



Sustainability-oriented Foodservice Providers in Thailand: Motivation, Challenges, and Strategies

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Abstract

An increasing number of niche restaurants, food delivery services, and cafés (foodservice providers) are responding to the increasing demand for healthy and environmentally friendly food options. A multi-level perspective approach and the social practice theory are used to discuss the transition towards a more sustainable food system in Thailand. This paper presents the results of a qualitative study aimed to explore the motivation, challenges, and strategies for opening a sustainability-oriented foodservice provider in Thailand. Based on 10 in-depth interviews, the main motivations behind operating their businesses are to improve the livelihood of local Thai farmers (by using sustainable sourcing strategies) and to offer healthy, tasty food that does not negatively affect the environment. The most common challenges are high operational costs, efficient production planning and finding a local source for food ingredients. The main strategies include recycling and reusing, minimizing energy consumption, efficient waste management methods and effective food production planning.

Keywords: Sustainable foodservice provider, Sustainable restaurant, Thailand, Transformation theories, Multi-level perspective, Social practice theory

ความยั่งยืน-มุ่งเน้นผู้ให้บริการด้านอาหารในประเทศไทย: แรงจูงใจ ความท้าทาย และกลยุทธ์ต่าง ๆ

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บทคัดย่อ

การเพิ่มขึ้นของร้านอาหารทางเลือกที่เป็นมิตรต่อสุขภาพและสิ่งแวดล้อมมีความต้องการที่เพิ่มขึ้นเรื่อยๆ การศึกษาครั้งนี้จะใช้มุมมองหลายระดับและทฤษฎีปฏิบัติทางสังคมในการอธิบายเกี่ยวกับการเปลี่ยนแปลงทางระบบอาหารที่ยั่งยืนในประเทศไทย บทความนี้ได้นำเสนอที่มีวัตถุประสงค์เพื่อสำรวจแรงจูงใจ ความท้าทาย และกลยุทธ์ในการเปิดให้บริการอาหารที่เน้นความยั่งยืนในประเทศไทย จากการสัมภาษณ์เชิงลึก 10 ครั้ง พบว่าแรงจูงใจหลักในการดำเนินธุรกิจของพวกเขาคือการเพิ่มรายได้ของเกษตรกรท้องถิ่นในประเทศไทย (โดยใช้กลยุทธ์ที่ยั่งยืนในการหาวัตถุดิบในการผลิต) และการนำเสนออาหารที่อร่อยและผลกระทบต่อสิ่งแวดล้อมน้อย ความท้าทายที่พบบ่อยที่สุดคือ ค่าใช้จ่ายในการดำเนินการสูง รวมถึงการวางแผนการผลิตที่มีประสิทธิภาพและการหาแหล่งผลิตอาหาร ส่วนกลยุทธ์หลักในการดำเนินงานคือการรีไซเคิลและการใช้ซ้ำ การลดการใช้พลังงาน วิธีการจัดการขยะที่มีประสิทธิภาพและการวางแผนการผลิตอาหารที่มีประสิทธิภาพ

คำสำคัญ: ผู้ให้บริการอาหารที่ยั่งยืน, ร้านอาหารที่ยั่งยืน, ประเทศไทย, ทฤษฎีการเปลี่ยนแปลง, มุมมองหลายระดับ, ทฤษฎีปฏิบัติทางสังคม

Introduction

In recent years, consumers in Thailand have increased their environmental awareness and made changes to decrease the negative impact of their consumption behavior on the environment (Wongsachia *et al.*, 2022). Spaargaren and van Koppen (2009) explore the role of companies as main providers of

new products and services and say that their intentions to become more environmentally friendly should consider consumer behavior and their practices. In addition, they should provide “environmental information on both the direct and indirect environmental impacts and (...) images and narratives on sustainable consumption” (Spaargaren & van Koppen, 2009).

The foodservice industry helps form the food system and can be defined as an outlet for providing food and beverages, either for an exchange of payment or for other reasons (such as for public services) (Edwards & Causa, 2009). For this study, the term foodservice providers will refer specifically to restaurants, cafés, and food delivery services. The requirements of what constitutes a sustainability-oriented business are still lacking in literature, hindering the clear definition of this term (Tiemann *et al.*, 2018).

We apply a multi-level perspective approach to understand better the dynamics of sustainability-oriented foodservice providers that are still niches in Thailand. With this, we can observe interactions between social niche innovations, existing regimes, and landscapes (Geels, 2002). According to Sahakian (2021), our food behavior is closely linked to historically grown cultural and social dynamics, which is why it is difficult to change our eating habits towards being more environmentally friendly. Instead of individual consumption choices, social practices in forms of meanings, like cultural conventions, competences (e.g., knowledge), and materials (e.g., infrastructure and objectives) determine our everyday life and manifest themselves in routines (Shove *et al.*, 2012). Therefore, the out-of-home consumption has an influence on our food practices and sustainability-oriented foodservice providers might change existing regimes as they provide, among others, specific food knowledge and infrastructure (e.g. sustainability-oriented restaurants). The research questions for this paper include the following:

RQ1: What is the motivation behind running a sustainability-oriented restaurant, café, or food delivery service in Thailand?

RQ2: What sustainability-oriented strategies are employed by Thai sustainability-oriented foodservice providers?

RQ3: What are the challenges in implementing these sustainability-oriented strategies? And how do the sustainability-oriented foodservice providers deal with them?

Literature review

Thai consumers have become more aware of topics like food safety and organic production (Jumpanyarach, 2018; Nuttavuthisit & Thogersen, 2015). This is because farmers in Thailand use high amounts of pesticides to increase the output of food production (Kantamaturapoj & Marshall, 2020), “Food scandals such as pesticide-use, bird flu, and swine flu make consumers in Bangkok start questioning the safety of the food sold in the stores and whether it can be trusted. The urban lifestyles may also increase psychic tension and create physical problems, which make people in Bangkok pay attention to health issues” (Kantamaturapoj *et al.*, 2012). A study by Ueasangkomsate and Santiteerakul (2016) shows that local consumers attitude in Thailand towards organic production is strongly linked with health issues but also with regionality, environment, food safety and finally animal welfare. Maichum *et al.* (2017), explored the purchase intention towards green products by young Thai consumers between 18 and 29 years and the results show that the intention to buy

green products depends on the green attributes but also on knowledge and consciousness of environmentally friendly produced products. Adopting green strategies e.g. in restaurants (such as adhering to plant-based concepts) provides them not only with a competitive advantage, especially given the greater interest in “eco-friendly” food displayed by consumers (Sarmiento & El Hanandeh, 2018), but can also sensitize customer awareness towards sustainable food consumption (Markoni & Götze, 2020).

Thai households spent an average of 33.9% of their total expenditure on food and beverages (Food Intelligence Center Thailand, 2019; Sirikeratikul, 2019). Among other factors, this was due to an increase in urbanization and disposable income (Sirikeratikul, 2019). Regardless of this general trend, Bangkok faces major struggles with regard to wealth inequality and income disparities (Phongpaichit & Baker, 2016; Un-Habitat, 2008). This inequality can also be identified in Bangkok’s housing market, with high-income groups living within inner city clusters or gated communities and low-income groups living in suburban areas (Wissink & Hazelzet, 2016). In addition to social disparities, Thailand struggles with education inequality (Phongpaichit & Baker, 2016). Further, a lack of financial capabilities and knowledge are barriers to consuming and purchasing environmentally friendly and healthy products (Hansmann *et al.*, 2020).

1. Sustainability strategies in the foodservice sector

According to Kamb *et al.* (2019), there are six main clusters for sustainable eating practices: Eating and buying less food; eating more plant-based food; making use of the surplus; growing one’s own food, refining, and storing food; eating more sustainable labeled products; and eating more locally produced food.

Sustainability-oriented foodservice providers source organic produce because organic farming is known to produce healthier food with fewer (or no) pesticide residues. In addition, this provides social improvement for farmers (through price premiums) and protects the environment through reduced leaching of agrochemicals (Setboonsarng *et al.*, 2006; Shreck *et al.*, 2006).

Another study suggests that restaurants use strategies such as purchasing minimally processed foods, adhering to a mainly plant-based concept, focusing on smallholder producers, reducing waste, and being innovative (Zanella, 2020). In one study, a comparison of the diets of high, medium, and low meat-eaters, fish eaters, vegetarians, and vegans presented a positive correlation between greenhouse gas emissions and the number of animal-based products consumed in an average diet of 2000 kcal (Scarborough *et al.*, 2014). Moreover, the market for plant-based meat alternatives is also growing to address the increasing popularity of vegan diets (Saari *et al.*, 2021; Wild *et al.*, 2014).

Thailand struggles with significant amounts of food waste due to improper recycling practices. For example, an increase of food waste from 2860 tonnes per day (2003) to 5669 tonnes per day (2018) was observed in Bangkok (Liu *et al.*, 2020). This has been equated to a lack of incentive, education, and proper legislation (Suchada *et al.*, 2003). According to Liu *et al.* (2020), it is important that Thailand develops a food waste policy to address this issue, as a large amount of food waste is currently being combined with municipal solid waste and dumped in landfills (Jitnarin *et al.*, 2011; Liu *et al.*, 2020).

The three Rs (reduce, reuse, and recycle) and the two Es (energy and efficiency) can be used to summarize the strategies employed to operate a sustainability-oriented foodservice provider (Green Business Network, 2020). Further, Thailand is one of the five focus countries from which over 50% of land-based plastic-waste leakage originates (Ocean Conservancy, 2017). Accordingly, no products or packaging should have an end of life and should be recycled, contributing to a circular economy (Ellen Macarthur Foundation, 2015). Nonetheless, it is important not to sacrifice factors such as quality and comfort when selecting packaging, because research suggests this will be ignored as a sustainable alternative (Schubert *et al.*, 2010).

In addition to operational strategies, marketing strategies (such as the use of social media) hold power as they can help make sustainability become more widely accepted. This is especially true in Thailand, as over 40%

of customers select their restaurants based on social media (Sirikeratikul, 2019). However, if the aim is to change individual consumer behavior, society and systems should provide a supportive environment, and interventions should be at a political level (Dirk *et al.*, 2013).

2. Contribution to current literature

Currently, there is a lack of research in the sustainable foodservice industry in Thailand. According to our research, there are no papers specifically focused on sustainable foodservice providers in Thailand. This paper can contribute and provide momentum to the current growth of awareness regarding sustainable practices; hence Thailand only recently experienced an upsurge in plant-based meat alternatives, with its largest meat supplier launching a vegan food range (Pritchett, 2020). Other news reports in Thailand also confirm plant-based meat innovations in demand (Bangkok Post Public Company Limited, 2022). Moreover, changes in practices and trends have sparked questions on the possibilities of transforming the current food system towards one that is more sustainable. This paper will contribute towards further development on proper guidelines on what constitutes a sustainable foodservice provider and allow for the identification of changes that need to be implemented to keep up the current pace of growth in the sustainable foodservice industry in Thailand.

Material and method

Our research approach was qualitative, including semi-structured in-depth interviews.

We opted for this approach to explore and gather knowledge, personal experiences, opinions, and perceptions (Boyce & Neale, 2006; Longhurst, 2009). The website of the foodservice providers, social media accounts, pamphlets and advertisements were sources to convey how the business wished to portray and represent themselves and was also a tool for our participant selection process as we only chose foodservice providers that publicly claimed to be sustainability-oriented.

The semi-structured interview guide was divided into four sections: motivation, perception of sustainable food production and consumption, strategies, and challenges of running a sustainable business, and the future of the foodservice provider, industry, and food systems in Thailand.

1. Recruitment and sample

The interviewee sample was chosen based on the following criteria: a) located in Thailand; b) claiming to be a sustainability-oriented business (either via their website, social media page, or through direct confirmation by the business owner); and c) the interviewee must be the business owner. All potential interviewees were contacted via email or a social media platform (such as Facebook, Instagram, and the Line direct messenger app). When participants were initially contacted, a brief explanation of what the interview was about, and the purpose of the research study was communicated to them. The interviews lasted between 30 and 75 minutes. Participants were given verbal notice that interviews would

be recorded for transcription purposes and that their identities would remain anonymous. All in-depth interviews were conducted online using video calls.

Among the 10 participants, eight were in Bangkok, one on the east coast of Thailand, and one in the north of Thailand, adding to the diversity of respondents. All interviewees were aged 30-40 years, with the majority being female. Further, six businesses were locally owned and four were expatriate owned. All expatriate-owned businesses (and two locally owned businesses) followed a plant-based concept.

2. Analytical method

The interviews were transcribed verbatim, and the qualitative data analysis software MAXQDA was used to analyze and code the interviews according to Mayring (2014). We coded the interview statements following a mixed approach, using inductive and deductive coding procedures. The deductive approach was used to formulate the main code and themes based on the interview guidelines and main research questions. The inductive approach can also be referred to as open coding, which is a line-by-line systematic coding process that formulates new categories and themes with the aim of the study in mind such as “strategies” and “challenges”. The categories were revised, and the research data were revisited until no new categories were formulated (Mayring, 2014). Interview coding was a crucial part of the analysis.

3. Theoretical framework

When analyzing the results, we based our main discussion points on the prominent transition framework according to Bilali (2019). This refers to “the multi-level perspective (MLP)”, used to discuss the transition towards sustainable development in food systems (El Bilali, 2019). The MLP comprises three levels: landscape, socio-technical regimes, and niches (Genus & Coles, 2008). According to Bilali (2019) and quoted from Lachmann (2013), landscape developments include “exogenous events and trends such as demographic changes, macro-economic trends, political developments, wars and crises, deep cultural and societal values, and climate change”. According to Genus and Coles (2008), socio-technical regimes consist of the market, policies, science, and existing technology. According to Geels (2011), niches are “protected spaces such as R&D laboratories, subsidized demonstration projects, or small market niches where users have special demands and are willing to support emerging innovations.” While socio-technical regimes remain relatively stable over time, developments in the landscape can pressurize these regimes, allowing “windows of opportunity for novelties” (Geels, 2004; Genus & Coles, 2008). These are used by niches to enable adjustments in the socio-technical regime, influencing developments at the landscape level. Bilali (2019) provides the criticism that sustainability assessments of niche initiatives in food systems (such as sustainability-oriented foodservice providers) are missing. Hence, their actual impact on a transition towards

sustainability is unknown. Nevertheless, the loss of biodiversity or climate change (landscape developments) places pressure on global food systems. More importantly, we urgently need a transformation towards sustainable food systems to meet the Sustainability Development Goal SDG 12 to ensure sustainable consumption and production patterns by 2030. Schäfer *et al.*, (2018) argues according to Spurling *et al.*, (2013), that technological innovation alone cannot change individual behavior as “social practices are a better target of intervention”. According to Shove *et al.* (2012), three different elements result in social practices: materials, competences, and meanings. Spurling *et al.* (2013) describe an example of elements that “compose the practice of hosting a dinner party”, whereby the material consists of a kitchen, food, drinks, tables, and chairs, among others. In addition to these elements, competence in cooking is needed as well as knowledge about etiquette of such an event which is based on cultural conventions and expectations of the guests (social group). “Socially acceptable individual behavior—or the successful performance of a social practice—thus rests upon the use of objects, tools, and infrastructures, of knowledge and skills and of cultural conventions, expectations, and socially shared tastes and meanings. These are the elements that compose social practices” (Spurling *et al.*, 2013). Keller *et al.* (2022) argue that combining the MLP and social practice theory helps to get more insights about the possibilities of social change. Hess *et al.* (2018) add socio-demographic factors, like income, education, or age, to highlight the role of cultural and status differences in social

practices. We can also highlight this with our study. The results are presented below.

Results

1. Motivation of sustainability-oriented foodservice providers

We present here the statements given by the interviewees regarding their perception on the process of sustainable food production and consumption and their personal definition of sustainability. All interviewees focused predominantly on the environment, with the most common initial response focused on minimizing plastic waste: “In general, right now when you talk about sustainability, everyone is focusing on no single-use plastic” (Susan). This can be associated to the intangible aspects of sustainability: “I think people have to see something visibly to try to understand. When you can see physical trash like plastic and things and straws, it is a lot easier to get behind the movement” (Derrick).

Participants were also asked to share their opinions as to why they think conventional foodservice owners do not adopt a sustainable concept. Lucy mentions that “There is a reality that to live a sustainable lifestyle isn’t cheap” (Lucy). John, who places importance on organic produce mentions that the reason is because “First of all, they probably think organic is expensive, [but] none of them work with local farmers” (John).

According to the interviews, it can be confirmed that motivation to become a sustainability-oriented foodservice provider

was associated with the business owner’s education level, lifestyle, interests, and beliefs. For example, the owners of the businesses followed a plant-based diet themselves and wanted to open a business to promote a plant-based lifestyle, believing it beneficial to their health and the environment. Moreover, local business owners committed to empowering farmers were also motivated to open a sustainability-oriented foodservice provider in support of underprivileged local farmers and to provide organic food to the Thai people. Susan commented, “I just want Thai farmers to be able to live by themselves and see farmers as the occupation that survives in Thailand. We want more farmers to grow organic produce for the good health of Thai people”.

2. Key success factors for the operation of a sustainability-oriented food business

Here we present results regarding the key success factors in operating a sustainability-oriented business. The most emphasized response was that location is crucial for success. Most foodservice providers chose their location based on areas where the population was known to have higher spending power and more disposable income to afford the higher menu prices. John decided to open his restaurant in central Bangkok, claiming there are “a lot of expatriates [in this specific location], there is a big community there with spending power”. Most interviewees had a significantly higher expatriate customer base, with most customers being female. According to the participants, the reasons for this extensive expatriate customer base included a higher socio-economic status,

more disposable income, education level, location, and westernized menus. According to Louise, local Thais do not dine in her restaurant because “Thai people are not familiar with the flavors I cook as well as the price”. Further, Lucy mentioned that “The Thais that do come in are ones that have a privilege of an international education or mainly lived or worked abroad for a little bit and are familiar with some of the concepts we have and also the tastes”.

All interviewees utilized social media platforms such as Facebook and Instagram to promote their concept of a sustainability-oriented restaurant, café, or food delivery service. However, they rarely invested money or extensive time promoting their businesses on the platform. In addition, not all businesses focused their marketing on the concept of sustainability. According to Matt, there was no “clear definition of eco-friendly and sustainable. Now the most misused word in the past decade is eco”. Moreover, he did not use the term sustainable because “You can use the word sustainable or eco without any consequences here”, suggesting a lack of appropriate regulation. Those who advertised their concept as healthy often did so to attract customers, “I thought the best way would be to make the concept to do with the health aspect first and then slip in some environmental and ethical issues around the edges” (Kate). The term organic was also used to promote health: “Organic will be a good selling point because people are concerned with their health” (John).

3. Challenges and strategies when running a sustainability-oriented foodservice business

The most discussed challenges faced by all interviewees were higher operational costs, which often translate into higher menu prices. John, Samantha, and Susan sourced directly from local organic farms, believing costs can be managed and the livelihood of farmers improved by removing the middlemen.

Another major contributor to high operational costs was the higher price of sustainable packaging. Foodservice providers that offer delivery services mentioned that using biodegradable packaging instead of single-use plastic was much more expensive. They also mentioned the problem of finding suppliers of biodegradable packaging in Thailand and concerns regarding eco-friendly packaging (such as food overspill or soggy and unappetizing food on arrival), which can negatively affect customer satisfaction. Derrick and Samantha resorted to reusable takeaway containers as a new strategy. However, this resulted in backlash and complaints due to the inconveniences of having to wash the containers, waiting for pickups, and not being able to microwave or discard the packaging easily.

Another challenge mentioned by the interviewees was appropriate waste management. Although most participants separated organic from non-organic waste, they did not compost with the main reason being the lack of space. Susan used an alternative method to manage organic waste, feeding it to soldier fly worms: “We fed the soldier fly worms and we sent them

back to the chicken farm to be the ingredient of the chicken food". Another way to cope with waste is by efficient production planning. Derrick runs a food delivery service, "We know all our orders from the night before which allows us to minimize our waste".

4. Customer demographic and the future of the industry

Sustainability-oriented foodservice providers rely mainly on tourists but are trying to change their customer demographics. John mentioned that "yes, now definitely our focus is on the locals" and "building a community has always been in our agenda". Louise mentioned that, "I see a lot of large companies producing meat substitutes and this is rapidly growing". According to the interviewees, there has been an increase in the number of plant-based restaurants across Thailand (specifically Bangkok) within the past few months. Derrick stated that the sustainable market (which he associated with organic produce) has increased in Thailand, and "we foresee it will continue to grow in the next [few] years".

Discussion

This study confirms the uncertainties around decisions of the regime actors, which affects the ability of grassroots and radical niches to grow (Nemes *et al.*, 2021). Rapid shock stimuluses can facilitate the ability to initiate a dealignment and realignment pathway, opening penetrative spaces for innovations to emerge (Geels & Schot, 2007), but can also result in a change in food values. More support from

locals rather than tourists could provide the momentum needed for the niche market of sustainability-oriented restaurants, cafés, and delivery services, enabling them to compete with conventional foodservice providers. In turn, this would initiate a dealignment and realignment pathway. According to the MLP, niches might influence socio-technical regimes and react quicker to landscape developments compared to socio-technical regimes (Geels & Schot, 2007). According to Spurling *et al.* (2013) technological innovations are not enough and "social practices are a better target of intervention". We assume that this counts also for social innovations. Sustainability-oriented foodservice providers might thus have an influence on their customers and their consumption habits. It could be possible that they also influence social practices in Thailand. They provide e.g., vegetarian food options (materials), have knowledge about sustainable food consumption (competences) and might change norms and values of their guests by educating and sensitizing them (meanings). For this, however, they have to come out of the niche in order to achieve widespread impact.

For social innovations to continue to develop, motivation to open a sustainability-oriented foodservice provider must rise. The owners of the foodservice providers that followed a plant-based approach were motivated to share the message that a plant-based diet can taste great, contribute towards personal health, and minimize environmental impacts. Another strategy which also relates to the motivation behind opening a sustainability-

oriented business includes direct local sourcing. Locally owned foodservice owners stated that the motivations behind following a sustainable concept and adopting direct sourcing practices were to empower local Thai farmers and to provide Thai people with healthy organic food. Research suggests that consumers' attitude in Thailand towards organic production was also linked to food safety (Ueasangkomsate & Santiteerakul, 2016).

1. Sustainability-oriented operational strategies

The overall strategies used to operate a sustainability-oriented foodservice provider presented in this study included local direct sourcing, waste management, using energy efficient technologies, sourcing organic produce, composting, and adhering to plant-based menus (also found in (Maynard *et al.*, 2020) and (Zanella, 2020). Recycling plastic contributes towards a circular economy by eliminating the focus on producing new plastic through virgin feedstock (Klemeš *et al.*, 2020), while production planning was used to reduce food waste, as food waste is a rising issue in Thailand (Liu *et al.*, 2020). Thailand experienced an increase in food waste between 2003 and 2018 (Liu *et al.*, 2020). This increase was probably not attributable to sustainability-oriented foodservice providers, as studies suggest that food waste can be correlated with a lack of incentive and education, which is contrary to the demographics of the interviewees. Accordingly, more education on the topic of appropriate waste management is required, as most Thai people are unaware of the concept of waste separation, which

hinders the possibility of (and an understanding of) composting or recycling (Liu *et al.*, 2020; Suchada *et al.*, 2003). Further, education has a positive correlation with environmental behavior and is perceived to have a stronger correlation than social class with regard to purchasing green products (Laidley, 2013; Lehtikoinen & Salonen, 2019).

The strategy of local sourcing raised some concerns, as the definition of what entices such practices differed between interviewees. The reasons ranged from local markets, supermarket franchises, grocery delivery services, to buying directly from farmers. The main benefit and reasoning for sourcing locally was to remove the middleman, allowing farmers to receive the most benefit. This can reduce costs for the buyer, contributing to lower operational costs (FAO, 2014). In addition to the claims of sourcing locally, many sustainability-oriented foodservice providers still imported foods to suit their westernized menu, as demanded by tourists. This contributed towards higher food miles and elicited the question of what constitutes a sustainable concept (Funk *et al.*, 2021).

With regard to the communication and marketing strategies discussed by the interviewees, the key terms used to promote sustainability-oriented foodservices included health and organic rather than sustainable. This is attributable to over-use and abuse of the term sustainable (as mentioned by one interviewee), which is also known as greenwashing (Chen & Chang, 2013). Greenwashing can result in a reduction in the value of the term sustainable and can

affect consumer trust (Campbell *et al.*; Chen & Chang, 2013; Dahl, 2010). Promoting healthy food is effective in Thailand, as consumers are known to purchase sustainable food for health-related benefits rather than for environmental or social reasons (Kantamaturapoj *et al.*, 2012).

Social media platforms (such as Instagram) are being used to promote sustainability-oriented foodservices. However, the interviewees stated that they invested minimal time or money to advertise on social media platforms. For sustainable dining to gain popularity, social media platforms could be utilized more effectively, given that Thai people base 40% of their dining decisions on social media (Sirikeratikul, 2019).

2. Possible effects and challenges of providing sustainability-oriented foodservices on sustainable transformations of food systems

Until now, few studies have researched the effects of sustainability-oriented niches on sustainable transformations such as food systems (El Bilali, 2019). In our study, some interviewees focused on plant-based menus because they strongly believed that plant-based diets are good for your health and can reduce the environmental footprint. According to Spaargaren and van Koppen (2009), providers can change with their products and services, images and narratives on sustainable consumption. Plant-based foodservice providers might change the image of meat consumption by offering healthy and sustainable alternatives. Despite a plant-based diet being more sustainable than one containing animal products, sustainable

diets should ensure food security in a newly industrialized country such as Thailand (FAO, 2010; Scarborough *et al.*, 2014). Having the ability to make sustainable food choices remains a privilege in Thailand that can only be achieved by those with sufficient disposable income. For example, the lack of trust in the Thai organic label and associated certification present barriers to the consumption of organic products, in addition to their high cost and limited accessibility (Nuttavuthisit & Thogersen, 2015). According to the customer demographic of our study, it can be confirmed that targeted consumers were predominantly expatriates, except some local Thais with higher-than-average disposable income (allowing them to afford the higher menu prices). These high menu prices are associated with the elevated overall costs of running a sustainability-oriented foodservice, which was mentioned as a major challenge by the interviewees of this study. According to them, the high prices of sustainable packaging and inefficient sourcing of organic produce can contribute to these increased operational costs. Moreover, currently available sustainable packaging options are not completely plastic free and are not suitable for all products (such as curries or soups). This can result in overspilling or unappetizing presentations of the products, which negatively affects customer satisfaction and business reputation. To address the issues of unsuitable and costly sustainable packaging, interviewees pushed the use of reusable containers. However, the inconveniences of having to wash the containers after use and not being able to microwave directly can negatively affect customer experiences. It is

critical that factors such as quality and comfort are prioritized, as consumers will not choose sustainable alternatives if these factors are compromised (Schubert *et al.*, 2010).

3. Limitations of the study and recommendations for future research

The limitation of this study concerns the small sample size and lack of diversity among interviewees. This can be associated to the research being conducted outside of Thailand, making it more difficult to recruit interviewees. Future research could focus on the influence of social media on sustainable food consumption and sustainability-oriented businesses. Further, the focus could be on finding suitable sustainable packaging and strategies to reduce plastic waste in delivery services. Finally, the use of various terminologies (such as sustainable, green, and eco-friendly) and how these in combination with terms associated to health, can influence consumer purchasing behavior would be an area of research that could help the growth and promotion of adopting sustainability-oriented approaches within the foodservice industry.

Conclusion

Transformation towards a more sustainability-oriented foodservice industry is especially promising in Thailand, where eating out and takeaways are both widespread and culturally embedded. According to Geels (2002), niches such as the interviewed foodservice providers can contribute to transforming food systems sustainably, as they respond faster to

landscape developments (such as climate change or pandemics) compared to existing socio-technical regimes. To persuade conventional businesses and entrepreneurs to adopt sustainable concepts in Thailand, the underlying issue of income and education disparity must be tackled. These socio-demographic factors play, according to Hess *et al.* (2018), besides meanings, competences, and materials, an important role when routine consumer behavior needs to be explained in all its variations. The results of this study hint that higher education levels and social classes with corresponding financial possibilities are equally important for sustainable business owners as their customers. This study also highlights the underutilization of different communication channels to promote business growth and to raise awareness of sustainability. In a society heavily influenced by what is seen (such as on social media platforms), more time, effort, and money could be invested to reach and educate a larger audience on the benefits of supporting and running sustainable businesses.

There are many sustainability-oriented strategies that can be employed by foodservice providers, including the minimization of food waste, sourcing locally through direct transactions with farmers, adopting plant-based menus, and utilizing energy-efficient technologies. These measures were already being adopted by the businesses interviewed. It is important to recognize that these foodservice providers in Thailand are at least trying to run their businesses as sustainably as possible according to their levels of knowledge. However, specific aspects, such as local sourcing or continuing

to import products from overseas to westernize their menus, must be reanalyzed. The social sustainability aspect must also receive more attention, particularly among the foodservice owners focused on promoting a plant-based concept. It is important to recognize that not all individuals will have the financial capability to make such sustainability-oriented choices, particularly in countries with large income gaps. To increase education on sustainable development, integrating sustainable and healthy food consumption into the school curriculum could help future generations to develop knowledge and understanding of the benefits of sustainable development at a young age, helping them to act accordingly.

The absence of local Thai customers reinstates the concern of income disparities and education inequalities. Persuading Thais to be customers can be perceived as an opportunity for businesses to escape from their

niche position and have a broader influence on the entire food system, ultimately helping to transform the entire food system towards more sustainability. Although the sustainability-oriented foodservice industry remains a niche market, it has the potential to grow along the lines of Thailand becoming an industrialized country. However, to make sustainable practice more common, political action must ensue. For example, the government could instigate an agency to develop sustainable business models and disseminate this information to interested entrepreneurs. Such an agency could grant tax privileges for the implementation of a sustainable business model, for example. Thus, in addition to education, political support for sustainable niche movements and overarching policy goals and frameworks (such as the 2030 Agenda for Sustainable Development and its Sustainable Development Goals) are required to transform our food systems sustainably.

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