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FOOD-RELATED WASTE MANAGEMENT PRACTICES AMONG STREET FOOD MICRO-ENTREPRENEURS: A PILOT STUDY IN ALOR GAJAH, MELAKA

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Abstract:

Street food vending is an important micro-entrepreneurial activity in Malaysia, providing ready-to-eat meals to communities while creating unique challenges in managing food-related waste. This pilot study explored current food waste management practices among street food vendors in Alor Gajah, Melaka, focusing on waste generation, handling, and disposal. Observations and structured interviews revealed that vendors operate under different business models, including snack resellers, food preparers, and beverage sellers, each producing distinct types and volumes of waste. Most vendors rely on linear disposal methods such as municipal bins or plastic bags, with little segregation, reuse, or recycling. Improper practices, including pouring excess beverages into drains and repeated reuse of cooking oil, highlight operational challenges and potential health risks. Some vendors demonstrate emerging sustainable practices such as sales forecasting, inventory control, and donation of unsold food, but these are primarily motivated by cost reduction rather than environmental concern. The study highlights a gap between current practices and circular waste management principles, emphasizing the need for practical interventions, guidance, and infrastructure to help vendors manage

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food-related waste effectively while maintaining viable micro-business operation.

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Keyword:

Food Waste, Linear Pathway, Micro-Enterprise, Street Vendor, Sustainability

Introduction

Street food vending has grown into one of the most resilient forms of micro-entrepreneurship in Malaysia. Other than playing an important role in the country's economic development, for many individuals with limited capital or formal education, it serves as an entry point into business ownership, providing independence and better income opportunities within the informal economy (Demong et al., 2020). Most street food vendors run their stalls as small family businesses (Godjali & Supramaniam, 2024). They adapt quickly to customer needs, manage their daily cash flow, and handle changing market conditions. Their success often comes from affordable prices, convenient locations, and the ability to operate with low costs. (Demong et al., 2020; Shafiee et al., 2017).

According to the Khazanah Research Institute, street vendors represent nearly 15 percent of the informal workforce, which supports thousands of small entrepreneurs across the country. These stalls, often employing between one and seven workers, generate monthly incomes ranging from RM1,000 to RM10,000 (Abdul Aziz et al., 2023). With over 11,000 street stalls nationwide recording transactions exceeding RM490 million for the past decade (Shafiee et al., 2017), the sector still remains a significant economic contributor nowadays.

Although this sector is economically vibrant, vendors often struggle to balance their business needs with the management of food-related waste. Malaysians produce around 930 tonnes of food-related waste daily (Jereme et al., 2016). It reflects inadequacies in food handling and distribution. Street vendors are a part of this system, which provides a key source of ready-to-eat meals for Malaysians. Unlike formal restaurants, study show that the vendors often operate with limited infrastructure, inadequate storage facilities, and minimal waste management support (Xu et al., 2024). This creates a constant tension between controlling food waste and running a viable business. At the same time, inefficient management of food-related waste can

lead to increased costs and reduced profitability, making it a key operational challenge for sustaining their business. In terms of food-related waste, street vendors primarily generate it from preparation scraps and unsold cooked items, whereas restaurants produce larger volumes from plate leftovers, preparation waste, and spoiled ingredients (Dagiliūtė & Musteikytė, 2019; Pirani & Arafat, 2016). This indicates that street vendors often face financial losses due to food-related waste, especially from unsold food.

Several studies have quantified the magnitude and composition of food waste generated by food service establishments, including street vendors. However, existing studies have largely focused on food safety, hygiene, and handling practices among vendors (Mohd Nawawee et al., 2019; Shafiee et al., 2017), with limited attention to the entrepreneurial dimensions of waste management. Among street vendors, waste typically arises from raw material trimmings, unsold meals, spoiled ingredients, and disposable packaging. From an operational perspective, these forms of waste translate directly into lost revenue and higher operating costs. Even so, sustainable business practices remains modest, with approximately 70% of vendors showing only partial awareness of business-related practices such as stock rotation, portion control, and food donation (Naim & Rahman, 2020). Apart from adopting sustainable practices to reduce costs as well as environmental impact, food-related waste extends beyond unsold or excess food, and includes food scraps. Packaging materials also constitute a significant portion of waste. This aligns with global trends where food waste accounts for up to 55 percent of street-market waste, followed by 43 percent waste from plastics and paper (Grangxabe et al., 2024). In professional restaurant settings, proactive measures such as inventory tracking, real-time meal preparation, and composting have proven effective in reducing waste and operational costs (Hatta et al., 2025). Nonetheless, such systematic practices are hardly adopted by street vendors, who often operate under spatial, financial, and informational constraints (Xu et al., 2024). Their standard practice is typically driven by short-term cost concerns, with sustainability viewed as secondary. This highlights the importance of exploring how street food vendors handle food-related waste, thus clarifying the operational challenges they face in pursuing sustainable business practices.

This pilot study aims to explore and map the current practices of food-related waste management among street food vendors, from waste generation to final disposal. The objective is to develop a simple process flow diagram that illustrates how vendors handle preparation waste, unsold food, and packaging in their day-to-day business operations. These preliminary insights will provide a foundation for designing more detailed studies, targeted training programs, and practical recommendations to support sustainable business practices among micro-entrepreneurs.

Materials and Methods

This pilot study employed a descriptive qualitative design to examine how street food vendors manage food-related waste as part of their daily business operations. The study focused on systematically observing and interviewing vendors to reconstruct the step-by-step processes of handling preparation waste, unsold food, and packaging, highlighting the operational challenges and decision-making strategies involved in managing waste within a micro-entrepreneurial context).

Journal of Tourism, Hospitality and Environment Management
JTHEM
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The pilot study was conducted over a two-week period on December 2025. Of the twelve street food vendors in the area, eight met the inclusion criteria, which are active stall operation for more than three months, willingness to participate, and availability during the observation period.

Location and Participants

Figure 1. Simpang Ampat, Melaka Map

The study was conducted in Simpang Ampat, Alor Gajah, Melaka (Figure 1). This location was selected for three reasons: (i) it represents a typical semi-rural Malaysian town with a mix of traditional and modern street food vendors; (ii) vendors operate with minimal formal waste management infrastructure, making it suitable for identifying operational gaps; and (iii) accessibility and logistical feasibility allowed repeated observations within the pilot study's constraints.

The selected eight stalls represented a variety of vendor types, including snack resellers, food preparers, and beverage sellers, to ensure a comprehensive understanding of how different micro-entrepreneurs manage food-related waste and navigate operational challenges. These characteristics align with the objective to map current waste management practices and inform future interventions in similar settings.

Data Collection Method

The study used two main methods, observation and interviews. It seeks to explore how street vendors manage food-related waste in their daily operations. First, the researcher conducted non-participant observations at each stall during randomly selected operating hours. The observations were structured to capture patterns of food-related waste generation, the availability and use of bins, waste segregation practices, and overall hygiene conditions.

Second, each vendor took part in a brief structured interview lasting 10–15 minutes, guided by a systematic set of questions. The interviews covered key areas such as the types of waste that make up the largest portion of their operations, the availability and use of waste collection facilities, and food waste management practices, including efforts to reduce waste, donation of unsold food, and the implementation of sustainable business practices.

The responses were then summarized into a process flow diagram representing the typical waste management pathway. The diagram highlights key decision points, such as sorting or not sorting waste, and opportunities for improvement.

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Result and Discussion

Vendor Operational

The observations indicated that street vendors operate under different business models, which affect both the type and volume of food-related waste they generate. The vendors can be broadly categorized into three types:

(i) Snack Resellers: Primarily sell packaged or ready-to-eat snacks.
(ii) Food Preparers: Prepare meals on-site, ranging from full meals to smaller dishes.
(iii) Beverage Sellers**:** Sell drinks, either as stand-alone stalls or in combination with food stalls

The study indicates, despite some awareness of waste management, many stalls have yet to implement sustainable practices. Vendors largely rely on conventional disposal methods, primarily using municipal bins, reflecting a heavy dependence on basic infrastructure. This aligns with national reports showing that in Malaysia, around 80% of food waste and municipal solid waste is still sent to landfills (Ghazali et al., 2025; Hashim et al., 2021).

Infrastructure for proper waste handling was generally lacking. While some vendors provided dedicated waste bins, others used plastic bags as temporary storage. The study also identified two common improper practices: disposal of excess beverages into drains and repeated reuse of cooking oil, both of which pose risks to public health and indicate operational inefficiencies. This illustrates how cost-saving measures are often prioritized over proper knowledge of safe and sustainable waste management.

Waste Management Practices

Table 1 Key Findings on Food-Related Waste Practices among Vendors.

Aspect	Key Findings
Bins Availability	Some stalls provide bins, while others use plastic bags for temporary storage.
Sorting and Segregation	Not practiced; all waste types are typically mixed together.
Most Discarded Waste	Primarily food scraps from preparation activities, followed by plastic packaging waste.
Sustainable Practice	**Waste Minimization:** Sales forecasting and meal planning to reduce excess food **Waste Prevention:** Donation of unsold food to minimize waste generation. **Waste Recovery:** No initiatives observed for composting, recycling, or resource recovery.

Table 1 highlight the key findings on food-related waste practice among vendor in study area. The findings reveal that food waste management among street vendors remains largely unstructured. Some vendors do not use bins, opting instead for plastic bags as temporary waste storage. These practices suggest that vendors face a constant challenge in balancing the need for sustainable waste management with the pressures of minimizing operational costs. Chong

and Stephenson (2020) support this, noting that traditional or small-scale vendors often lack the financial capacity to invest in adequate infrastructure. This compels them to adopt methods that are simple and cost-effective but clearly less sustainable.

Two major challenges in managing food-related waste were identified among street vendors. First, using plastic bags for waste often leads to spills and dirty conditions around the stalls. Once released, these plastics are hard to manage and can easily spread, creating additional clean-up work and operational challenges (Knoblauch et al., 2018). Second, the absence of waste segregation, where food waste and packaging are mixed, complicates waste handling at the municipal level. This suggests that vendors may lack both awareness and motivation to segregate food waste, and that adapting to new norms of source separation will require additional time, guidance, and effort (Kasmuri et al., 2023). It noted that weak enforcement and insufficient supervision often lead people to ignore waste regulations, reducing their effectiveness (Xu et al., 2024).

In terms of waste type, the most frequently discarded materials are food residues from preparation activities and plastic packaging. The operational nature of street vending, which relies heavily on disposable containers and generates organic waste during food preparation, aligns with prior studies. Vendors often use single use plastic and disposable containers, such as Styrofoam (Abdullah et al., 2022), to serve food and drinks quickly to customers. Although convenient and cheap, these contribute to long-standing environmental issues, including their inability to biodegrade and the formation of microplastics (Noor et al., 2024). According to Kasavan et al., (2019), it noted that much of the food waste originates from the production and preparation stages, due to limited technology, poor infrastructure, and inadequate preservation skills. This highlights the ongoing challenge for vendors in balancing operational costs with more sustainable waste management practices. Within this context, waste generation among street vendors largely stems from two sources: packaging materials and excess food from preparation or unsold items. The findings also indicate that both vendors and customers rely heavily on plastic bags during transactions, emphasising how everyday business practices contribute to the overall challenge of managing food-related waste (Abdullah et al., 2022; Kamaruddin et al., 2015).

Despite this challenge, some vendors demonstrate emerging elements of sustainable practices. The findings indicate efforts to reduce waste through better sales forecasting and inventory control. Of which, implementing an efficient sales forecasting system that accounts for both accuracy and uncertainty is a fundamental measure for minimizing food waste (Nari A. et al., 2014). Although these practices are informal, they reflect a growing awareness of resource efficiency, primarily motivated by cost savings rather than environmental concern. Additionally, food donations to customers or nearby welfare homes are among the most common ways to prevent edible surpluses from becoming food waste. Generally, food-related waste handling among street vendors in the study area remains informal and lacks systematic structure.

Process Flow Mechanism

Field observations revealed three waste management flow models in street stall operations, reflecting current practices in handling different types of waste; solid waste, including food waste, liquid waste, and used cooking oil. Figure 2 summarizes the waste management practices adopted by the vendors.

Journal of Tourism, Hospitality and Environment Management
JTHEM
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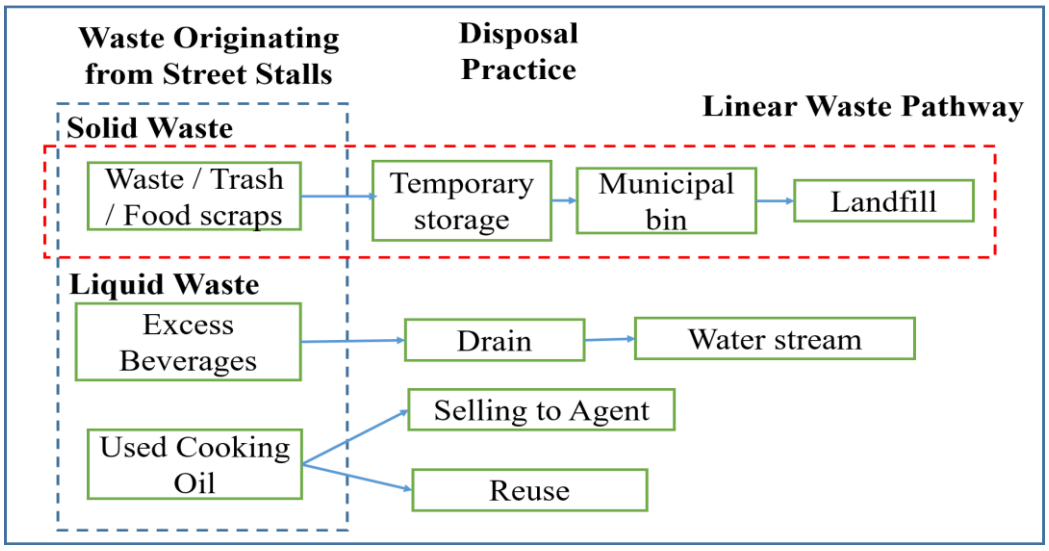

Figure 2. Waste Management Flow Mechanism

The first mechanism represents the solid waste stream generated from food preparation activities and packaging materials**.** Most stalls store these wastes temporarily near the stall, typically in open containers or plastic bags, before transferring them to municipal bins provided by the local authority. The findings indicate a complete dependence on municipal waste collection systems, with the waste ultimately disposed of in landfills. This observation is consistent with previous studies conducted in the same area, which reported similar community practices and the absence of waste segregation or recycling initiatives (Ghazali et al., 2025a; Ghazali et al., 2025b). Consequently, this practice contributes to potential environmental contamination and diminishes opportunities for resource recovery.

The second mechanism involves the disposal of excess or unsold beverages, which are typically poured directly into nearby drains without any treatment. This practice can lead to environmental pollution and a decline in water quality because the high sugar content and synthetic coloring agents increase the organic load in the wastewater, promoting eutrophication and oxygen depletion (Fukami et al., 2021). The poor handling of beverage lead to microbial growth, also impact to health, also if the excess go to drainage the effect also impact to human.(Mohd Nawawee et al., 2019). The absence of a proper disposal mechanism highlights a critical gap in liquid waste management at small-scale food outlets.

The third mechanism focuses on the management of used cooking oil, where two main practices were observed: (i) resale to recycling agents and (ii) reuse with top-up of fresh oil without complete replacement. While selling to licensed collectors supports recycling into biodiesel or other industrial uses, continuous reuse poses health and safety risks due to the harmful substance in the use cooking oil (Deshmukh, 2019; Tsai, 2019). Vendors often opt for reuse to minimize operating costs, without fully considering the potential health risks to consumers. (Deshmukh, 2019).

These three models collectively highlight the informal and inconsistent nature of waste management at street stalls. The lack of structured systems, limited infrastructure, and minimal awareness contribute to unsustainable practices. This finding aligns with previous studies,

Journal of Tourism, Hospitality and Environment Management
JTHEM
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which emphasize that the readiness of any entity, including the vendor, to implement effective waste management depends on key pillars such as infrastructure, financial capacity, programs, and training (Ghazali, et al., 2025c).

Linear Waste Pathway

Field observations revealed that waste management practices among street vendors predominantly follow a linear pathway, where materials flow in a one-way direction. Vendors tend to rely on this linear model because it is the fastest, least demanding, and most familiar approach within their operational constraints. However, this dependence on a linear system presents several challenges, such as valuable resources that could be recovered or repurposed are wasted, overall waste volumes increase, and greater pressure is placed on landfills (Sharma et al., 2021).

Circular principles such as segregation, reuse optimisation, or converting waste into secondary resources are rarely practised among street vendors (Kasmuri et al., 2023). The findings suggest that this is largely associated with operational constraints, including limited time, space, resources, and a lack of supporting infrastructure, which collectively hinder the adoption of more circular waste management practices.

Conclusion

This study found that food-related waste management among street food vendors in Alor Gajah, Melaka, is largely informal and unstructured. Vendors operate under different business models, including snack resellers, food preparers, and beverage sellers, which influence the type and amount of waste they generate. Most vendors rely on simple disposal methods such as municipal bins or only use the plastic bags, prioritizing cost and convenience over sustainable practices.

Waste management generally follows a linear pathway, with little segregation, reuse, or recycling. Improper practices, such as pouring excess beverages into drains and repeatedly reusing cooking oil, highlight operational challenges and potential health risks. Some vendors are likely to adopt sustainable practices, including sales forecasting, inventory control, and donating unsold food, but mainly to reduce operational costs.

These findings show a clear gap between current practices and more circular, sustainable waste management approaches. Supporting vendors with infrastructure, guidance, and practical strategies could help them manage food-related waste more effectively while maintaining viable business operations.

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References

Abdul Aziz, N. A. S., Kamarulzaman, N. H., & Abdul Hadi, A. H. I. (2023). Evaluation of food safety knowledge, attitude, and practices among street food vendors in the Klang Valley, Malaysia. *Malaysian Journal of Agricultural Economics.* https://doi.org/10.36877/mjae.a0000437

Abdullah, N. B. A., Yaacob, N. A., Ab Samat, R., & Ismail, A. F. (2022). Knowledge, readiness and barriers of street food hawkers to support the single-use plastic reduction program in Northeast Malaysia. *International Journal of Environmental Research and Public Health, 19*(8), 4507. https://doi.org/10.3390/ijerph19084507

Dagiliūtė, R., & Musteikytė, A. (2019). Food waste generation: Restaurant data and consumer attitudes. *Environmental Research, Engineering and Management, 75*(2), 7–14. https://doi.org/10.5755/j01.erem.75.2.22995

Demong, N. A. R., Kassim, E. S., Mohamad Yunus, N., Shahrom, M., & Abdul Kader Jailani, S. F. (2020). Factors contributing to the successful business of street market food vendors. *Asia Proceedings of Social Sciences, 6*(3), 211–216. https://doi.org/10.31580/apss.v6i3.1242

Deshmukh, R. K. (2019). The effect of repeatedly cooking oils on health and wealth of a country: A short communication. *Journal of Food Processing & Technology, 10*(8). https://doi.org/10.35248/2157-7110.19.10.807

Fukami, K., Oogi, T., Motomura, K., Morita, T., Sakamoto, M., & Hata, T. (2021). Effective purification of eutrophic wastewater from the beverage industry by microbubbles. *Water, 13*(24), 3661. https://doi.org/10.3390/w13243661

Ghazali, M. S. M., Mupit, M., Azni, M. E., Yaacob, Z., Ibrahim, K. N., Sabri, M. Z., Zahari, M. N. B., & Hamzah, A. A. (2025). Food waste generation and economic implications during Ramadan in student rented houses: A pilot study. *Jurnal Ekonomi, Manajemen, Akuntansi dan Keuangan, 6*(4), 9. https://doi.org/10.53697/emak.v6i4.2960

Ghazali, M. S. M., Mupit, M., Azni, M. E., & Zaihar, Y. (2025). Sustainable food waste management in UniKL MICET: Challenges in translating awareness into action. *Journal of Tourism, Hospitality and Environment Management, 10*(40), 43–52. https://doi.org/10.35631/JTHEM.1040004

Ghazali, M. S. M., Mupit, M., Azni, M. E., Yaacob, Z., Sabri, M. Z., Zahari, M. N., Hamzah, A. A., & Ibrahim, K. N. (2025). Exploring institutional readiness for sustainable food waste management: Insights from a food waste audit using the five-pillar framework. *International Journal of Politics, Public Policy and Social Work, 7*(18), 1–15. https://doi.org/10.35631/IJPPSW.718001

Godjali, M. G. B., & Supramaniam, S. (2024). *Entrepreneurial mindset strategies in times of crisis: A qualitative study on street food vendors. Qualitative Research Journal, 25*(2), 160–179. https://doi.org/10.1108/QRJ-02-2024-0043

Hashim, A. A., Kadir, A. A., Ibrahim, M. H., Halim, S., Sarani, N. A., Hassan, M. I. H., Hamid, N. J. A., Hashar, N. N. H., & Hissham, N. F. N. (2021). Overview on food waste management and composting practice in Malaysia. *AIP Conference Proceedings, 020181.* https://doi.org/10.1063/5.0044206

Jereme, I. A., Siwar, C., Begum, R. A., Abdul Talib, B., & Faculty of Business and Economics, National University of Malaysia (UKM). (2016). Addressing the problems of food waste generation in Malaysia. *International Journal of Advanced and Applied Sciences, 3*(8), 68–77. https://doi.org/10.21833/ijaas.2016.08.012

Kamaruddin, M. A., Yusoff, M. S., & Ahmad, A. H. (2015). Waste to wealth: Recovery of recyclable items and biodegradable wastes from night markets at Seberang Perai

Selatan, Penang. *Applied Mechanics and Materials, 802*, 543–548. https://doi.org/10.4028/www.scientific.net/AMM.802.543

Kasavan, S., Mohamed, A. F., & Abdul Halim, S. (2019). Drivers of food waste generation: Case study of island-based hotels in Langkawi, Malaysia. *Waste Management, 91*, 72–79. https://doi.org/10.1016/j.wasman.2019.04.055

Kasmuri, N., Razak, S. N. A., Yaacob, Z., Miskon, M. F., Ramli, N. H., & Zaini, N. (2023). Waste segregation through recycle and composting activities in urban and suburban areas. *IOP Conference Series: Earth and Environmental Science, 1135*(1), 012059. https://doi.org/10.1088/1755-1315/1135/1/012059

Knoblauch, D., Mederake, L., & Stein, U. (2018). Developing countries in the lead: What drives the diffusion of plastic bag policies? *Sustainability, 10*(6), 1994. https://doi.org/10.3390/su10061994

Mohd Nawawee, N. S., Abu Bakar, N. F., & Zulfakar, S. S. (2019). Microbiological safety of street-vended beverages in Chow Kit, Kuala Lumpur. *International Journal of Environmental Research and Public Health, 16*(22), 4463. https://doi.org/10.3390/ijerph16224463

Naim, M., & Rahman, H. A. (2020). Knowledge, attitude, and practice on food waste management among food vendors in Universiti Putra Malaysia, Serdang, Selangor.

Nari Sivanandam Arunraj, A., Ahrens, D., Fernandes, M., & Müller, M. (2014). Time series sales forecasting to reduce food waste in retail industry. https://doi.org/10.13140/RG.2.1.4829.1607

Noor, N. S., Yahaya, N., Zain, N. N. M., Mansor, M. S., Aziz, M. Y., & Waras, M. N. (2024). Microplastic pollution in Malaysia: Status and challenges – A brief overview. *Journal of Analytical Sciences, 28(3),* 569-585.

Pirani, S. I., & Arafat, H. A. (2016). Reduction of food waste generation in the hospitality industry. *Journal of Cleaner Production, 132*, 129–145. https://doi.org/10.1016/j.jclepro.2015.07.146

Shafiee, N. F., Karim, M. S. A., & Razali, A. B. M. (2017). Halalan toiyyiban food handling practices: A review on street food vendors in Malaysia. *Journal of Islamic, Social, Economics and Development (JISED), 2(6),* 385-394.

Sharma, N. K., Govindan, K., Lai, K. K., Chen, W. K., & Kumar, V. (2021). The transition from linear economy to circular economy for sustainability among SMEs: A study on prospects, impediments, and prerequisites. *Business Strategy and the Environment, 30*(4), 1803–1822. https://doi.org/10.1002/bse.2717

Tsai, W.-T. (2019). Mandatory recycling of waste cooking oil from residential and commercial sectors in Taiwan. *Resources, 8*(1), 38. https://doi.org/10.3390/resources8010038

Xu, J., Liao, W., Lim, N. H. H., Fong, C. S., Wang, H., & Xu, Y. (2024). Operational and environmental assessment for night markets under the informal economy impacts: Insights from the case study of Selangor, Malaysia. *3C TIC: Cuadernos de Desarrollo Aplicados a Las TIC, 13*(1), 189–219. https://doi.org/10.17993/3ctic.2024.131.189-219