elements, street vendors declared to their activities in the public spaces of Tirto Agung Park because 1) the shady place because there are trees will make the street vendors and the consumers feel comfortable because they are not swelter; 2) the place is quite bright because the place is quite open so when the daylight the consumers and traders are not dazzled and when the night comes there are enough lights to light up. It illustrated that the dominance of street vendors thinks the place they utilized is convenient for traders and visitors.

c. Security of the space, street vendors, are not worried about doing their activities in Tirto Agung Park because the location permitted by the local government and also they pay the retribution fee in order as security guarantees, so they will never face the eviction unless there is a change of the regulation. It illustrated that the street vendors consider the public spaces of Tirto Agung Park is safe to be used as a place of trade activity [10].
d. Parking space, the dominance of street vendors stated that visitors usually park their vehicle along
the Jl. Tirto Agung as the main road or in the restaurants’ parking lot which located next to the
park. For visitors who use a motorcycle, they often park their motorcycle inside the park, although
this is prohibited. It illustrated that although parking on the side of the road and in the nearby store
yard, street vendors consider there is space for parking lot visitors. The street vendor thinks places
on the pedestrian ways and road sides can be used as a place of trade, although there is no parking
available. Related to Shirvani’s explanation, 1985, that available space and parking lot to facilitate
the visitors, as a measure of comfort, street vendors’ thoughts the public spaces such as on the
sidewalk and road sides can be used as a place of trade, although there is no parking space
available. Whether there is or there is no available parking space in Tirto Agung Park, street
vendors said that they still exist in the public sphere.

4. Conclusions
To sum up this research’s results, the behavior of street vendors in choosing trading location are
influenced by the type of street vendors’ activities in public spaces, activities in the area, types of
merchandise, types of trading facilities, the form of space with real or unreal boundaries, activity time
of street vendors and the people around the area, time period activities, access, natural elements, space
security, and parking spaces.
Street vendors Tirto Agung Park is utilizing inside the park, on the development land of the park, and
on the sidewalks and roadsides around Tirto Agung Park. It shows the suitability of the place in
accordance with the characteristics of the activity, which is called livability of space.

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