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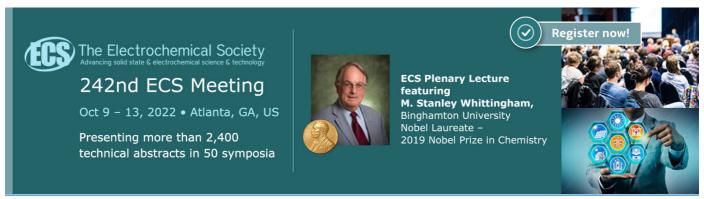
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Sustainable activities for the informal sector traders in the post-covid-19 in the public space around the Manahan Sport Stadium Area Surakarta City

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Abstract. The activity supports as one of the elements of urban designs which grow and develop because there are the main activities there are informal sector traders that can provide job opportunities for the jobless people due to the pandemic. However, those particular objects places in the public space are often considered to interfere with other activities around it, so finally, it becomes an element out of place. In addition, the condition of disturbing others done by informal sector traders also occurred in Surakarta City, which much disrupted, whereas actually their informal sector trader activities were basically needed to support their own needs. It is a real urban activity that must be accommodated, so it can turn into an in-place element and impact sustainable activities even during the pandemic. In supporting the sustainable activities of informal sector traders in the post-Covid-19, it was done research aimed to explain sustainable activities for informal sector traders in the post-Covid-19 public spaces. The method used was a quantitative method through questionnaires, observations, and cross-tabulation to analyze the characteristics of sustainable activity for informal sector traders in the post-Covid-19 public spaces. The results showed that the characteristics of sustainable activities for informal sector traders include the main activities based on the area, the type of products, trading facilities, a trading time, a spare pattern, hawker units' informal sector traders' activities during the Covid-19 pandemic and informal sector activities in the post-Covid-19.

Keywords: informal retailer activities, sustainable activity, public space, post-covid-19

1. Introduction

The high level of urbanization influences an incensement in work demand. However, these needs of work cannot be absorbed in the formal sectors, such as the government or private offices, commerce and services, education, health, industries, tourism, etc. Moreover, these low educated and unskilled people in cities have difficulties getting a formal job. As a result, some of them try to fulfill their needs by involving themselves

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in informal sectors as traders [1]. They get more opportunities to save them from having a problem in poverty where they cannot fulfill their daily life needs of food, health, and education, etc [2].

The traders utilize public spaces, such as roadsides, pedestrian ways, parks, or squares which can be accessed easily by consumers [3], where they provide any kinds of daily life needs in every city [4], [5]. Informal trader activities are one of the activity supports in urban areas, and they can support public spaces function as people interaction spaces in cities [4]. Their activities in public spaces create problems because they are considered as an element out of place that disturbs safety, cleanness, and the aesthetic of areas, and it also creates disordered situations in it [6].

Informal sector traders that work in public spaces are always considered as a disorder element, for example occupying pedestrian ways creating problems where people cannot use the ways to pass it, and they create problems in traffic too. That is why they are unplanned elements [7], [8], [9], and in general to solve the bad conditions, governments do their best ways by displacing them [9], [6]. Even though their activities are done to survive their life and fulfill their needs [10], [11]. Based on the condition above, Surakarta as a city with a similar situation didn't apply to displace policy, but the Surakarta government removed its location into the other place to avoid problems, and the government can change it into in planned element [7], [8], [9]. The applied policy has been done by the Surakarta government in the Manahan Sport Stadium area by applying stabilization systems for informal sector traders. The Manahan Sport Stadium area was chosen as a case study because this area acted as a developing embryo of informal sector traders. Moreover, the government determined it as a stabilization place of informal sector traders to accommodate the traders from the other place in Surakarta city, which were located in the forbidden place. Since the Covid-19 pandemic happened around the world in the first term of 2020, informal sector traders have been hampered too. As a result, the activities were also stuck due to the pandemic. To solve the negative impact of it and to make the economic activities done smoothly, a pandemic overcoming system was done to reduce the economic problems due to the pandemic. The Surakarta government campaign for the Covid-19 health protocol implementation due to WHO (World Health Organization) in a form of 5M, which are wearing a mask, washing hands, about 2 meters of physical distancing, limiting mobility, and limiting crowdedness as Covid-19 prevention [12].

What has been done by the Surakarta government was an effort to solve poverty problems around informal sector traders to keep their existence and sustainabilities since their activities are the important contributors to economic activities to fulfill public goods for people. It is interesting to be researched because the government was only doing replacement and stabilizing the informal sector trader activities space, not by hampered them. Unfortunately, the previous informal sector trader studies were still focused on economic, social, and policy perspective discussion [13], [14], [15]. Because of that, the purpose of the research is to explain the sustainable activities of the informal sector traders in the public space in the post-Covid-19 in Surakarta. The result can explain the character of the sustainable activities of the informal sector traders in the public spaces in the post-Covid-19.

2. Data and Methodology

The research was done by applying the quantitative approach and based on the deductive thinking of the theory verifications that are available, such as the informal sector trade concept, the space and time activities theory, and also the Covid-19 health protocol implementation. The collecting data research was done by the direct spread questioners towards informal sector traders around Manahan Sport Stadium Surakarta, which is located in KS. Tubun street and Menteri Supeno street (**Figure 1.**).



Figure 1. Location of the Informal Sector Traders in Manahan Sport Stadium Area

The research sampling is based on the trader populations of their type of products. The research sampling technique is based on the stratified random sampling detailed by type of products for about 113 traders out of 185 (**Table 1.**). The data processing was done by using the tabulations cross technique (Crosstab) to find out the connection between the variable location of the traders and the informal sector traders' characteristics. The Covid-19 variables can explain the informal sector trader activities during the pandemic and in the post-Covid-19 pandemic in Manahan Sport Stadium public places.

Table 1. Stratified Sample of Informal Sector Traders in Manahan Sport Stadium Area by the Type of

Product					
Sample			$n1 = n/N \times N1$		
Type of Trading	n (sample)	N (population)	N1 (population type of product)	n1 (sample total of type of product)	SAMPLE
Food	110	185	127	75,60	76
Beverage	110	185	40	23,81	24
Grocery	110	185	11	6,55	7
Toys	110	185	2	1,19	2
Sport jersey	110	185	3	1,79	3
Fruits	110	185	2	1,19	2
TOTAL			185		113

Source: Author, 2022

3. Result and Discussion

The sustainable activity study for the informal sector traders in the post-Covid-19 in public space is to find out the continuity of the informal sector traders in a city based on main activities analysis based on the area, the trading facilities analysis which based on the type of products, the trading time analysis based on the area activities, the informal sector trader activities analysis which based on the spare pattern, the informal sector trader activities analysis which based on the hawker units during the pandemic and informal sector traders activities in the post-Covid-19.

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3.1 The Main Activities Analysis around Manahan Sport Stadium

The research showed that there are some activities around Manahan Sport Stadium, such as entertainment, recreation or sport; trade and services; education; offices; worships; and residences which show the main activity varieties there. Such conditions around the area bring people's interest to come or visit or explore the area around Manahan Sport Stadium. This condition creates images of the high customer accumulation emergence in the area [16], [6]. On the other hand, there are KS Tubun street and Menteri Supeno street which act as Surakarta City, so that the high mobilities of people emerge, and it can be considered as a high accumulation of customer which produces traffics. Based on the condition, the informal sector traders catch opportunities of doing business in selling or buying because the high accumulation of customers is the opportunity to get customers [16], [6]. These conditions raise the informal sector traders to provide goods that customers or people around the area or passing by people need. The various activities and the easy street access to go to other places in Surakarta City can create the traders interest to have the trading activities there. Furthermore, the government policy for letting the traders work there is exactly true and also gives benefits to the traders who act as the activity support from the main activity around the area [4]. The existences of them have been placed and can be the in-place element or the in planned element [7], [8], [9].

As a result, the traders can do the activities safely and comfortably so that they can get the benefits of fixed income to support their family and their life [10], [11]. Based on the research, the continuity of the trader activities during the Covid-19 pandemic was still continued within the strict government rules by doing "Pemberlakukan Pembatasan Kegiatan Masyarakat" or the enforcement implementation of public activities restriction. During the Covid-19, there were 90% of the informal sector traders who were still in operations and active traders who still supplied people's needs but they applied the health protocol implementation by only doing take away system in selling their products. After the pandemic or post-pandemic, the traders in the space room have applied a similar system of trading the same as at the pandemic time. The continuation of the traders' activities around Manahan Sport Stadium in the post-Covid-19 pandemic to fulfill people's needs was still on [17]. The continuation activities done by informal sector traders in a city public room were very important to support the economy by supplying people's needs, and it also created job opportunities for the jobless people. This is exactly as mentioned by [18] that continued city developments are not only focusing on environment concepts but also focusing on economic developments and the quality of community life. (Figure 2.)

3.2 Type of Products Analysis Based On The Area Activities

The result showed that the type of product varieties followed the main activities variety around Manahan Sport Stadium [16], [19], [20]. The types of products were dominated by processes food and beverage [16], where all the food and beverage were prepared and processed soon after the customers needed it, for example chicken soup, ginger drink or *wedang ronde*, Japanese food, juices, tea or coffee, and non-food products such as groceries, toys, and sports jersey. During the Covid-19 pandemic, all the products traded around the area were exactly similar to the post-Covid-19 pandemic, but it still applied the health protocol implementation by taking away the system for the people's needs. For more conditions, the sales results dropped down due to the enforcement implementation of public activities restrictions and trading time which should follow the government rules. All the government rules and regulations mentioned above in the post-Covid-19 pandemic were not applied anymore when the informal sector traders still did the trading activities with similar products. It showed that the informal sector traders continued with a similar product of trading didn't stop, but it still went on and on until now, the post-Covid-19 pandemic [18]. (Figure 2.)

3.3 Trading Facilities Analysis based on Type of Products

In doing the trading activities, trading facilities analysis took an important part in supporting the informal sector traders' activities. The results showed that trading facility varieties were influenced by the variety of

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the products [16], [19], [6], and the shapes of the trading place are sheltered. Every trader around KS Tubun street provided a dining table and seats for the customers, while the traders used the wheelbarrow to keep and display their products, and the kitchen table to prepare customers' orders. On the other hand, the traders around Menteri Supeno street provided dining tables and seats for the customers, while the traders themselves used display cabinets, and kitchen tables for preparing the products. There are also traders using the wheelbarrow motors, for example wedang ronde's traders located in front of the gate of Manahan Sport Stadium. The arrangement of dining tables and seats during the Covid-19 pandemic were arranged based on the government rules and regulations due to the health protocol implementation, which controlled the 1 - 1,5 meters distance for customer's tables and the 1 meter distances for the customer's seats. About the trader's shelters, they are divided into kitchens and customer's room and also provide washing hand basins. The furniture's arrangement created physical and social distancing among customers to keep them safe and comfortable during the process of purchasing following health protocol implementation [21] [12]. These conditions actually supported the continuity of the informal sector traders, so that their operational activities could be continued ever after in safe and healthy environments [18]. Moreover, the trader's shelters are open and separated between the traders and the customers in the form of the 80 centimeters high wall that will easily get the great sunlight and air circulation, which can reduce the risk of the Covid-19 virus spread [22] [23]. Based on the continuity of sustainable urban design that the informal sector traders can operate continuously in the great sunlight and air circulation space [18]. During the Covid-19 pandemic, the space arrangement and trading facilities were still applied, and this condition showed that continuity of the informal sector traders in public spaces were still operating by applying the health protocol implementation to provide the safe and comfortable process of purchasing. (Figure 2., Figure 3.)

3.4 The Trading Time Analysis based on The Area Activities

The results showed that the time arrangement of the main activity varieties in the Manahan Sport Stadium area is based on the trading period, time, and duration of trading [16], [20]. Most of the traders had different variety for opening and closing of the time trading, such as 6 a.m. to 3 p.m.; 6 a.m. to 12 p.m.; and 6 p.m. to 12 p.m., which follow the main activities around the area, for example sports; works; worship; education; trade and services; residents and people mobilities from one part to the other parts of the city passing the Manahan Sport Stadium. The main activities varieties around the area with people mobilities caused the hectic and active activities in 24 hours duration everyday which can be mentioned as a never sleep city following the government rules about the enforcement implementation of public activities restriction which keep changing based on the level of the rules as stated in the Instruction of The Ministry of Internal Affairs of The Republic Indonesia Number 24 the Year 2021 and Number 26 the Year 2021, [24], [25]. The third and fourth level is the operational time was limited only until 8 p.m, where the traders served the customers by applying take away or delivery system. The second level is trading time for the informal sector traders was limited only until 8 p.m with only 50% customers. The first level is trading time for the informal sector traders was limited only until 9 p.m with only 75% customers, and now the trading time is limited only until 10 p.m with 100% customers

Based on what has been explained about the trading time done by the informal sector traders above, it showed that the traders' operational times were still active and went on. There is a road network located around the Manahan Sport Stadium area connecting one site to the other site of the city, which take people mobility and activities in 24 hours time. It shows that the area is always live with the activities so that it can be opportunities for the traders to do the business [17]. Moreover, during the Covid-19 pandemic, the informal sector traders didn't stop their activities, but they still continued the activities by following the trading time designed by the government in the enforcement implementation of public activities restriction rules and regulations. There was the continuity of the informal sector traders' activities, and the economic activities were continued during the Covid-19 pandemic [18]. (Figure 2.)

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3.5 The Activity Analysis based on The Spare Pattern of The Informal Sector Traders

The results showed that the type of places for the trading around Manahan Sport Stadium are arranged in ranks of linear chain shapes following the road pattern, and the traders preferred to be closed to each other when trading with similar products, for example the food and beverage traders can be found around KS Tubun street and Menteri Supeno street. There are reasons why they wanted to be closed to each other, and it is to create the easiest to compare their needs of products, and also it can be good collaborations among the informal sector traders in trading their types of products. It also showed that the traders spare pattern in a linear chain shape located on the roadside of KS Tubun street and Menteri Supeno street because of the accessibilities reason that creates the easiest access for customers to get the traders. Based on [16], [6], the spare pattern of the informal sector traders were influenced by the agglomeration and the road network pattern around the area. During the Covid-19 pandemic, it showed that there were no spare patterns changing of the informal sector trading, and it was still in the same conditions of the spare pattern in the post-Covid-19 pandemic because of the agglomeration of the informal sector traders showed the trader collaborations to promote their product each other. This supports the continuity of the informal sector trader activities [18]. Furthermore, the spare pattern of the informal sector trader shapes are still applying the linear chain patterns on the side of KS Tubun street, and Menteri Supeno street, which creates clearly looks and the easiest access for the customers to get the traders. It gives the positive impact that there are many consumers coming to them [26], which creates the continuously trading activities both in the pandemic era and until now [17]. The situation and the conditions of the trading sectors around Manahan Sport Stadium accommodated by the Surakarta Government supported the existence of the informal trading sectors. (Figure 2.)

3.6 The Activities Analysis Based on Types of Hawker Units

The result showed that the informal sector traders who did the trading at the same time and location every day are the informal sector traders who are static traders in the permanent and the types of facilities that are used the wheelbarrow or display cabinets [16] [3]. The majority of these sectors are static, for example the trader of Japanese Food, chicken soup, meatball noodle, sport utensils, kid's toys, etc. These static conditions created the trader to have the loyal customers and to have static places for trading as stabilization places regulated by the government. There are also mobile hawkers who can move to the other places using wheelbarrow motor who sell ginger drink or *wedang ronde* located in front of the main gate of Manahan Stadium Sport. They can stop anywhere they like to wait for their customers [16] [19] [20]. During the Covid-19 pandemic, the trader activities can still be done with the static conditions or mobile conditions supported by government rules and regulations so that they can continue their activities [17]. (Figure 2.)

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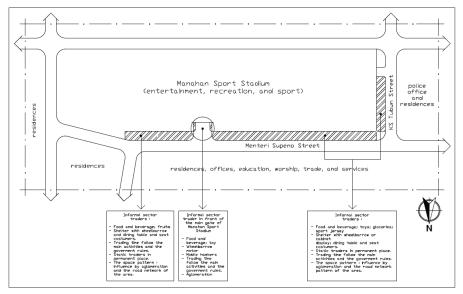


Figure 2. Informal Sector Traders Activities in KS. Tubun Street and Menteri Supeno Street

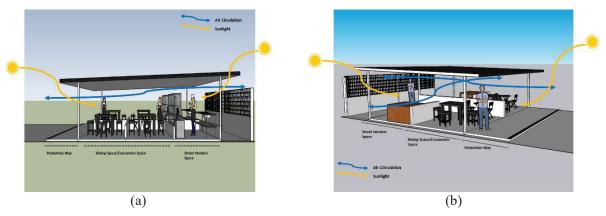


Figure 3. The Division of Space; Air Circulation and Sunlight of Informal Sector Traders in KS. Tubun (a) Street and Menteri Supeno Street (b)

3.7 The Informal Sector Trader Activities around Manahan Stadium Sport in the Post-Covid-19
The result showed that the activities done by the informal sector traders during the Covid-19 pandemic were still applied using the enforcement implementation of public activities restrictions and the post-Covid-19 pandemic, too. These were all the activities in the public spaces during and in the post-Covid-19 pandemic that can be done by following the Covid-19 health protocol implementation to prevent the virus spread [21] [12]. It can be seen that all the traders have followed the WHO regulation by applying the trading facilities arrangements, such as the 1 to 1,5 meters distances for customer's tables, the 1 meter distance for the customers' seats, separated places for kitchens and customers, washing hand basins additional, for wearing mask compulsory, pedestrian ways in front of traders shelters which applying the 80 centimeters hight wall that will easily get the great sunlight and air circulation, so the customers will get safe and comfortable purchasing [12]. The continuation of the informal sector trader activities in public spaces have similar

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characteristics to the traders themselves, who always choose the location that has high accumulation of customers [17] so that the stabilization place for the informal sector traders in Manahan Stadium Sport become proper places for the trader activities, and it turns into an in-place element or in planned element [7] [8] [9]. The continuity of the trader activities in the post-Covid-19 pandemic in public spaces played an important role due to their continuity activities will give benefit for themselves to get income to continue their life [1]. Moreover, the continuity activities of the traders were able to support the economic development during the pandemic since their activities could fulfill people's daily needs and can create job opportunities for others, therefore, it can support social equalization [18]. According to the sustainable urban development concept by considering the environmental aspect, social progress, economy, cultural and people life quality improvement [18]. It also can be poverty reduction efforts for the informal sector traders because the continuous activities can support them in sustaining their work and their family life [10] [11].

4 Conclusion

Based on the elaboration above, it can be concluded that there are sustainable activities for the informal sector traders the post-Covid-19 in Manahan Sport Stadium public space that happened there. The trader activities still went on with conditions as follow. First, the traders obeyed the enforcement implementation of public activities restriction with the arranged trading times that were divided into the three levels of time. The third and fourth levels with the operational time were limited only until 8 p.m, when the traders served the customers by applying a takeaway or a delivery system. The second level was limited only until 8 p.m. with only 50% of customers. The first level was limited only until 9 p.m. with only 75% customers, and now the trading time is limited only until 10 p.m. with 100% customers. Second, the types of trading products were mainly the same, which were dominated by processes food and beverage, for example chicken soup, ginger drink or wedang ronde, Japanese food, juices, tea or coffee, and non-food products such as groceries, toys, and sports jersey. The trading facilities were still similarly used there, like wheelbarrows or display cabinets for static traders in the permanent place and also wheelbarrow motors for mobile hawkers. Third, the spare pattern and the agglomeration during or the post-Covid-19 are still the same, which follow in a linear chain shape located on the road side of KS Tubun street and Menteri Supeno street. It showed that there were traders collaborating to promote their products to each others, and it was the easiest access for customers to choose the trader products. The conditions of the informal sector trader activities around Manahan Sport Stadium were considered as in-place element or in planned element, so these activities can be sustainably applied. During or post the Covid-19 pandemic, these activities could support people to fulfill their daily needs, and it also could give benefit the traders to earn income and to support their family life where they could be poverty reduction efforts.

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