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# Spatial Configuration & Management Street Vendors in Public Space

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**Abstract.** Street vendors contribute to meeting people's needs, but not by their presence in public spaces. This dynamic is essential, and attention is paid to street vendors' spatial configuration and management in public spaces. This study aims to learn more about the spatial configuration & management of street vendors in public spaces. The method used is a Systematic Literature Review (SLR), with a search and analysis related to the spatial configuration and management of street vendors in public spaces in 35 journals in the last ten years. This process shows that the spatial configuration and management of street vendors influence the dynamics of public spaces, creating diverse economic and social activities. So, the existence of a spatial configuration and comprehensive management of street vendors in public spaces will minimize management problems. This contribution provides knowledge for sustainable urban planning and the development of policies that consider spatial configurations to accommodate the management of street vendors in public spaces.

Keywords: spatial configuration, management, street vendors activities, public spaces

## 1. Introduction

Street vendors exist as a necessity and to meet the needs of fellow citizens. In the 1950s and 1960s, there was a view that the traditional economic sector would become extinct due to the presence of the modern formal economy (Lewis, 1954). However, in the 1970s, this opinion was contradictory because this sector had survived and expanded (ILO, 1972). This term later developed from "informal sector" by Hart (1973) to “informal economy” in 1993 at the International Conference of Labor Statisticians (Onodugo. Street vendors are known in Indonesia and are part of the informal economy. Until now, this dynamic continues to be an effort to overcome economic, social, and political factors, which have been widely investigated in some instances related to this activity (Peimani & Kamalipour, 2022). Street vendors are generally present in urban public spaces almost worldwide, but their total presence is difficult to obtain. If labor force statistics are available, street vendors will contribute to many jobs in urban areas (Roever & Skinner, 2016). The informal economic activities of street vendors are one of the efforts that people in most countries are interested in as a financial opportunity.

### Street Vendor Activities

The dynamics of street vendors in public spaces have been widely investigated in the last ten years, starting from the characteristics of their activities (Retno Widjajanti, 2012), occupancy (Suryanto et al., 2020), social typology (Busthanul et al., 2020), problems in public spaces (Lin, 2018), and even empowerment through management efforts (Onodugo, Ezeadichie, Onwuneme, & Anosike, 2016) like relocation (Rachmawati, 2013), formalization (Utami, 2009), and good public space for street vendor activities (Lolo et al., 2019). It is known that the investigation may refer to the Street Vendor space. Spatial configuration and street vendors are relevant to the presence of good management. Traders' strategies for occupying

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certain places or going from one place to another to be close to customers (Peimani & Kamalipour, 2022) in public spaces are one thing that needs attention.

Street vending activities are independent work, not well organized, and grow and develop independently (Saputra, 2014). The growth of an urban population also provides relevance (Widyaningrum, 2009). This activity is also known as traders selling on the street, providing convenience for consumers (Widjajanti & Wahyono, 2018) and access to goods and services that society expects (Kong & Pojani, 2017). This activity does not differentiate who sells (Silupu et al., 2023). An official report estimates that 12 to 24% of urban residents in Africa, Asia, and Latin America choose informal jobs such as street vending. (Roever & Skinner, 2016). Some are primary or secondary income (Andringa & Kies, 1989) (Islam & Khan, 2019). The needs traded generally consist of food, drinks, clothing, and accessories at affordable prices. In Indonesia, street vendors' physical facilities or modes vary quite a bit, among others (Widjajanti, 2000: 39) (Widjajanti, 2012) stalls, stalls, carts, tables, stalls, and pick-ups.

Traders use city space facilities as physical capital (Brown et al., 2015) (Basu & Nagendra, 2020) with the aim of trading, and almost 60% said they used the sidewalk, and 40% used the road to sell. Part of their reason is because they don't have the costs (Yadewani & Syafrani, 2018). The use of sidewalks in this era of urbanization means that sidewalks are a multi-purpose space rather than just a pedestrian zone (Kim, 2012). Someone chooses to be part of Street vendors because it is a primary or secondary opportunity (Dube, 2021). This issue in Indonesia has given the government attention and shared knowledge about experiences and the best way to handle this problem (Rachmawati, 2013). Street vendor activities in public spaces are often seen as unfavorable, such as affecting the ecological function of parks (Rahman et al., 2020), vehicle congestion, pedestrian density (Hagos et al., 2020), or public health hazards to hygiene and food safety (Swanson, 2007; Lincoln, 2008). Traders generally do not have legal status for the goods they buy and sell (Bhowmik, 2005). So, the implementation tends to involve confiscating goods, cleaning sidewalks from traders, and obtaining fines (Imai, 2008) (Lin, 2018). Street vendors tend to exploit their activities. Street vendors have considerations in their livelihood (Hidalgo et al., 2022). The complex problem of street vendors brings the view that in each region of certain countries, there are quite diverse problems, and the efforts that have been made to optimize them are quite varied, such as relocation. (Rachmawati, 2013), formalization (Utami, 2009), collaboration in policy making (Kurniadi & Sumarna, 2022), and participation between city planners and traders (Onodugo et al., 2016), as well as recognition between fellow traders (Falla & Valencia, 2019). Problems will also encourage changes in the characteristics of traders that influence visitors or buyers in public spaces (Kabelen et al., 2022). The ability of street vendors to contribute to the community in public spaces needs to be considered (Lolo et al., 2019). So, with the problems and efforts made, it is necessary to know more deeply about the spatial configuration and management of the street vendors themselves.

**Street Vendor Space**

Street vendor space in public spaces allows traders to offer their wares anywhere, at any time, and in specific spaces. However, the spatial configuration of street vendors generally does not occur by design (Loukaitou-Sideris, 2012). So, street vendors tend to be "out of place" in public spaces (Yatmo, 2008). Traders' spaces in the case of Korea tend to be closer to traditional market areas because, in modern markets, their existence is less accepted (Jeong & Ban, 2020). The term street vendor in Thailand is referred to as “Hap re paeng loi” (Askew, 2002), which means, when translated, "the shoulder pole moves and the stall floats." Istilah reflects the early history of street vending in Thai cities as a “moving activity” (Boonjubun, 2017). This term also supports the relevance of moving activities that

require connected accessibility to achieve merchant interaction opportunities (Farouk, 2019). So, choosing the location of street vendors in close connection with their spatial configuration is essential for management and monitoring efforts in public spaces. (Liu & Liu, 2022). Apart from that, matters such as infrastructure quality, attractions, and structure (hierarchy) (Barreda Luna et al., 2022) in a public space can also be considered. Spatial configuration is a relevant aspect when establishing oneself in a street or public space (Ojeda & Pino, 2019), and street vendors become essential links in empowering efforts to provide rights and improve the quality of life.

Street vendor activities are selling goods and services to the public without having a permanent trading place (Bhowmilk, 2005; Saha, 2011) (Islam & Khan, 2019). In this condition, traders take advantage of public access to trade and tend to be assessed negatively. However, traders use access due to several factors, such as the lack of space provided by the Government, and if there are some of them, they cannot or cannot rent the space (Yadewani & Syafrani, 2018). Apart from that, traders are present in a public space in a particular place because they can judge that the location is strategic (Manning, 1985; 238) and have the opportunity to sell well et al. 2020) because their merchandise is sold out (Busthanul et al. The dynamics of street vendors are also relevant to the objectives of the Sustainable Development Goals (SDGs). So, street vendors in public spaces in specific regions and countries emphasize that complex things must be minimized to provide rights and improve the quality of life in every community.

Street vendors in specific public spaces are influenced by efforts to meet life's needs and as supporters of community activities. Traders provide particular characteristics, but this activity tends to attract criticism because it causes various things, such as vehicle and pedestrian congestion, and can even be related to public health, hygiene, and food safety (Swanson, 2007; Lincoln, 2008). One article provides a statement regarding street vendors: "We work like ants; we avoid being troublemakers." This term describes traders who do not have legal status for their merchandise and continue to receive criticism (Bhowmik, 2005) (Lin, 2018). This description encourages us to be able to contribute to the complex issues between street vendors and public spaces, specifically regarding their spatial configuration and management.

The data collection process in journal study fields such as urban design, urban studies, and cities provided findings of around 622 articles. Most researchers have made this contribution, but it is possible to be more specific about spatial configuration and management. So, this research aims to learn more about the spatial configuration & management of street vendors in public spaces. These findings provide a trend toward patterns, diversity, and levels of management that influence street vendors in public spaces. With the current dynamics, it is hoped that this can provide insight into city planning and develop policies regarding the management of street vendor activities in public spaces.

## 2. Methods

The research uses the Systematic Literature Review (SLR) method to comprehensively determine the spatial configuration & management of street vendors in public spaces by looking at previous research. Collection and analysis of relevant literature was also carried out from various search engine sources. This method is carried out in stages, including (Okoli & Schabram preparing research questions, data collection, inclusion & exclusion criteria, and data analysis.
The research question is, what is the spatial configuration & management of street vendors in public spaces? So, the data collection process was carried out using the Publish or Perish

(PoP) software, with data sources from Google Scholar and Science Direct. The search process determines the quality assessment of inclusion & exclusion criteria created for specific searches (keywords, year limits, search engines). The keywords are “spatial configuration, management, activity, street vendors, and public spaces.”

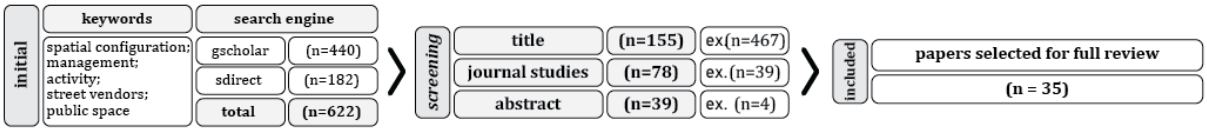



Figure 1.1 Prisma Flow Diagram (author)

In Figure 1.1, the process of filtering relevant search results is determined by initialization based on inclusion and exclusion criteria. Then, screening is carried out on titles, abstracts, and journal studies to obtain articles for complete review. Diagrammatic simulation with VOS Viewer also provides knowledge that research on street vendors is predominantly related to "activity, occupancy, traders." Thus, it is possible to comprehensively understand street vendors' spatial configuration and management in public spaces.

Inclusion and exclusion criteria are used to decide whether the data found is suitable for use, including data used from 2012 to 2023 and based on the Google Scholar and Science Direct search engines. The data obtained will be analyzed regarding the spatial configuration and management of street vendors in public spaces by comparing data in the form of tabulation, diagrammatic, and descriptive analysis.

## 3. Discussion

The spatial configuration and management of street vendors were studied in 35 relevant articles—a total of 20 articles categorized spatial configuration and management in specific countries that have attempted this approach. Meanwhile, 15 other articles provide trends regarding spatial configuration and management. The following are detailed research findings from 35 articles:

**Table 1.1** Spatial configuration of street vendors in space in various countries/regions (analysis)

| **Configuration location** | | **Reference & year** | **Action** | **Configuration** |
|---|---|---|---|---|
| **Country** | **Case & Region** | | | |
| Indonesia (Southeast Asia) | Simpang Lima Park in Semarang, Central Java | (Widjajanti, 2012) | Selling on terms: disassembly system and a specific time | Lined along the main road of community activities |
| Indonesia (Southeast Asia) | A. P. Pettarani street in Makassar, South Sulawesi | (Lolo et al., 2019) | Selling along roads approaching strategic commercial, office, and residential areas | Trades are clustered linearly along roads approaching strategic locations. |
| Indonesia (Southeast Asia) | Kutek Sunday market at Juanda Street in Depok, West Java | (Suryanto et al., 2020) | Selling along the sidewalk, but only on Sundays | Trade along the road in groups to make it easier for consumers |

| | | | | |
|---|---|---|---|---|
| Vietnam (Southeast Asia) | Sidewalk commercial downtown area in Ho Chi Minh City | (Kim, 2012) | Selling along the main road with the integration of formal activities | Linear lines along the main roads of the city |
| China (East Asia) | Neighbourhood street area in Shenzen, Guangdong | (Liu & Liu, 2022) | Selling in certain regions near strategic locations in a practical way | Selling near strategic locations in certain areas |
| South Korea (East Asia) | Yukgeori market in Cheongju-si | (Jeong & Ban, 2020) | Selling in traditional markets occupies a particular area | Trade near strategic locations with non-permanent trading modes |
| Egypt (North Africa) | Terminal stations in Cairo | (Farouk, 2019) | Selling near strategic locations | Trade close to strategic locations and strive to make access easier |
| Nigeria (West Africa) | Street markets in Enugu City | (Onodugo et al., 2016) | Selling at locations determined by the Government | Tend to group according to type of merchandise |
| Peru (South America) | Sidewalk downtown area in Lima | (Roever & Skinner, 2016) | Selling in strategic locations in the city of Lima with licenses and regulations | Linear rows are grouped in specific strategic locations. |
| Chile (South America) | Av. Uruguay sidewalks in Valparaiso | (Ojeda & Pino, 2019) | Selling by looking at adjustments to the informal economy | The mode and type of trade will adjust to the strategic location chosen |

In Table 1.1, it can be seen that there are ten articles on various actions and configurations of street vendors in public spaces. The study provides an overview of the configuration patterns that occur as follows:

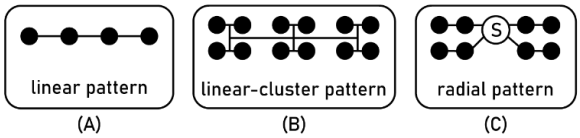



**Figure 1.2** Spatial configuration patterns of street vendors in public spaces (analysis)

Figure 1.2 shows the configuration pattern of street vendors in public spaces, which is seen based on the tabulated spatial configuration in various countries/regions. So, there are three patterns, including:

A linear pattern is a configuration pattern of street vendors selling in rows along the side of the road that is considered based on strategic value for trading. This pattern occurs in the Simpang Lima Park area in Semarang, Central Java (Retno Widjajanti, 2012), the sidewalk commercial downtown area in Ho Chi Minh City (Kim, 2012), and the neighborhood street area in Shenzhen, Guangdong (Liu & Liu, 2022).

Linear-cluster pattern is a configuration pattern of traders who tend to be grouped in rows along the side of a road or public space with ample space. This pattern occurs in the case of areas in the Sidewalk downtown area in Lima (Roever & Skinner, 2016), street markets in Enugu City (Onodugo et al., 2016), A. P. Pettarani Street in Makssar, South Sulawesi (Lolo

et al., 2019), Yukgeori market in Cheongju-si (Jeong & Ban, 2020), Sunday Market at Juanda street in Depok, West Java (Suryanto et al., 2020).
A radial pattern (converging pattern) is a trader configuration pattern that tends to concentrate closer to locations that they consider strategic. The configuration that occurs adapts to the available space and can be linear or form a cluster. This pattern appears in the area in Av. Uruguay sidewalks in Valparaiso (Ojeda & Pino, 2019) and terminal stations in Cairo (Farouk, 2019).
Patterns in street vendors' spatial configuration tend to shape their characteristics in public spaces. Traders will try to adapt to be in consumer-oriented and strategic locations.

**Table 1.2** Management of street vendors in various countries/regions (analysis)

| **Management location** | | **Reference & year** | **Management action** |
|---|---|---|---|
| **Country** | **Region** | | |
| Indonesia (Southeast Asia) | Simpang Lima area in Semarang | (Widjajanti & Wahyono, 2018) | Relocation of street vendors: specific locations, trade management |
| Indonesia (Southeast Asia) | *S. Parman street in Padang City* | (Yadewani & Syafrani, 2018) | Permanent control of street vendors, as well as emphasis on not damaging public facilities |
| Indonesia (Southeast Asia) | Klithikan Notoharjo Market in Solo | (Rachmawati, 2013) | Formalization of street vendors: relocation, community, technical guidance |
| Indonesia (Southeast Asia) | *Commercial sidewalks in Makassar* | (Busthanul et al., 2020) | Formalization of street vendors: unique locations, security |
| Thailand (Southeast Asia) | *Chao Phraya River in Bangkok* | (Boonjubun, 2017) | Every street vendor has the right to trade with the following conditions: management fees, cleanliness, and security. |
| Bangladesh (South Asia) | *Park area in Khulna City* | (Zaman & Ahmed, 2023) | Empowering fellow street vendors to increase safety and consumer comfort |
| India (Southeast Asia) | *Old neighbourhoods of* Hyderabad | (Basu & Nagendra, 2020) | Empowerment and space for street vendors: facility assistance, funding |
| Etiopia (East Africa) | *Downtown sidewalks in Addis Ababa* | (Hagos et al., 2020) | Mode regulation of street vendors: type and size, location of trading space within pedestrian access |
| New York (USA) | *Manhattan Downtown* | (Loukaitou-Sideris, 2012) | Every street vendor has the right to trade with a permit and requirements: cleanliness, health, and safety. |
| Colombia (South America) | *Downtown sidewalks in Bogota* | (Falla & Valencia, 2019) | Formalization of street vendors: particular areas, trade mode exemption, licensing |

In Table 1.2, it can be seen that there are ten articles on the management of street vendors in various countries/regions that have various management actions by the government. Actions are influenced because each region and certain countries have different cultural, social, and environmental factors. This form of management can be known as follows:

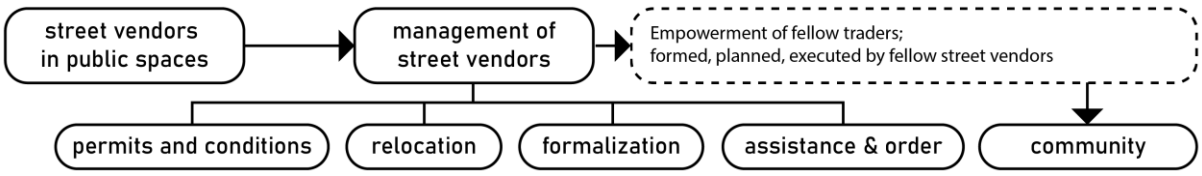



**Figure 1.3**. form of management of street vendors

Figure 1.3 provides an understanding that street vendors in public spaces, in terms of management, can be assisted by the government, and even fellow traders are trying to do this. Management form with studies from various regions/countries, namely trading with permits and conditions such as in the case of Manhattan downtown (Loukaitou-Sideris, 2012), Chao Phraya River in Bangkok, Thailand (Boonjubun, 2017), and Downtown sidewalks in Addis Ababa, Ethiopia (Hagos et al., 2020). Apart from that, there are also relocations such as the Simpang Lima area in Semarang (Widjajanti & Wahyono, 2018), formalization such as Downtown Sidewalks in Bogota, Colombia (Falla & Valencia, 2019), and Klithikan Notoharjo Market in Solo, Indonesia (Rachmawati, 2013). The most minimal action can also be taken by assisting the Old Neighborhoods of Hyderabad in India (Basu & Nagendra, 2020) and controlling things such as S. Parman Street in Padang City (Yadewani & Syafrani, 2018). This empowerment is also being pursued by fellow traders in the Park area of Khulna City (Zaman & Ahmed, 2023). In Indonesia, it is commonly known as paguyuban. Various kinds of actions regarding the management of street vendors in public spaces can be seen as levels in management efforts. Several factors influence this difference. Thus, management needs to consider the characteristics of street vendors so that the various actions carried out remain optimally realized in public spaces.

### Levels of spatial configuration & management of street vendors

Street vendors, in their spatial configuration & management efforts, cannot be separated from certain factors that influence their implementation in public spaces. So, this effort can be carried out through the following stages:

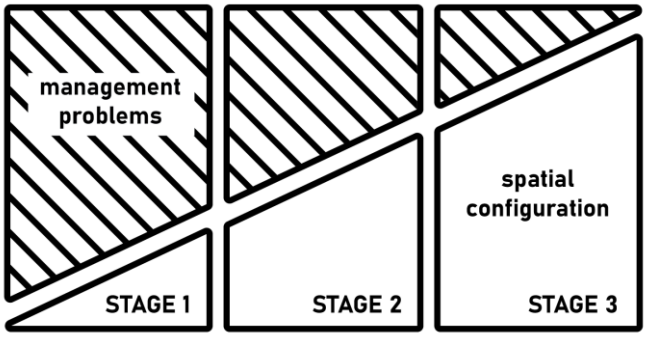



**Figure 1.4** Stages of spatial configuration in completing street vendor management (analysis)

Figure 1.4 explains that achieving the spatial configuration of street vendors is closely related to solving management problems. Thus, spatial configuration is one of the things that, if completed, will minimize the difficulties of managing street vendors in public spaces. Meanwhile, according to the study results in tabulations (1.1) and (1.2) regarding the spatial configuration & management of street vendors in public spaces in various regions/countries, there is a tendency for the configuration to be formed or realized gradually. At each stage, having an increasingly optimal spatial configuration will minimize management problems. If Figure (1.4) is viewed with tabulation (1.1) regarding spatial configuration, the following phases or stages can be seen:

**Table 1.3** Stages and patterns of spatial configuration (analysis)

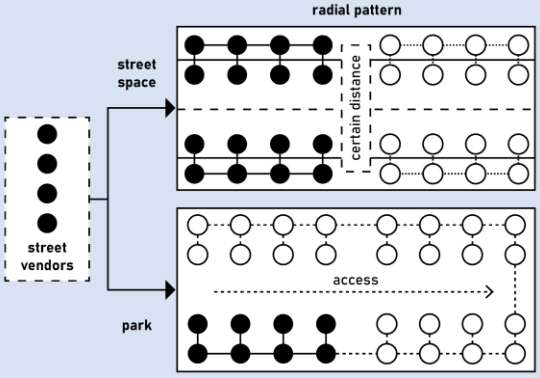
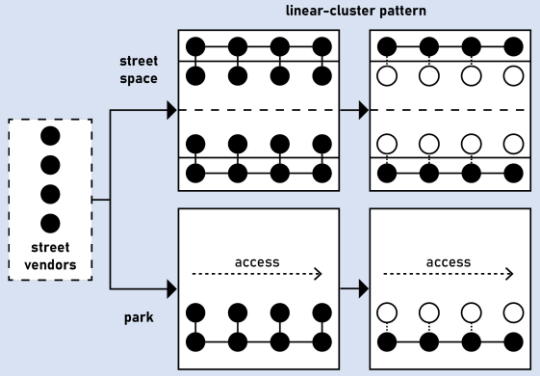
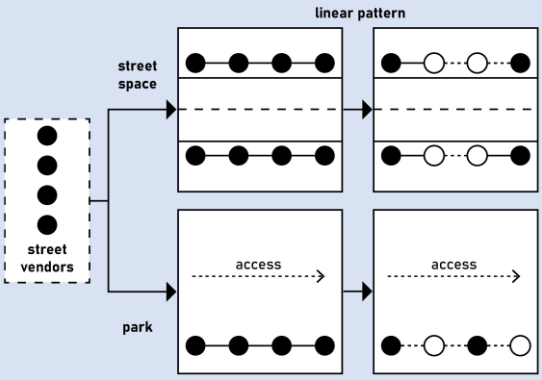
| Stages | Spatial configuration | Configuration pattern |
|---|---|---|
| Stage 1 | Simpang Lima Park in Semarang, Central Java (Widjajanti, 2012)<br>*Sidewalk Downtown Area in Lima* (Roever & Skinner, 2016)<br>*Terminal Stations* in Cairo (Farouk, 2019)<br>A. P. Pettarani *Street* in Makassar, South Sulawesi (Lolo et al., 2019)<br>Yukgeori *Market* in Cheongju-si (Jeong & Ban, 2020a)<br>*Neighborhoods Street Area* in Shenzen, Guangdong (Liu & Liu, 2022) |  |
| Stage 2 | *Street Markets* in Enugu City (Onodugo et al., 2016)<br>Av. Uruguay *Sidewalks* in Valparaiso (Ojeda & Pino, 2019) |  |
| Stage 3 | Kutek *Sunday Market* at Juanda *Street* in Depok, Jawa Barat (Suryanto et al., 2020)<br>*Sidewalk Commercial-Downtown* Area in Ho Chi Minh City (Kim, 2012) |  |

Table 1.3 shows the stages in achieving spatial configuration based on the study's Table (1.1) results. So, it is known that the efforts made in various countries/regions have stages in resolving multiple management problems in public spaces. This effort is not only about street vendors. However, it provides equality in public spaces. Thus, the spatial configuration of street vendors may be carried out in any public space. Still, it has stages that also have implications for the completion of its management in public spaces.

Street vendors in spatial configuration findings in various regions and certain countries provide an understanding of variations in spatial configuration patterns that occur in public spaces. This pattern is generally dominated by street vendors forming linear-cluster patterns in public spaces, such as in Lima, Peru (Roever & Skinner, 2016), Enugu City, Nigeria (Onodugo et al., 2016); Makassar, Indonesia (Lolo et al. 2019), Cheongju-si, South Korea (Jeong & Ban, 2020), Depok, Indonesia (Suryanto et al., 2020). Public spaces that street vendors widely use include sidewalks and roads or parks that have sufficient space. Thus, its connection with management will provide variations in efforts to empower street vendors, as

is the case in the United States (Loukaitou-Sideris, 2012), South America (Falla & Valencia, 2019), Southeast Asia (Boonjubun, 2017) (Widjajanti & Wahyono, 2018) (Yadewani & Syafrani, 2018) (Rachmawati, 2013) (Busthanul et al., 2020), East Africa (Hagos, et al., 2020), and South Asia (Basu & Nagendra, 2020) (Zaman & Ahmed, 2023) which has various management efforts. So, empowerment with spatial configuration efforts can be achieved by arranging public spaces. If it is carried out in a participatory manner, it will have implications for the management of street vendors by looking at their characteristics. Efforts can be implemented in stages, and if they become more optimal, their significance will be seen in minimizing the problem of street vendors in public spaces.

Spatial configuration & management of street vendors in public spaces can also contribute to the economic, social, and sustainability sectors. This insight is still limited in interpreting the findings due to several factors, such as each region in a particular country having various locations, types of public spaces, and cultural differences. So, direct observation of this insight becomes necessary to be known.

## 4. Conclusion

Finding out more about the spatial configuration & management of street vendors in public spaces provides an understanding of the importance of understanding the characteristics of traders as a participatory effort in minimizing the problem of street vendors in public spaces. Each spatial configuration has a particular pattern that encourages the characteristics of street vendors, including linear pattern, linear-cluster pattern (linear cluster pattern), and radial pattern (central pattern). This configuration pattern generally forms a row cluster pattern in public spaces. This pattern occurs when street vendors try to choose strategic locations where they think there are consumers. So, the configuration pattern between street vendors and individual traders will be considered to strive for good management. Many management forms are carried out in various regions/countries, such as management actions with permits & conditions, relocation, formalization, control, social assistance, and community associations. This form for street vendors has become quite complex, so attention from the government or fellow traders is sought in public spaces to minimize the problems of managing street vendors. Management problems, with efforts to achieve spatial configuration to form patterns of street vendor characteristics, are one effort that can be made. By considering the configuration pattern, each stage of spatial configuration efforts in public spaces will be able to determine its significance in minimizing management problems in public spaces.

Recommendations refer to the importance of involving stakeholders, including street vendors, to minimize the problem of street vendors in public spaces. An approach that prioritizes participation in understanding the patterns of street vendors in public spaces is quite helpful in creating more inclusive and sustainable policies and management. It is hoped that this contribution can become a reference for urban planning, policy development, and sustainable, inclusive, and safe management of street vendors in public spaces.

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