

AN EXPLORATORY STUDY ON SUSTAINABLE PRACTICES IMPLEMENTED IN FOOD SUPPLY CHAIN MANAGEMENT OF THE FIVE STAR HOTELS IN BANGKOK

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Abstract: *The originality of this research lies in attempt to fill a significant gap in hospitality management literature pertaining to sustainable practices implemented in Bangkok's five star hotels in regard to their food supply chain management. It is apparent that food sourcing practice is complex and dynamic, and the nature of the upscale segment of hotels influences the sourcing strategy implementation. The study is informed by qualitative data acquired through in-depth interviews with decision makers at 8 chain and 8 independent hotels located in the city of Bangkok. The results describe hotel professionals' attitude towards sustainable sourcing and their guests' expectations for the meals. Moreover, this paper reveals a low level of "green" initiatives among hotels in Bangkok in regard to food sourcing and suppliers selection. The reason for this may lie in geographical and agricultural conditions creating the need for a food import, as well as in the specific customer demand regarding the food label. Thus, this paper enriches the understanding of food supply chain management in the upscale hospitality segment, and provides theoretical framework for a future research.*

Keywords: *supply chain, food, hospitality, sourcing, sustainability, environment*

1. Introduction

The food supply chain has developed throughout the years, affected by variety of economic, technological, social and environmental factors. Early supply chains were small, regional and basic in regards to the number of inputs and outputs. Nowadays, sourcing has become global as suppliers all over the world sell on the Net (Rahman, 2004). Contemporary chains provide a large range of products to serve for the rapidly changing needs of customers, satisfying varied tastes, trends and wellness necessities. Nevertheless, these alterations have also caused new challenges for the industry.

Problems related to sustainability, corporate social responsibility, health, and nutrition, have become one of the main to handle for food producers and retailers. Each industry has an effect on the environment, nonetheless, food impacts disproportionately because of the comprehensive usage of resources like land, water, energy, and the unintended outputs such as carbon dioxide (CO₂) emissions, contamination and waste.

Sustainable hospitality focuses on reducing the environmental, social and economic impacts of the hospitality sector (Environmental Protection Agency, 2012). As the hospitality industry continuous to grow rapidly, it cannot escape from its responsibility for contributing to environmental degradation. Particularly, restaurants are considered to be one of the least sustainable economic sectors in the world (Wang, Chen, Lee and Tsai, 2013).

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Tourism with hotel industry is critical in Thailand since the country has become a destination of choice for millions of international travelers every year. A growing number of visitors to the country reached 26.7 million in 2013 (TATNews.org, 2014). The average occupancy rate around the country was recorded at 64.86 per cent in 2013 (Bank of Thailand) and 75 per cent in Bangkok (CBRE Thailand). Food and beverage sales in hotels and resorts account for about 30% of total tourism revenues. The average rate of imported food against locally produced food in Thailand's entire dining industry sector is 30%, while in the United States has approximately 15%- 20% of product shares. Items such as beef, seafood, cheese, wine, and spices are popular in the hotel/restaurant trade, particularly in Italian, French, Japanese, American and other international restaurants, and with airline catering firms. Thai Airways International uses approximately 30%- 40% imported food in their in-flight catering service. Thailand's large food service sector consists of roughly 150,000 outlets, including some 100,000 restaurants and more than 5,000 hotels and resorts. Hotels, resorts and restaurants are heavy users of imported food (International Markets Bureau, 2012), in particular, upscale hotels with fine-dining restaurants.

Four - and five - star hotels in Thailand have been mainly operated by chains such as: Hilton group, Accor group, Intercontinental Hotel group, the Regent group, Starwood, Marriott, Hyatt, (Ooncharoen and Ussahawanitchakit, 2010). Rahman, Reynolds and Svaren (2012) suggest that the size, management practices and location of companies affect

The life cycle energy equivalent for

their sustainable practices. For example, due to the leveraging economies of scale through uniform corporate practices, chain hotels are found to add more green practices into their operations than individual hotels.

2. Research Objective

Nowadays, companies around the world pay remarkable attention to environmental protection practices. Hotels are a non-exception in this matter. This research aimed to examine the existence of green practices within food supply chain management in the five star hotels in Bangkok, and answer whether the food selection is influenced in any degree by ecological trends. This scope of F&B operations had not attracted adequate researchers' attention; therefore, examination of procurement activities was broadly conducted.

3. Review of Literature

One of the greatest problems of our time concerns the environmental degradation. The foodservice industry can negatively impact the environment through excessive usage of resources such as water, electricity and gas; ineffective recycling procedures; usage of harmful chemical products and in particular, contribution to carbon emissions through the daily delivery of supplies (DiPietro, Cao and Partlow 2013).

According to study by Bergström, Solér and Shanahan (2005), food accounts for nearly 40 per cent of the environmental impact when converting household consumption into the life cycle energy equivalents.

different foods varies noticeably.

Vegetarian and locally produced foods account for low values, whereas the values for meat and exotic foods shipped long distances are rather high. Locally produced food, open-air cultivation and reduction in meat consumption are proposed in order to diminish the environmental impact of food. Also organic foods, produced without chemicals, tax the environment less.

Fortunately, the use of green practices in the foodservice industry is a growing area of interest in the world of travel, tourism, and hospitality. Initiatives to slow the continual demand for faster, cheaper and larger deliveries of food from other regions and decrease the impact of food miles have been developed in recent years (Alonso, 2010). The wide concept of environmental food supply chain management can be described as an inter-organizational management practice consisting of different elements such as green marketing, green purchasing, green design, and green production. Some of these concepts might be successfully applied into food and beverage management such as green food procurement (organic and local), green menu planning and cooking (Wang et al., 2013). The focus has been placed on the information collected on how food is produced, packed, stored and transported. These are factors included in a life cycle assessment (Figure 1) of foods before they are consumed (Bergström et al., 2005). Green procurement in the case of food seems to be a rather simple theory. It would engage promotion of supply chains that deliver food items of a type and in a way, which minimizes the impact on the environment. Reducing environmental impact would seem, at least initially, to be a sensible working definition of “green” in

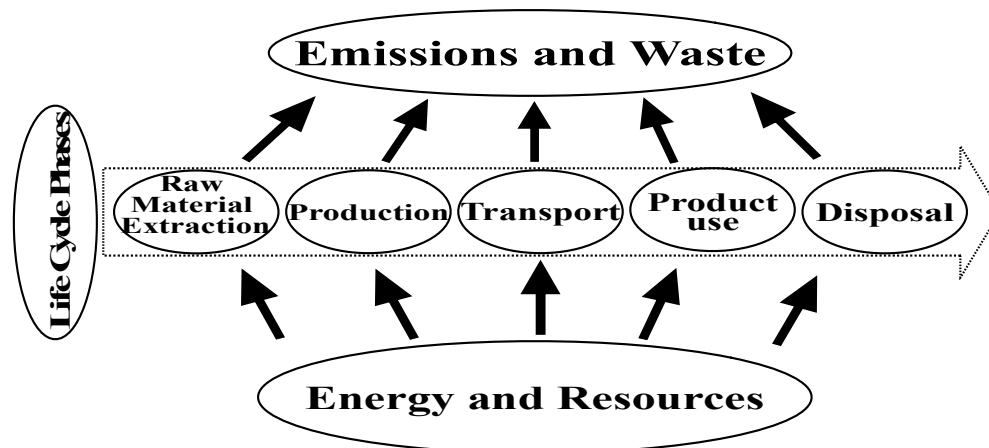
this context. As with many things, however, the situation is not that simple. We must look at “greenness” or sustainability in a broader context, particularly when investigating something so complex as the food supply chain (Beer and Lemmer, 2011).

The main aspect of green procurement is related to travel, in that it is not only food type and the way that it is produced, but where in the world it is produced, and the distance the food has to travel from the producer, to the consumer (Beer and Lemmer, 2011).

There has been a tendency to assume that local food is an answer to the problem of food miles as the transport and refrigeration rely on fossil fuels, resulting in the emission of various gasses that have a harmful impact on the environment (Coley, Howard and Winter, 2011). Therefore, the main concern is how does the transport of food affect the environment. Initially, the idea is fairly simple. The food miles for a dish are the total miles that the food has to travel from producer to consumer.

The distance that food travels is an important part of the concept of sustainability, as it takes energy to move anything. There are, however, two problems. First, not all miles are equal. The types of transport have also a large effect on how much of pollution is generated. For example, importing food by airplane results in much greater emissions of greenhouse gases than import by vessel.

Figure 1: Life Cycle Phases



Source: Link cycle. What is Life Cycle Assessment? Retrieved on September 5, 2014, from <http://www.linkcycle.com/what-is-lca/>

Although there are some exceptions, in most cases, locally produced food proves to be the best choice for minimizing global warming and other pollutants. In fact, another study shows that all locally grown food produces still less carbon dioxide emissions in transport than any one imported product (Natural Resources Defense Council, 2007).

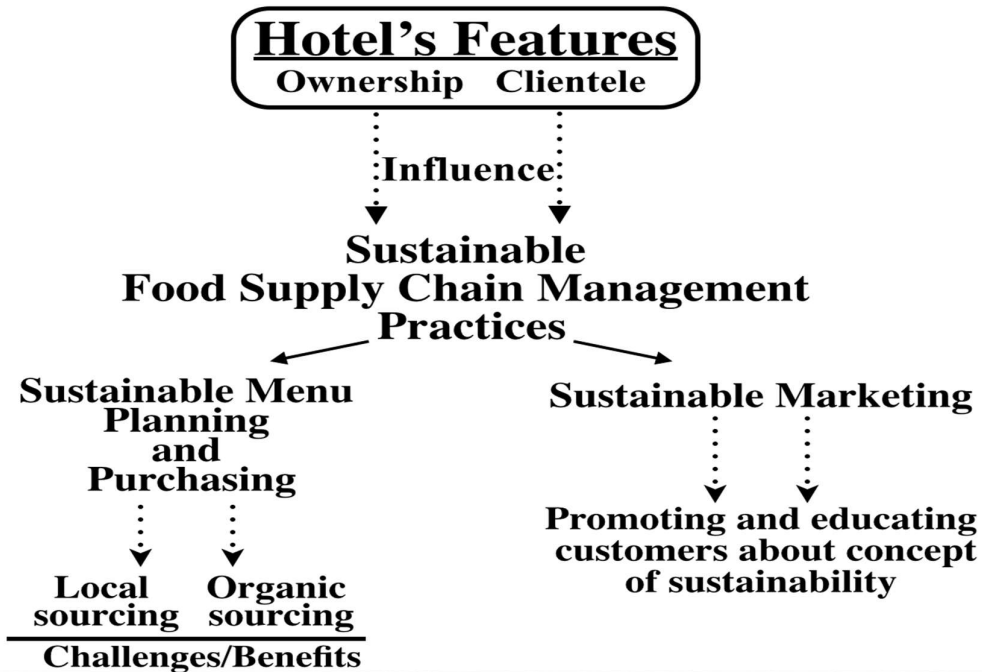
Previous research by Sharma, Moon and Strohbehn (2014) has shown that hotel managers in charge of food purchasing would prefer to source domestically. This is driven by perceived tangible benefits such as freshness and taste, as well as more intangible motivations such as sustainability and community support. However, sourcing locally can be time consuming and may engage negotiations with many small vendors in order to obtain guarantee of punctual deliveries, desired quality and sufficient quantities. Also, the situation when unpredictable weather incidents (floods, drought, etc.) characteristic to one geographic region may negatively affect the food item availability. These concerns sometimes restrain

managers from local buying (Murphy and Smith 2009). Voss (2013) suggests that if a purchasing person has the option of sourcing domestically or internationally, the mix of domestic and international suppliers might be employed to expand the geographic supply base and lessen the risk.

Results from a previous study by Kang (2012) showed that decision makers were willing to purchase local foods if they could overcome some of the challenges associated with procurement such as: inconsistent quality, seasonality, and inadequate quantity. Moreover, in case of some hotels and franchise food businesses, international ownership and head offices dictate the source of food and food suppliers.

4. Conceptual Framework

Figure 2: Conceptual Framework



Source: Developed by the Author

Since there are few, if any, research frameworks to study sustainable practices employed by hotels in Thailand in regard to food supply chain management, the worldwide literature sources helped to map the most significant concepts and activities in the hotel food supply chain management (Figure 2).

The activities identified from food SCM and sustainability literature were used as a framework to design the questions in the interview schedule for data collection, which are explained further in the Appendix 1.

5. Methodology

The study aimed to explore, not to verify nor measure aspects with regards to sourcing practice. Therefore, quantitative questionnaire surveys were not suitable for

producing the data required to understand food sourcing and management mechanisms, therefore, qualitative research method was utilized. Nevertheless, the major assets of qualitative research have their own limitations. Qualitative research provides in-depth answers about one, very specifically defined individual or group. It does not provide assurance that findings presented in this article are representative for the entire segment of five star hotels in Thailand or even in Bangkok itself due to relatively small number of participants. In addition, qualitative research often depends on the individual judgment of the researcher and is heavily dependent on the researcher's interpretation.

- Data Collection

As the research goal was to develop an understanding of the phenomena in great detail, it was natural decision to use

interviews in order to acquire information about facts and opinions pertaining to food supply chain management in hotels. Face to face interviewing was preferred over the email or telephone methods. Interviews were conducted from August 2014 to the end of October 2014 and usually took between 30 to 50 minutes, depending on respondent's free time and willingness to elaborate the answers. All interviews were recorded with the digital audio recorder. This process ensures that nuances such as tone and certainty, are maintained and incorporated into the findings (Randall and Mello, 2012).

- Selection of Hotels and Participants

The main concern in regards to obtaining qualitative samples is an appropriate selection of the research participants who can provide the necessary data that allows understanding the investigated issues. The sampling in qualitative research usually relies on small numbers with the aim of studying in detail and seeking a richness of data about a particular phenomenon. The samples should be derived purposefully rather than randomly (Patton 2002). Thus, participants' selection (Table 1) was based on job profile, job position, their experience with the phenomenon, and willingness to participate. The person requested for the interview often had a title of executive chef, sous chef, or manager of purchasing. Two general managers and one owner also agreed to participate. Moreover, in order to provide a broader perspective, two existing types of hotel establishments were selected: chain and independent. These two categories were identified as a result of previous observation that led to the assumption that different hospitality businesses may have different design of their supply chain

management as well as the approach to green practices.

The number of interviews was not known in advance as Grounded Theory methodology determines to stop sampling in the moment of reaching theoretical saturation. Saturation means that no additional data are being found. When saturation occurs, researcher receives only already known statements (Glaser and Strauss, 1967).

- Data Analysis

The large amount of the data generated by qualitative research makes data analysis a real challenge. Therefore, the data was collected and coded following the qualitative research guidelines found in the Grounded Theory in order to generate substantive categories that could be interpreted by the researcher. Coding might be regarded as a fundamental analytical process, which plays a vital role in analyzing, organizing and making sense of textual data.

Strauss and Corbin (1990) base their analysis on three types of coding: open (identifying, naming, developing categories of information, and describing phenomena), axial (the process of relating categories to each other), and selective coding (a procedure for building a story that connects a core category with other categories and produce a set of theoretical propositions).

Table 1: Hotels and Interviewee List

Hotel		Respondent's position	Experience at the hotel	Experience in the industry
1.	ChH1	Sous Chef	3 years	13 years
2.	ChH2	Owner	10 years	10 years
3.	ChH3	Sous Chef	2 months	20 years
4.	ChH4	Executive Chef	2 years	15 years
5.	ChH5	Sous Chef	3.5 years	16 years
6.	ChH6	Sous Chef	3 years	9 years
7.	ChH7	Sous Chef	4 years	14 years
8.	ChH8	Executive Chef	3 years	14 years
9.	IH1	Executive Chef	5 years	30 years
10.	IH2	Executive Chef	4 years	25 years
11.	IH3	Executive Chef	11 years	35 years
12.	IH4	Executive Chef	4 years	30 years
13.	IH5	General Manager	7 years	16 years
14.	IH6	General Manager	4 years	21 years
15.	IH7	Purchasing Director	11 years	20 years
16.	IH8	Executive Chef	9 years	18 years

Source: Developed by the Author

5. Research Findings

All decision makers in terms of sourcing acknowledged quality and price as a top priority when they purchase food items for their food operations. Price of organic local products was perceived high, similarly to imported items. Nevertheless, it was the problem with quality consistency pointed out primarily.

Organic foods were purchased only if it was the chef's personal choice bringing better quality to the menu. Using organic products was also perceived as appealing from a marketing point of view. Two of sixteen respondents mentioned that creating a special "story" over organic product could work as a good sales point to

attract specific clientele. However, such events could be organized only periodically as organic farms are not able to produce required quantities. Also, most of the interviewees pointed out that they could not see any strong trend among their customers wanting sustainable food, nor willing to pay more for menu labeled as organic. Several times it was stated that market in Asia is not ready for this yet and imported goods are more appealing to local customers. Perhaps it would be worthwhile to be seen as green from a marketing point of view, but only for the overseas type of guests. Thai guests were portrayed to perceive products as luxurious if they were imported.

One of the chefs was of the opinion that green practices are much easier to

implement for the business in Europe or in other Western countries. He stated that some hotels in France have their own organic gardens. As the example may serve Le Manoir aux Quat'Saisons hotel in Oxfordshire, UK, that is supplied by a two-acre patch in the grounds, which produces more than 90 types of vegetable and 70 varieties of herb. Hotels that lack the land to grow produce to fuel a restaurant kitchen may look for other spaces, such as rooftops. The Fairmont Royal York in Toronto has its own organic

rooftop herb garden with more than 60 varieties of herbs, fruit, vegetables and edible blossoms in the rooftop garden (Green Hotelier, 2013). Such practice contributes to the lower emission of CO₂ due to absence of food miles, and provides healthy and fresh product. Also, the Britain located chain of Malmaison Hotels has announced that it intends to try and source its food from within 30 miles (Beer and Lemmer, 2011).

Non-organic local foods are also perceived as more sustainable than imported ones. Reduced amount of food miles in comparison to air-shipped products could be considered as sustainable behavior. However, one of the chefs expressed his negative opinion whether the food transported by a truck hundreds kilometers from North of Thailand can be regarded as sustainable. Regardless of sustainable approach, particular local foods were purchased mainly because of lower than imported price, and as long as the quality was appropriate for fine dining. The emphasis was placed on the factor of freshness that could be delivered only with freshly harvested vegetables.

Most of the large chain hotels participating in this research did not reveal any green practices regarding the food procurement, however, two of them featured with high awareness of environmental issues and attempted to act sustainably. In spite of the all obstacles characterizing the market in Thailand, these hotels have taken small steps such as discontinuation of sales of endangered species, educating guests, and outstanding amount of locally sourced food comparing to other hotels.

One of those hotels was revealed to be even more forward thinking about the environment, and aims to source more locally every year until 80% of ingredients will be sustainable. Moreover, the hotel has launched projects promoting sustainable food through organizing events labeled "farm to table", where only local and organic products are purchased directly from producers. Also, the hotel embarked a platform for a discussion with its suppliers to create stronger direction towards sustainability and debate how they can contribute to the green movement, or how the hotel could help them to become more sustainable. Hotel also tends to have stronger and long-term cooperation with suppliers that are proactive in this area.

Such approach however could be seen as the exception in the hospitality industry in Thailand, where a lack of sustainable food sourcing is evident not only at the properties level but also corporate level in most of cases. It is distinctive to the global trend where especially big hotel groups strive to be seen as green, and implement extensive sustainable programs including food procurement as well.

6. Conclusion

Data from the interviews revealed that hotels tend to implement green practices, but in the areas, which are more achievable and economically feasible (electricity, recycling and water efficiency plan) than sustainable food sourcing. Several executive chefs obtained recommendations from the company's offices to source locally as much as possible, especially fruits and vegetables, but it was evidently dictated by the logistic convenience and finances, not any green policy.

Respondents greatly agreed that trend of sustainable sourcing is evidently more mature on the West where customers are more aware of sustainability concept. Especially, big hotel groups join the trend to be perceived as environmentally friendly. In Thailand however, imported food is still perceived as luxurious and it creates unsustainable demand.

Decision makers in this study stated that they would source sustainably if they could. However, they had to face obstacles such as seasonality, lack of appropriate volumes and consistent quality, plus an absence of any customers' green demand. What is more, most of key specialty ingredients were naturally unavailable on the local market and had to be imported.

7. Recommendations

It is expected that the hotel food service sector in Thailand will become affected by the global movement of sustainable sourcing. Sustainability can be only fully achieved if all members of the supply chain participate in sustainable practices. Establishing and maintaining a true

sustainable supply chain management requires cooperation among all members of a supply chain including hospitality businesses, suppliers and also final customers.

Hotels should not only gradually pressurize cooperating suppliers to implement green practices but firstly educate them and support with their strives to become sustainable as much as possible. This could slowly be achieved by encouraging use of sustainable forms of transport, reusable packaging schemes and contributing to the development of regional infrastructure with more local abattoirs. A prior action however, should be directed to create sustainable demand. As could be seen from the data, most of customers did not reveal any interest about environmental impact nor endangered species of animals. Therefore, hotels should educate their customers and promote sustainable behavior through the marketing campaigns, events, brochures, and websites providing detailed information on their sustainable initiatives. Perhaps, the problem lays also in the way the Thai government deals with sustainability issues. Local authorities could participate in development of farmers' markets and support agriculture on a larger scale as it is already initiated through the King's rural project in the North of Thailand.

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Appendix 1. Interview questions

1. Who are your food suppliers?
2. How did you choose your main suppliers?
3. Who is involved in food sourcing?
4. Can you please explain the process you follow when you source your food?
5. Are you concerned about environment when sourcing food?
 - a) do you try to select your suppliers among local food producers to minimize transport impact on environment?
 - b) do you try to select organic food?
6. If so, what kind of information about product do you look for in order to make environmentally friendly purchase.
7. Do the customers care? Do you try to make them aware of your environmental care?