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Research Article

A REVIEW OF STREET FOOD MANAGEMENT IN ASIA

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Abstract

Street food has been a very important component of each nation's tourism industry. Street food reflects the history and uniqueness of each local culture. This paper is a review of the literature about street food in Asia and street food management in Asia using papers from Google Scholar, Scopus, Web of Science and Hospitality and Tourism Complete. This paper aims to introduce readers street food tourism in some countries in Asia and some lessons that can be learnt from street food management in these countries. The lessons can be ranged from licensing programs to formalise this informal industry to financial support from local government to bottom-up approach with the listening to the voice of street food vendors when establishing street food regulations.

Keywords: Street Food, Street Food in Asia, Street Food Management, Food Tourism

Introduction

Street foods often exhibit indigenous customs of a nation and provide a distinctive tourism experience not only for tourists but also for national residents (Liu, Zhang and Zhang, 2014). Many countries in Southeast Asia have street foods. The diversity in cultures and geographic locations across Southeast Asia creates disparities of street food in each city and country (Chavarria and Phakdee-Auksorn, 2017). In Southeast Asia, street food plays an important role in the tourism and hospitality sector (Jeaheng and Han, 2020). Because of its importance, many countries in Asia have established some regulations for street food industry like India, Vietnam, Taiwan, Hong Kong, South Korea, Malaysia, Singapore, and Thailand (Jeaheng et al., 2023). The next sections will introduce the images of street food tourism in some Asian countries.

Methodology

In terms of methodology, this paper is treated as a systematic review. Google Scholar, Hospitality and Tourism Complete, Scopus and Web of Science have been used as the search engines for this paper. The search terms include "street food management in Asia", "street food in Thailand", "street food in Singapore", "street food in Malaysia", "street food in China", "street food in Taiwan", "street food in India", "street food in South Korea", "street food in Vietnam", "street food management in Thailand", "street food management in Singapore", "street food management in Malaysia", "street

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food management in China", "street food management in Taiwan", "street food management in India", "street food management in South Korea", "street food management in Vietnam". All relevant papers are visited until there is no new paper coming out.

Findings

Street food in Thailand

Street food vendors exist in many main tourist locations in Thailand and display a variety of cuisines for tourists to choose from (Chavarria and Phakdee-Auksorn, 2017). Thai food has been an important element of the image of Thailand. About 20% of the Tourism Authority of Thailand (TAT) budget was used to promote Thailand's food tourism (Jeaheng, et al., 2023). Many marketing strategies including 'Amazing Thai food' or the 'Thai street food festival in 2014' which help promote authentic local cuisines formed a better status for Thai gastronomy (Chavarria and Phakdee-Auksorn, 2017). There are about 103,000 street food businesses constituted about 69% of the total food entrepreneurs which create a total revenue of over 7,000 million euros (Jeaheng et al., 2023). Many famous tourism destinations in Thailand comprising Bangkok, Phuket, Chiang Mai, Pattaya, and Krabi built up street food as tourist spots (Jeaheng et al., 2023).

Phuket has been the only city in Southeast Asia bestowed the title of 'creative city of gastronomy' by UNESCO. This creates a competitive edge for Phuket to differentiate itself from other cities which also benefit from local gastronomy (Chavarria and Phakdee-Auksorn, 2017). Thailand's Ministry of Foreign Affairs (MFA) created a mobile application namely Phuket Street Food with information about the most common food and the locations of street food. Some famous authentic street foods of Phuket are introduced to tourists such as Hokkien noodles (Baba Nyonya style), dim sum (shumai), satay, roti, sticky rice served with mangoes, and Kanom Jeen (rice noodles in a creamy coconut and curry sauce that is similar to laksa of Malaysia and Singapore) (Jeaheng et al., 2023). Besides, the Thailand government cooperated with Michelin to promote 13 types of street food of Thailand in the Michelin Guide Phuket in 2019 (Jeaheng et al., 2023).

Bangkok, Thailand's capital ranked 3rd in the Top Global Cities for Dining by The MasterCard Global Destination Cities Index in 2018 (TAT, 2019). CNN (2017) listed Bangkok as one of the world's best destinations for street foods. At a very early stage, street food vendors in Bangkok existed in canals or floating markets but after the building of streets under the reign of King Rama IV (1851–1868), Bangkok has transformed from the 'Venice of the East' to a city on ground and vendors were now operated in the streets (Boonjubun, 2017). During the weekday lunch time, food stands especially in Bangkok overcrowded with office workers. A delivery service or take-away menu were operated during this time to save time instead of long queues and long walking in the high temperature. Kinds of food can be from one plate of noodles, fried- rice, rice with topping to the modern foods, which can be consumed within an hour.

Street foods in Thailand are ranged from uncooked to convenient meals, such as Thai cuisine, snacks, desserts, fruits, and beverages. Street foods are classified into different groups: sold by mobile vendors/hawkers (e.g., food stalls, trollies, carts, trucks, and kiosks on road/street sides or public areas); sold in fixed locations or trading sites on the ground floor or doorsteps of semipermanent structures, providing only tables and chairs; and sold at a point occupied in marketplaces or in front of the seller's house with cooking and food service areas, such as tables and chairs in the house and on the sidewalk or street (Jeaheng and Han, 2020: 642).

Street food in Singapore

The hawker centre is a symbol of modern Singapore. As a result of ageing population, the Singapore government has configured the hawker in the 1960s and relocated them from the street to the hawker centres (Tarulevicz, 2018). In 2016, two street food hawkers in Singapore namely Hill Street Tai Hwa Pork Noodles and Liao Fan Hong Kong Soya Sauce Chicken Rice and Noodles received Michelin stars (Henderson, 2019) and Singapore became the first country in Southeast Asia received Michelin

star (Ooi and Tarulevicz, 2019). 2020 also witnessed the recognition of UNESCO towards hawker centres as an intangible cultural heritage of Singapore which also highlighted the positive image of Singapore regarding its hawker regulation (Chiu and Zhang, 2022; Yong, 2020). There were more than 6,000 stands with cooked food at reasonable prices for the low-income clients which now are visited frequently by more wealthy Singaporeans. Singaporeans have tendency to dining out which is an integral activity in their daily life (Henderson, 2017).

Stands are small enterprises with a small number of staff from two to four. The eating space is very simple with plastic chairs without air conditioner. Centres are normally hot and busy. Long queues can be expected at the more famous stands especially at peak times. Opening hours are different according to each stand but food can normally be served from very early morning to late night and some centres can open 24 hours (Henderson, 2017). Hawker food is an exhibition of Singapore's mixed culture with many ethnic groups including Chinese, Malays and Indians together with westerners and others. Some Singaporean famous dishes are chicken rice and bak chor mee (Henderson, 2017).

Singapore's transformation to an independent 'Asian Tiger economy' has facilitated its economic growth with a complicated network of peoples, goods, and trade. This complex network also created a movement of labours and the requirement of inexpensive food to provide to these labours. Many of them cannot approach to kitchen or have no family members to cook for them. This requirement was met by hawkers and street vendors which provide easy meals with cooked and uncooked foods, snacks, and beverages. Hawkers and hawker food played a critical role in building the economy of Singapore (Tarulevicz, 2018).

Street food in Malaysia

In Malaysia, the food tourism sector with famous street food destinations displaying distinctive Malaysian tastes which were derived from the cultural heritage of three main Malaysian ethnic communities: Malay, Chinese and Indian. Through local street food vendors, Malaysian food with a diversity of authentic Malaysian cuisines can be introduced to international tourists (Mohamad, Palan, Roslan and Nasron, 2022). In Malaysia, Kuala Lumpur City Hall categorises the hawkers by the kinds of buildings where they located such as stands (secured), hawker centre, kiosk, night market (licensed), night market (unlicensed) and food courts. The travelling vendors are categorised as mobile hawkers (Hassan, 2003). Some famous Malaysian street foods are Assam Laksa (Rice Noodles in Fishy Soup), Rojak (Fruit and Vegetable Salad), Roti Canai (Flatbread), Chendul/Cendol (Cold Dessert Soup), Apom Balik (Stuffed Pancake), Batu Maung Satay (Grilled Meat on Skewers), Koay Chiap (Duck and Noodle Soup), Chee Cheong Fun (Rice-Noodle Rolls) (Rishad, 2018).

Penang has received many titles for 'Best Street Food in Asia' as acknowledged by Time Magazine (Mohamad, Palan, Roslan and Nasron, 2022) and for 'Asia's Greatest Street Food City' as acknowledged by CNN (Cripps, 2017). Penang street food provide a diversity of tastes showcasing different cultures and ethnicities including Malay, Chinese, Indian, Arab, Siamese, and European, making Penang famous as Asia's Food Paradise (Mohamad, Palan, Roslan and Nasron, 2022).

Street food in China

Chinese food culture must go along with street food. Many cities have street food and provide it to its residents and tourists, and street food has become a very special feature of Chinese culture (Liu, Zhang and Zhang, 2014). Street foods sold in many cities of China include snacks such as crisps (Chinese Jianbing), Jiaozi (Chinese dumplings), hotpot (Chinese Huo guo), rou jia (Chinese Hamburger), Chinese style fried chicken, Banuian (Chinese noodle soup), Baozi (Chinese bread buns), etc. Cooked foods are also sold, commonly at a specific location (Shanghai street foods, 2017). There are about 19.5 million street food vendors in China (Xue and Huang 2015).

Street food in Taiwan

Night markets are a distinctive feature of Taiwanese culture and are interesting places to visit to try local cuisines (Sun, Wang and Huang, 2012). Tourist Night Markets ranked the top three most famous sight-seeing spots for tourists in Taiwan (Hsieh and Chang, 2006). Vendors in night markets contributed significantly to the socioeconomic development of Taiwan. Wherever you visit in Taiwan, night markets can easily be found with thriving vendors, many customers, and goods with reasonable price including clothes, shoes, accessories, games, and foods (Sun, Wang and Huang, 2012). By the end of 2003, Taiwan had over 150,000 food and beverage business on the street and over 40% of the street vendors in night markets are food enterprises (Sun, Wang and Huang, 2012).

There are three formal Tourist Night Markets in Taipei City: Hwa-shee, Zhao-ho and Linchiang Tourist Night Market. There are three purposes for building up Tourist Night Markets including to encourage local business and to enhance regional economic benefits; to provide a night activity for the local community and to change some illegal vendors into legal ones. In addition, from the view of customers, it is expected that the establishment of Tourist Night Markets can reduce some bad shopping experiences they can face when visiting the normal hawkers (Hsieh and Chang, 2006)

Street food in India

Eating out to Indians often referred to eating street food because it has reasonable price in comparison with the prevalence of restaurants. Besides, the immigrants in big cities prefer street food because of its handiness and low prices (Choudhury, Mahanta, Goswami, Mazumder and Pegoo, 2011). There are about 10 million street-food vendors in India and it helps address the unemployment rate and provides domestic receipt and necessary food source for many people. It is also a cultural characteristic which appeals tourists to visit for culinary activities (Khanna, Nagar, Chauhan and Bhagat, 2022). Bhowmik (2005) stated that about 2.5% of India's population in the cities operated street food vendors which provide food and other goods to residents in the cities. Low-income city dwellers at their work locations had difficulties in terms of time and facilities to prepare meals at home so they depended on street food vendors every day.

The diversity of street-foods provided by the street food vendors have become cultural characteristics that attract tourists to India. Famous Indian dishes are Cholley Bhature, Assorted tikkas & kebabs of the North; Pav Bhaji, Bombil Fry and Dabeli of the West; Momos, Jhal Moori and Puchka of the East and Paddu and Biryani of the South (Gupta, Sajnani and Gupta, 2020). Moreover, some Indian delicacies also borrowed the ingredients and some recipes from other countries from Western and Central and South Asian culture like kebabs, biryani and pulao (two rice-based dishes) (Gupta, Sajnani and Gupta, 2020).

Street food in South Korea

Street vendors in South Korea had a massive increase after a rebuilding caused by the 1998 economic crisis. There were about 800,000 street vendors in Seoul in 2005 (Bhowmik, 2005). Korean street foods exist around the country, and mostly close to university areas, shopping districts, subway stations, etc. (Choi, Lee and Ok, 2013).

Street food in Vietnam

In Vietnam, street food vendors exist in two kinds: fixed and mobile street vendors, which are classified based on some criteria such as fixed location, equipment, water, electricity, and kinds of business registration. Fixed vendors often have fixed stands, and usually have its own license. In contrast, mobile vendors are movable with food on their bicycles and motorcycles, and have no licence (Huynh, et al., 2022).

Street vendors occupied a small but recognisable part of Hanoi's economy. National statistics in 2006 showed that there were about 5,600 mobile fruit and vegetable vendors in Hanoi with 90% of them moving from rural provinces to city centre to sell their products. This numbers show the big difference

between incomes from rural and urban areas. Street food vendors help poor households in rural areas attain a living income (Lincoln, 2008).

Challenges of street food management in Asia

Street food safety has become a national safety issue for many countries in Asia with poor food handling and unsanitary conditions. In Thailand the economic turnovers of street food are hindered by health and social issues. Many scholars demonstrated critical issues of this industry such as the lack of education about food hygiene, food-handling standards, and personal hygiene of street food vendors (Chavarria and Phakdee-Auksorn, 2017). In China, majority of street food vendors have little knowledge about food safety, and have little inspections and regulations (Ma, Chen, Yan, Wu and Zhang, 2019).

Taiwan's positive reputation for high-quality food is influenced by the food safety scandals in the past few years. The food safety scandals started with a plasticiser found in cold drinks, jams, and pastries in 2011, and fake olive oil with green colouring made from a chemical additive in 2013, etc. These events have decreased the trust of people on the safety of Taiwan's food supply system (Chen, 2016). India also received public attention about food safety (Reddy, Ricart and Cadman, 2020). Bad food safety procedures are often related to low wages and poverty. Although there were some enhancements in food safety issues in India, there are still many problems related to food-borne illnesses. In India, food safety also has an issue related to the degree of quality insurance for customers (Reddy, Ricart and Cadman, 2020).

Street food vendors also have an influence on the images of many cities. From 1990 to the 21st century, street food economy in China has been a hindrance for many cities to protect the city's image, which caused some harsh regulations (Xue & Huang, 2015). During the National Sanitary City Campaign in many cities, the existence of street vendors has become unwanted phenomenon as street food vendors were operated in the busy streets and pavements, created the confusion in the city, and often violated the city regulations (Hanser, 2016). Some other problems of street food in Thailand consisted of bad design of food stands, bad management, unsuitable selling position of hawkers, lack of law application, etc. (Chavarria and Phakdee-Auksorn, 2017). Vietnamese government also had to implement many strategies to solve problems related to street food vendors as street vendors normally related to old fashioned disorder of urban commercial areas (Lincoln, 2008).

Lessons learnt from street food management in Asia

Street food is a unique characteristic of many Asian countries with Pojangmacha (small tent) in Korea, night markets of Taiwan to hawker centres of Singapore. Some famous food tourism destinations were mentioned are Phuket and Bangkok of Thailand, Taipei of Taiwan, Penang of Malaysia, Seoul of Korea and Hanoi of Vietnam. The number of street food vendors are varied according to each country. The biggest numbers of street food vendors are in China and India with more than 10 million. They were followed by Korea, Thailand and Taiwan. There have been so many problems related to street food reported in many countries in Asia such as the safety issues in Thailand, Taiwan, China and Vietnam with bad management and lack of law application. Moreover, street food also created the disorder of urban commercial areas in Vietnam and Thailand with unsuitable selling location of hawkers and influenced cities' image and created confusion in high traffic street of the cities in China.

There are some lessons we can learn from successful countries in Asia, Pill (2011) suggested that to regulate street vendors, countries must first develop registration and licensing programs to formalise this informal industry. Through zoning, timing control and the soft governance approach, Guangzhou's government of China attempts to guide the street vendors into orders instead of eliminating street vendors (Flock and Breitung, 2016). Since 2009, some local governments in big cities in China started to adopt some softer approaches to regulate street vendors in order to reduce the frictions between vendors, the public, and city management officers. Conditional permits are issued to street vendors in municipalities such as Nanjing. According to Chiu and Zhang (2022)

centralized hawker centres can help create a healthy competition and eradicate the monopoly power of some entrepreneurs. Some countries like Singapore, Hongkong, Malaysia has been successful in establishing hawker centres to create a social hub for entertainment activities. Singapore promoted entertainment activities in hawker centres (NEA, 2010a). The NEA in collaboration with Health Promotion Board have created some activities such as the City Hawker Food Hunt to seek for and bestow the title of hygienic and authentic hawker food. They also created an interactive web in 2010 for registered users to comment on food, stands and centres (NEA, 2010b).

For a successful zoning, countries should raise the awareness of street vendors as a lesson from Bandung, Indonesia where street vendors move voluntarily to Cicadas area. The street vendors in Bandung had higher awareness related to the pedestrian rights and the influence of their business on the street disorder of the city than in Jakarta and as a consequence, they are more willing to follow the instructions from the local government. Moreover, according to Henson, Jaffee and Wang (2023), there should be a suitable legal and regulatory framework to provide incentives to facilitate their change to become a formal industry such as a simpler registration, a tax reduction, an enhancement in property rights and enhancing their capacities to approach infrastructure, business services, education and training, accessing public supply, etc.

In Singapore and Hongkong, the governments have a stricter regulation to move street vendors into authorised areas in which any people operate an illegal vendor in the street can be fined and imprisoned. In Singapore and Hongkong, food hawkers have to obtain a license to operate their business in the street. If they don't obey the law, they will be fined up to HK$ 5,000 (about 583 euros) and imprisoned for one month in Hongkong and up to S$5,000 (about 3426 euros) or imprisoned up to three months in Singapore (Chiu and Zhang, 2022). Singaporean citizens or permanent residents who are 21 and over are eligible for a hawker licence. The hawker licence cannot be granted to sole proprietorship, partnership or company and the owner must apply according to his personal financial situation. During their trading, hawkers must follow the government's Environmental Public Health (Hawkers) Regulations and Environment and Health Law if they don't want to lose their licenses. Licensing is not only used to track vendors but also helps vendors to access educational trainings about hygiene and good business models. In Singapore, all licensed hawkers are provided with educational trainings. Governments also move street vendors into designated vending areas and food centres. In Singapore and Malaysia, many street food vendors have been moved to food centres with clean water, clean vending location, and an orderly space for their trading.

Fines and the grading system of Singapore are some of the government efforts to provide incentives for formalisation process. In Singapore, the National Environment Agency adopted the Points Demerit System since September 1987 to penalise hawkers who violate public health regulations. Licensed hawkers cannot operate their business in two weeks if they receive 12 demerit points during the year. The suspension will last for four weeks with second violation. Their license will be withdrawn permanently with their third violation. The government also categorized the violations into A and B. Category A is a serious violation, which will lead to a reduction of 6 points with selling unclean food. Category B result in a reduction of 4 points with irrelevant food storing (Chiu and Zhang, 2022).

They also launched a food safety scheme since 1997 in which food stands are received a grade from A to D regarding the cleanliness, housekeeping and sanitation. The grades must be exposed to public and the National Environment Agency will do frequent examinations. Hawkers have to go through a basic food hygiene training and the employees must have vaccine injection for typhoid since 1990 (NEA, 2010a). In 2006, 77% of licensed street vendors obtained an 'A' or 'B'. This percentage increased to 99% in 2018 (Henson, Jaffee and Wang, 2023). This also happened in India with the 'Eat Right India' program. However, they have different approaches for different types of enterprises. With large food enterprises, the government used a traditional approach with frequent examinations, product sampling and penalties for violations. With small and medium enterprises, the government build up their capacity and hygiene assessments as an incentive to facilitate their voluntary obedience.

With micro and informal enterprises, the government employed a grouping approach with close connections with groups or associations of vendors to enhance shared infrastructure and provide training, etc. (Henson, Jaffee and Wang, 2023)

Licensing also helps to offer street vendors with educational trainings about hygiene and good business practice like the cases of Singapore and Malaysia. Thailand had also launched so many skill trainings for street vendors and supported them financially to run their business. However, Henson, Jaffee and Wang (2023) argued that education training cannot have a permanent effect on improving food safety practice of street food vendors without going together with proper incentives and the ability of government in controlling food safety. There have been many studies demonstrated that there were some enhancements in street food vendors' awareness after training; however, little changes can be made in their food safety practice. Hence, it is recommended that incentives and controlling capabilities should be integrated with training programs to improve its efficacy.

Successful business with good practices cannot be formed if there is no support from the government. As said earlier, licensed vendors in Thailand will receive financial support from the government. Moreover, in Singapore, many policies of subsidy and reducing rents have been implemented to address the decline in the number of hawkers. Singapore government provides a subsidy to more than 60% of the vendors, which help to increase the number of hawkers and provide around 5% of employment for people with low educational level (Chiu and Zhang, 2022). In addition, in 2001, the government invested SGD 420 million for rebuilding infrastructure for hawker centres with the Hawker Centre Upgrading Program (Henson, Jaffee and Wang, 2023). Singapore's policies for urban hawkers are more supportive than the policies in China with the investment of the government into the hawker centres and subsidies to hawkers depending on their current situations (Chiu and Zhang, 2022). In China, there is a compensation policy for landless farmers. Compensation policies were adopted to fix the top-down street vending regulations, such as the regulation to move vendors into marginal locations (Dai, Zhong and Scott, 2019). Street vendors who are landless farmers were allowed to operate street vending, and children of landless farmers can be hired to be chengguan (Dai, Zhong and Scott, 2019). Farmers were given a new urban space; however, they continue to do farming and food related business on this space for a living. Urban space used for informal economies can be considered as a way to compensate landless farmers if it didn't influence the social security programs (Dai, Zhong and Scott, 2019). Other countries can learn from Singapore's hawker management via reducing the stand rents or providing suitable financial support for stands with lower economic prospects. Building up hawker centres can also help street vendors access clean water, have a clean vending location, and an orderly space for their trading.

Incentives we mentioned here are not only financial but also market based incentives. If consumers know well about potential risk related to food, they will have tendency to pay more for the food they think it is safer (Henson, Jaffee and Wang, 2023). In 2017, Indian government create an interactive educational online channel within 'Eat right India' program to raise customers' awareness about food safety (FSSAI, 2022). The channel adopted food safety display boards to demonstrate practices that food enterprises must comply, and consumers can have feedback, make inquiries and complaints via given contacts. Partnership programs were also implemented to enhance food safety in schools, workplaces, hospitals and houses of worship, and within the railway system. The rating systems applied in many countries like Singapore are also another form of market-based incentives (Henson, Jaffee and Wang, 2023). Henson, Jaffee and Wang (2023) suggested that countries where there are weak regulatory systems should promote market-based incentives for a better food safety control.

Countries can also learn from lessons of Indonesia and Thailand in which street vendors have to pay a fee each month for cleaning and maintaining the area and there is a day set for cleaning their vending area every two weeks. In Thailand and Singapore, the governments also have regular examinations for their food safety compliance. Regarding periods of control, countries should not only ban street vendors in rush hours like Thailand but also prohibit their merchandise in many crowded streets and main areas and during special events and public holiday time frames like China. The license should

be reissued each year which means that the street vendors have to keep following the hygiene regulations of the authority in order to continue run their business.

Through formalisation, the government can better manage street vendors and in some countries like Singapore, the grading system can work well and provide customers with reviews and hygiene information of the stands. Entertainment activities and competitions in hawker centres like Singapore can turn them into famous tourist attractions for tourists. For food safety, countries can follow the success of the project 'Clean Food Good Taste' of Thailand to protect customers and to promote good sanitation practices among establishments. 'Clean Food Good Taste' project was launched in 1989 to make sure that all restaurants and street vendors are hygienic. The project is the outcome of the collaborations between the Department of Health of the Ministry of Public Health, the Tourism Authority of Thailand and the Ministry of the Interior (which is responsible for all local governments in provinces). The examinations will be conducted for restaurants and street food vendors in Thailand which register voluntarily into the project. If the restaurants and street food vendors cannot pass the examination, they will have to improve according to recommendations of local officers. Ten experiments will be conducted, five from food, three from containers and utensils and two from hands. To obtain the 'Clean Food Good Taste' logo the restaurants and street food vendors have to had nine negative tests out of ten. The examination will be conducted regularly every two months. Trainings are provided to make sure that local authorities, food service personnel, and consumer groups understand well the good hygiene practices (Kongchuntuk, 2002).

Countries should also adopt a bottom-up approach with the listening to the voice of street vendors in creating relevant legislations and policies instead of a current top-down approach with strict measures like China. The rights of street vendors can be better protected with street vending unions and organizations. In India, vendors receive support from the National Alliance of Street Vendors in India, and in South Korea, vendors receive support from the National Federation of Korean Street Vendors (Pill, 2011). For example, India's 2011 Street Vendors (Protection and Promotion of Livelihood) Bill requested the Indian government to care for the street vendors and their economic role in the national economy (Pill, 2011). Instead of resisting the government, social organizations in China obtained changes via close cooperation with the government (Dai, Zhong and Scott, 2019). Likewise, in Bangkok, vendors can protect their rights via their relationships with local politicians (Yasmeen and Nirathron 2014).

In Singapore, The National Environmental Agency (NEA), under the Ministry of Sustainability and the Environment is responsible for managing the hawker centres (Figure 1). The Hawker Centre Group is responsible for the regulation of renting and operating of the hawker centres as well as building up and reviewing of the hawker-related policies. In addition, hawkers of each centre build up their own hawker's association to protect their rights, and the NEA keep connection with the associations to solve the issues of these centres (Chiu and Zhang, 2022).

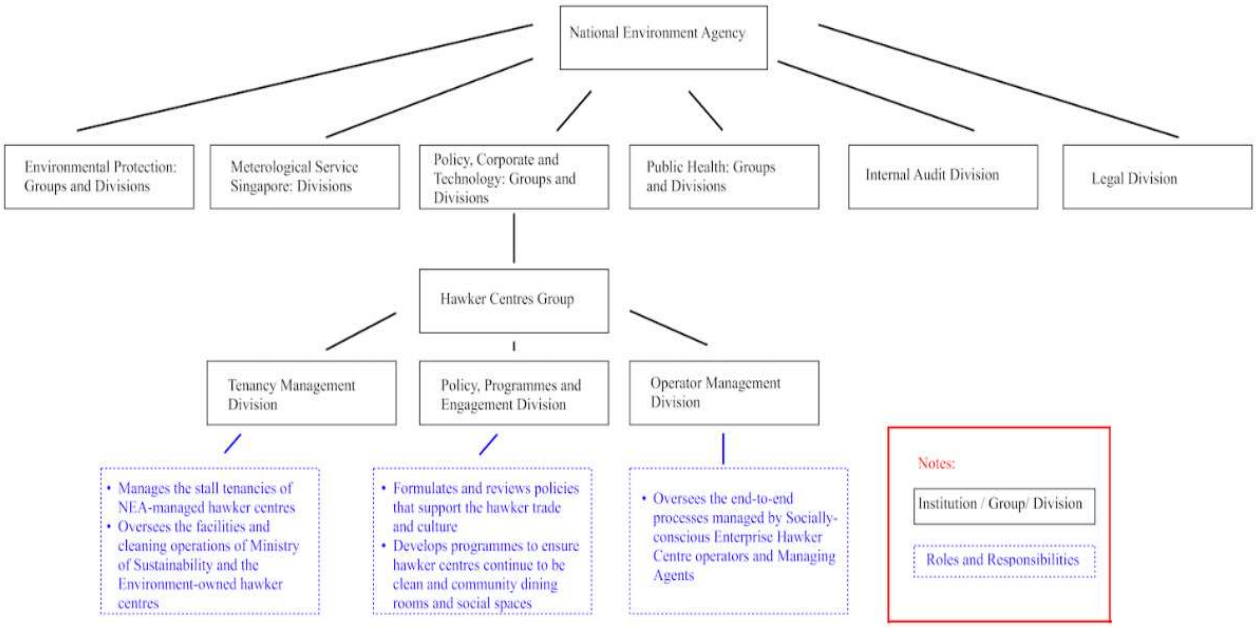

Figure 1. Organization Chart of the National Environment Agency and the Hawker Centres Group in Singapore

Although there have been many attempts to set out regulations and policies for street food, the bottom-up approach should also consider the perspective of tourists who will consume street food. Jayasuriya (1994) stated that street food regulations must be built up after carefully considering the perspectives of street food vendors and their customers.

Conclusion

A way to solve problems of this informal sector is to encourage its steady formalization through registration/licensing, application of fees/taxes, development of monitoring networks, and the use of product standards and procedures or facility regulations (Henson, Jaffee and Wang, 2023). For the success of this transition, there is a need for a relevant legal and regulatory framework and a need for public incentives to ease this change to the formal economy.

For large food businesses, there should be a traditional regulatory approach regarding regular checking, product examining and fines in the circumstance of not complying. For small and medium enterprises, there should be a focus on capacity building and hygiene ratings to promote self-compliance. For micro and informal businesses, there should be a cluster approach, working with groups of street food vendors for a provision of common infrastructure and training.

For high-income countries, there should be a financial incentive. In Singapore, many policies of subsidy and reducing rents have been conducted to increase the number of hawkers (Chiu and Zhang, 2022). For low- and middle-income countries, to change street food vendors' behaviour, social incentives play a very important role. These countries should engage consumers and peers in managing the behaviour of street food vendors. They can raise awareness among customers to be more demanding to change social norms around a certain behaviour (Henson, Jaffee and Wang, 2023).

Although formalisation is regarded as an effective way to deal with food safety issues and confusions within the cities, there are some problems regarding the vendor resistance and the cost of its compliance. Local government should play their role in providing financial incentives and promoting customers' awareness to provide social incentives to improve food safety issues. The authors believe if there is a strict measurement and relevant incentives, disorders in city centres and food safety can be improved significantly.

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