ABSTRACT

This research aims to study the model of Vannamei white shrimp supply chain management to expand the results of the study on Thai tourists who use a grill restaurant and to study the tourists’ push and pull motivations towards the use of grilled restaurants using Vannamei white shrimp in Bang Len District and Kamphaeng Sean District, Nakhon Pathom Province, Thailand. The data was collected using questionnaires and analyzed using descriptive statistics, such as mean and standard deviation. The results found that the supply chain could be divided into 6 types of upstream and downstream characteristics, comprising supplier, Na Bualuang Thad Dok farmers, wholesalers, retailers, and consumers. In addition, when studying the downstream of supply chain which was tourists who like Gastronomic Tourism, it was found that the overall push motivation factors affecting the grill restaurant usage with a selling point by using Vannamei White Shrimp as the main raw material was at a high level. The push factor that had the most mean was the motivation for food mixing ingredients and food style, followed by food using new innovations, and places to eat. While the overall pull motivation factors affecting the use of various types of restaurants was at a high level. The pull factors that had the most mean was the cleanliness of the food and the taste of food, followed by the quality of the raw materials (Vannamei White Shrimp), and the service of the restaurant.

Keywords: Motivation, Tourism, Grill Restaurant, Vannamei White Shrimp Farm, Supply Chain, Nakhon Pathom Province

I. BACKGROUND AND SIGNIFICANCE OF PROBLEMS

A new type of tourism called "Gastronomic Tourism" is a phenomenon that occurs when travelers spend more than one-third of their total tourism spending on food and drinks (Quan and Wang, 2004). Food, therefore, is one of the parts that help tourism connect between tourists and the history of the local area well by telling the story of the culture, tradition, and way of life. The occupation of the local community and new tourism trends need to combine tourism with food because tourists are not only looking for experiences from seeing stories alone but they want to learn the origin and production process. All of which can link the cultural tourism, experience tourism, local tourism, and ecotourism. For tourism in the past, food is a neglected element of tourism, when compared with other elements. Many tourists choose to eat food that they are familiar with and are confident that it is safe, such as choosing well-known fast food restaurants or the cleanest restaurant. For general tour operation, the food provided to tourists is often chosen based on the convenience of travel between one attraction to another, rather than the novelty or even the deliciousness of the menu (Chayanin Wangsai, 2017).
Thailand is one of the countries in Southeast Asia with original authentic foods and a variety of foods according to civilization in the country. In addition, Thailand has begun to place importance on bringing food as a supplement to tourism support by working together to create a world-class restaurant guide on behalf of the "Michelin Guide" that has been selected according to the standards of Michelin. Furthermore, the Ministry of Tourism and Sports has also signed an agreement to host the global food tourism promotion conference by aiming to create public relations opportunities to promote Thailand's food tourism image to be more famous on the world stage with a new strategy "Thai Foods for Tourism" to develop Gastronomic Tourism as a country with world-class ingredients and foods.

Nakhon Pathom Province is an important exporter of Vannamei White Shrimp to many countries and has a continuously expanding export value. The major export markets of Vannamei White Shrimp are in many countries such as the United States, the European Union and Japan, as the Vannamei is an economically important shrimp with a well-developed species, ease to raise, fast growing, lower cost of production, and popularity with consumers both at home and abroad. Vannamei White Shrimp can be processed into a wide variety of products to facilitate storage, export and meet the needs of consumers. This is a distinctive feature that allows for high export potential. Nakhon Pathom Province has suitable areas such as water sources with 100% irrigation system, public utilities, and a valuable food source for aquaculture. Moreover, there is a suitable transportation system, which is conducive to the marketing system of fishery products in Thailand. Nakhon Pathom Province is an area in the central region where there are many farmers who cultivate white shrimp. The area for cultivating white shrimp Vannamei is approximately 20,000 rai, which is an economic animal that generates a lot of income for farmers (Nakhon Pathom Provincial Agricultural Office, 2017) as well as being a province with complete tourist attractions. In particular, the readiness in Gastronomic Tourism, in which the restaurants that uses Vannamei White Shrimp raw in the shrimp farm in Nakhon Pathom Province as raw material are considered a supply chain that comprises a kind of gastronomic tourism resources that Nakhon Pathom Province can attract tourists in addition to visiting other attractions within the province. This causes direct and indirect local experiences that will encourage more tourists to come to travel. However, if a restaurant that uses Vannamei white shrimp raw material in a shrimp farm in Nakhon Pathom Province lacks factors to attract tourists to use the service, it will not be able to develop into a gastronomic tourism and travel routes according to the provincial and national strategies in the future. From this importance, it becomes important to study the supply chain management model of Vannamei White Shrimp and a study of the motivation of tourists towards a grill restaurant in the Vannamei white shrimp supply chain of Nakhon Pathom Province.

Research Objectives

- To study the model of supply chain management of Vannamei White Shrimp in Nakhon Pathom Province
- To study general information of Thai tourists who use the service of a grill restaurant from Vannamei White Shrimp Farm in Nakhon Pathom Province
- To study the level of tourists’ push and pull motivations towards the usage of the grill restaurants using Vannamei White Shrimp

Scope of the Study

- Data collection: This research collected data from tourists who were not domiciled in Nakhon Pathom Province and traveled in Bang Len District and Kamphaeng Saen District since the preliminary data survey found that these two districts were the areas with the most Vannamei White Shrimp farms and had the potential for gastronomy tourism. There were various types of restaurants as well as famous and popular tourist attractions, including easy traveling or access, and many facilities.
- Research variables: The independent variables were general information about tourists, including gender, age, status, occupation and income. The dependent variables were tourism behaviors, push factors, including food adventurers, location focus, authentic national foods, cheap foods, mixed foods, high-class foods, innovative foods, local foods, exotic foods, and socializing, and pull factors, including food attractiveness, restaurant service, restaurant environment, quality of ingredients (Vannamei Shrimp), quantity of foods, and taste of foods (Buatham, 2020)

Gastronomic tourism concepts

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Gastronomic tourism is another market that has high potential in increasing value and generating income. It can also boost the income of community and agricultural sectors as food represents societal and local cultures which emphasize the originality of the places. Moreover, using local food is a way to distribute income to the community in both direct and indirect ways (Boonpienpon and Wongwiwattana, 2017). In other words, gastronomy tourism is a tourism that has gained great attention and is very popular nowadays. Food is part of the travel experience in which food is tied to the environment and local culture. Tourists tend to find local food that is unique in each tourist destination (Soonthornpipit et al., 2021). It is considered that food is part of the travel experience, especially the touch with the senses, such as the taste of food and learning the process of cooking. This is added value to the experience of tourists. Therefore, tourism for learning about food includes unique food tourism experiences (Saowapawong, Tinuan, and Smith, 2018).

Travel behavior concepts
Maslow’s theory of hierarchal motivation is fundamental to psychologists and sociologists. Thinkers, moreover, have applied it to describe attitudes, behaviors and human motives in tourism. It makes them aware of the thinking process, travel decisions, and the behavior of tourists. Tourism motivation is what motivates a person to seek pleasure through targeted behavior by traveling to a specific place (Pimolsompong, 2007) because the behavior is the result of the advantages received. Therefore, individual behavior is characterized by a series of responses performed in a given environment (Cornell et al., 2020), where traveler motivation is divided into two factors: internal factors from tourists or push factors and destination or pull factors. The Park et al. (2015)’s concept of tourism motivation refers to push and pull factors of tourists’ traveling. It was found that tourists’ push factors were learning, having fun, relaxation, escapism, life shopping, and nightlife. While four things of tourist motivation were as follows: 1) excitement and a relaxed atmosphere, 2) local resources and cultures, 3) gambling and entertainment, and 4) reputation of the destination, in which all 4 groups of tourists had motivation, overall satisfaction of the activity, and post-trip behavior with statistically significant difference. Moreover, if tourism that is outstanding, it will incentivize tourists to travel to destinations, including push and pull factors that contribute to relaxation (Sooksai, 2019).

Supply chain concepts
Hiranphaet (2019) refers that supply chain or a logistics network is the use of an agency system, consisting of people, technology, activities, information and resources to apply together for the movement of goods or services from suppliers to customers. The activities of the supply chain transform natural resources, raw materials and other materials into a finished product sent to the end customer (Aunyawong et al., 2020). So, the supply chain is a different process from before producing until bringing the product to the consumer group in order to create the highest satisfaction whether it is purchasing raw materials, production, storage, adopting technology as a support, product distribution, and shipping (Choopak, 2019). It reflects that all processes are connected and must be passed a standard procedure in order to give consumers an impression of such product.

II. RESEARCH METHODOLOGY

The study was divided into 2 parts: 1) quantitative ample was 359 white shrimp aquaculture farmers living in Nakhon Pathom Province obtained from Taro Yamane's formula (Taro Yamane, 1967) by purposive sampling, and 2) qualitative sample was 32 sea shrimp farmers who has registered and received certification of aquaculture farm standards from the Department of Fisheries and was still operating in the year 2017 (Department of Fisheries, 2017) by purposive sampling. The research instruments were a questionnaire and interview form. Then, data was collected from the survey from white shrimp farmers living in Nakhon Pathom Province with questionnaires and interview form. After that, the data obtained from the questionnaire were analyzed by using descriptive statistics on each dimension of the white shrimp supply chain management.

For the study of general information of 400 Thai tourists who used a grill restaurant from Vannamei Shrimp Farm in Nakhon Pathom Province, the sample size was determined from Krejcie and Morgan's tables (Krejcie & Morgan, 1970) at a 95% confidence level. The questionnaire used in the research consisted of 4 sections:

Part 1: General information of respondents was a checklist.

Part 2: ‘Tourists’ push motivation towards using various types of restaurants was a five-rating scale questionnaire.

Part 3: ‘Tourists’ pull motivation towards using various types of restaurants was a five-rating scale questionnaire.
Part 4: Feedback was an open-ended question.

Data were collected from 400 questionnaires that were evaluated for the validity from 3 experts and tryout before collecting the data from for Thai tourists traveling in Bang Len and Kamphaeng Saen districts, 200 sets per district. After that, the researchers checked the accuracy and completeness of the data in the questionnaire before statistically analyzing the data.

The general information obtained from the questionnaires was analyzed using descriptive statistics by frequency distribution and percentage. While tourists’ push and pull factors towards Vannamei White Shrimp in the restaurants within the area of Bang Len and Kamphaeng Saen Districts, Nakhon Pathom Province, were analyzed using descriptive statistics by finding mean and standard deviation. The data was presented in a tabular form along with a briefing of the results and recommendations using content analysis. Then the data analysis results were presented by descriptive analysis.

III. RESULTS

The supply chain could be categorized into six different types according to the types of the distribution route and the customer segments, consisted of merchandise through middleman and retailer, merchandise through retailer, merchandise sold directly to consumers, merchandise through middlemen and restaurant, merchandise through retailer and restaurant, and merchandise through middleman, retailer, and restaurant. Customers who are tourists could try fresh Vannamei White Shrimp from any restaurants and grill restaurants in the vicinity of various tourist attractions, as shown in Figure 1.

Figure 1: Vannamei White Shrimp Supply Chain Types
General information of Thai tourists who use the service of a grill restaurant from Vannamei White Shrimp farms in Nakhon Pathom found that most of the tourists in Bang Len and Kamphaeng Saen Districts were female (60%) and male (40%), aged 31-50 years (47%), followed by tourists aged 22-30 (39%). Most of them had single status (58%), followed by marital status (29%), occupied private company employees (40%) and their own business (28%). Their income per month was mostly 15,001-25,000 baht (39%), followed by 25,001-50,000 baht (24%). Most of them graduated a bachelor's degree (63%), followed by a master's degree (19%), respectively.

Overall tourists’ push motivation towards the usage of grill restaurant services from Vannamei White Shrimp Farm in Nakhon Pathom Province was at a high level (\(\bar{x}=3.74\)). When analyzing each dimension, it was found that the push factors with the most mean were foods mixed of ingredients and food style (\(\bar{x}=4.25\)), followed by innovative foods (\(\bar{x}=4.20\)), and the place to eat (\(x=4.14\)). For the push factors with the least mean were expensive high-class foods (\(\bar{x}=2.83\)), as shown in Table 2.

### Table 2  Tourists’ Push Motivation towards the Usage of Grill Restaurant Services from Vannamei White Shrimp Farm in Case Study Area

<table>
<thead>
<tr>
<th>No.</th>
<th>Tourists’ Push Motivation</th>
<th>(\bar{x})</th>
<th>S.D.</th>
<th>Opinion Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The foods mixed of ingredients and food styles</td>
<td>4.25</td>
<td>0.46</td>
<td>High</td>
</tr>
<tr>
<td>2</td>
<td>Innovative foods</td>
<td>4.20</td>
<td>0.53</td>
<td>High</td>
</tr>
<tr>
<td>3</td>
<td>Place to eat foods</td>
<td>4.14</td>
<td>0.75</td>
<td>High</td>
</tr>
<tr>
<td>4</td>
<td>Socializing foods</td>
<td>4.03</td>
<td>0.51</td>
<td>High</td>
</tr>
<tr>
<td>5</td>
<td>Reasonable-price foods</td>
<td>4.03</td>
<td>0.39</td>
<td>High</td>
</tr>
<tr>
<td>6</td>
<td>Authentic local foods</td>
<td>3.63</td>
<td>1.16</td>
<td>High</td>
</tr>
<tr>
<td>7</td>
<td>Exotic foods</td>
<td>3.53</td>
<td>0.99</td>
<td>High</td>
</tr>
<tr>
<td>8</td>
<td>Adventure in eating strange foods</td>
<td>3.39</td>
<td>0.93</td>
<td>Moderate</td>
</tr>
<tr>
<td>9</td>
<td>Local foods</td>
<td>3.34</td>
<td>0.66</td>
<td>Moderate</td>
</tr>
<tr>
<td>10</td>
<td>Expensive high class foods</td>
<td>2.83</td>
<td>1.49</td>
<td>Moderate</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>3.74</td>
<td>0.78</td>
<td>High</td>
</tr>
</tbody>
</table>

Overall Tourists’ pull motivation towards usage of grill restaurant services from Vannamei White Shrimp Farm in Nakhon Pathom Province was at a high level (\(\bar{x}=4.40\)). The most pull factors were food cleanliness (\(\bar{x}=5.00\)) and food taste (\(\bar{x}=5.00\)), followed by the quality of the raw materials (Vannamei White Shrimp) (\(\bar{x}=5.00\)), and restaurant services (\(\bar{x}=4.63\)). While the pull factor with the least mean was the restaurant reputation (\(\bar{x}=3.71\)), as shown in Table 3.

### Table 3  Tourists’ Pull Motivation towards the Usage of Grill Restaurant Services from Vannamei White Shrimp Farm in Case Study Area

<table>
<thead>
<tr>
<th>No.</th>
<th>Tourists’ Pull Motivation</th>
<th>(\bar{x})</th>
<th>S.D.</th>
<th>Opinion Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Food cleanliness</td>
<td>5.00</td>
<td>0.00</td>
<td>Highest</td>
</tr>
<tr>
<td>2</td>
<td>Food taste</td>
<td>5.00</td>
<td>0.00</td>
<td>Highest</td>
</tr>
<tr>
<td>3</td>
<td>Quality of raw materials (Vannamei White Shrimp)</td>
<td>5.00</td>
<td>0.07</td>
<td>Highest</td>
</tr>
<tr>
<td>4</td>
<td>Restaurant services</td>
<td>4.63</td>
<td>0.48</td>
<td>Highest</td>
</tr>
<tr>
<td>5</td>
<td>Restaurant environment</td>
<td>4.39</td>
<td>0.49</td>
<td>High</td>
</tr>
<tr>
<td>6</td>
<td>Food attractiveness</td>
<td>4.05</td>
<td>0.68</td>
<td>High</td>
</tr>
<tr>
<td>7</td>
<td>Food decoration</td>
<td>3.95</td>
<td>0.69</td>
<td>High</td>
</tr>
<tr>
<td>8</td>
<td>Quantity of foods received</td>
<td>3.87</td>
<td>0.76</td>
<td>High</td>
</tr>
<tr>
<td>9</td>
<td>Restaurant reputation</td>
<td>3.71</td>
<td>0.76</td>
<td>High</td>
</tr>
<tr>
<td>(\sum)</td>
<td></td>
<td>4.40</td>
<td>0.44</td>
<td>High</td>
</tr>
</tbody>
</table>

### IV. CONCLUSION

The study of the supply chain management model of Vannamei White Shrimp in Nakhon Pathom Province consists of six types of the upstream-downstream supply chain, which consisted of the overall components of the entire supply chain as follows: raw material suppliers, Vannamei White Shrimp Farms, middlemen, retailers, restaurants, and consumers. Most of the distribution is completed through middlemen delivering products to provinces and delivering products through retailers to consumers in the province. Distribution for tourists is the nature of food processing in restaurants within the province. The general local consumers, besides, will buy the products from the farms on occasion.
Most of the tourists using the grilled restaurant service from Vannamei White Shrimp Farm in Bang Len and Kamphaeng Saen Districts, Nakhon Pathom Province, were female, aged 31-50 years, had a single status, worked for private company employees, had monthly income of 15,001-25,000 baht, and graduated with a bachelor's degree. Overall tourists’ push motivation towards the usage of grill restaurant services from Vannamei White Shrimp Farm in Nakhon Pathom Province was at a high level. When analyzing each dimension, it was found that the push factors with the most mean were foods mixed of ingredients and food style, followed by innovative foods, and the place to eat. For the push factors with the least mean were expensive high-class foods. While, overall Tourists’ pull motivation towards usage of grill restaurant services from Vannamei White Shrimp Farm in Nakhon Pathom Province was at a high level. The most pull factors were food cleanliness and food taste, followed by the quality of the raw materials (Vannamei White Shrimp), and restaurant services. While the pull factor with the least mean was the restaurant reputation. For suggestions from the survey, it was found that most of the tourists lacked information on famous restaurants in Nakhon Pathom Province. Therefore, they often chose to use the service of restaurants that are located on the roadside that can be easily seen and has a parking lot.

V. DISCUSSION
A Study of the Supply Chain Management Model of Vannamei White Shrimp in Nakhon Pathom Province consists of six types of the upstream-downstream supply chain, which comprise the overall component of the entire supply chain: raw material supplier, farmers, middlemen, retailers, and consumers. Most of the distributions are done through the middleman delivering products to provinces and deliver products through retailers to consumers in the province. For distribution for tourists and local consumers, farmers will distribute products themselves in the local market. This is in line with Sooksai (2019) research on The Knowledge Linkage in Supply Chain of Cut-flower Sacred Lotus Farming in Nakhon Pathom.

According to the results of the study on general information of Thai tourists who use the shrimp grill restaurant in Nakhon Pathom Province, most of the tourists who use the restaurants were 31-50 years old, had single status, worked for private company, received monthly income 15,001-25,000 baht, and graduated with a bachelor's degree. This shows that most of the tourists travelling in the Bang Len District and Kamphaeng Saen District are working people with low income because such areas are not far from the center of the capital city of Thailand. Tourists can travel easily and purchasing power. The working age group is also part of the Thai gastronomic tourist group as well (Puntien, Chantachon, & Koseyayothin, 2017).

The results of the study on the level of opinion on tourists’ push motivation towards the usage of grill restaurants from the Vannamei White Shrimp Farm in Nakhon Pathom Province has found that the tourists need foods mixed of ingredients and food styles because of their interesting. Tourists want to taste the perfect blend of foods through a grill style and Vannamei White Shrimps are the main ingredients that are a motivation for tourists to learn about local livestock foods and create a great travel experience, based on the concept of Scarpato (2003).

Results of the opinion level on tourists’ pull motivation towards the usage of the grill restaurant services in Nakhon Pathom Province found that food cleanliness and the food taste are most important, followed by the quality of the raw materials (Vannamei White shrimp), consistent with the research results of Kururatchaikul (2014), which address the drivers of satisfaction towards Thai foods, as referred to the principles of the marketing mix, including the deliciousness of the foods, the good ambience, the quality of the foods, and the freshness of the ingredients.

However, tourists have recommended the information related to famous or interesting restaurants in the tourism area in Nakhon Pathom Province still lacks public relations. The tourists therefore choose to use the restaurant located on the roadside that can be seen clearly and has easy parking. The above data shows that street grill restaurants are not yet widely known among tourists. Hence, it may have a negative effect on the sustainable development of gastronomic tourism within the area in the future. Consequently, brochure or applications showing details and locations of famous restaurants should be created as well as the quality of the restaurants should be classified to publicize the tourists. The potential development of gastronomic tourism will help Thailand to gain the attention of both domestic and foreign tourists and to be the main destination for gastronomic tourism. Moreover, this is the creation of a food experience that is deeply connected to the tourist attraction (Cohen & Avieli, 2004; Setthachotsombut, & Aunyawong (2020).

RECOMMENDATIONS
• Government agencies or those who are involved should use the data obtained from this research to propose a grill restaurant business practice from Vannamei White Shrimp Farm in Nakhon Pathom Province in order to attract tourists to use the services and be able to develop shops to meet the needs of tourists. Restaurants can offer their services through Facebook, website, LINE OA, and others, as well as a variety of tourist restaurant information manuals.

• The further study should adjust target group to cover all types of restaurants that use Vannamei white shrimp as a culinary ingredient to be able to use the research results to formulate plans for supply chain management and a more appropriate form of gastronomic tourism, for example, the arrangement of the famous food tourism routes of Nakhon Pathom Province, etc. This will further contribute to the creation of jobs, generate income and stimulate the overall economy of the restaurant industry in the province.

ACKNOWLEDGEMENT
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