

## Food and Beverage Service Innovation in the Fine Dining Restaurant during the New Normal Pandemic

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### Abstract

The purpose of this research is to study the factors causing food and beverage service innovation and to study the patterns of food and beverage service innovation in the fine dining restaurant during the New Normal Pandemic in Thailand. This qualitative research study used documentary research, participated observation, and in-depth interviews. The population is a purposive selecting of the fine dining restaurants of five-star hotels in Thailand. The data were collected by in-depth interviews with food and beverage managers or management levels who understand the food and beverage operation and their policies. Data were collected from 12 managers of 12 hotel restaurants in 4 tourist destinations in Thailand; Bangkok, Pattaya, Phuket, and Chiang Mai. The study found two factors that contributed to the food and beverage service innovation during a new normal pandemic. 1) External factors; These include the spread of COVID-19 and the government's

issuance of SHA health and safety standards. 2) Internal factors; including internal reforms of an organization and the use of technology to enhance the efficiency of restaurant operation. The results of the study showed that 6 patterns of service innovations were created to increase the efficiency of restaurant operations during the new normal pandemic. The six patterns consist of; 1. Design and atmosphere of the restaurant, 2. Food safety and hygiene, 3. Technologies applications, 4. Social Responsibility, 5. Human Resources Management and 6. Service process.

**Keywords:** Service Innovation, Food Service Innovation, Service Innovation in Food and Beverages, Restaurant Service Innovation, New Normal

## บทคัดย่อ

งานวิจัยนี้มีวัตถุประสงค์เพื่อศึกษาปัจจัยที่ก่อให้เกิดนวัตกรรมการบริการทางด้านอาหารและเครื่องดื่ม และศึกษาถึงรูปแบบของนวัตกรรมการบริการทางด้านอาหารและเครื่องดื่มของธุรกิจร้านอาหารระดับหรูในยุคชีวิตรุ่งใหม่ ในประเทศไทย งานวิจัยนี้เป็นการวิจัยเชิงคุณภาพโดยใช้การวิจัยเชิงเอกสาร การสังเกตการณ์แบบมีส่วนร่วม และการสัมภาษณ์เชิงลึก กลุ่มประชากรใช้วิธีสุ่มตัวอย่างแบบเจาะจง รวมทั้งเก็บข้อมูลโดยการสัมภาษณ์เชิงลึก จากผู้จัดการฝ่ายอาหารและเครื่องดื่ม หรือผู้จัดการแผนกอื่นที่เกี่ยวข้องกับอาหารและเครื่องดื่ม จำนวนทั้งสิ้น 12 ท่านจาก 12 โรงแรม ใน 4 ที่พักที่ต้องเที่ยวของประเทศไทย กรุงเทพ พัทยา ภูเก็ต และ เชียงใหม่ ผลการศึกษาพบส่องปัจจัยที่ก่อให้เกิดนวัตกรรมการบริการทางด้านอาหารและเครื่องดื่มในยุคชีวิตรุ่งใหม่ 1) ปัจจัยภายนอก อันได้แก่ การแพร่ระบาดของโรคโควิด-19 และการออกมาตรฐานด้านสุขอนามัยและความปลอดภัย SHA ของภาครัฐ 2) ปัจจัยภายในองค์กร อันได้แก่ การปฏิรูปภายในองค์กร และการใช้เทคโนโลยีเข้ามาช่วยเพิ่มประสิทธิภาพการทำงานของร้านอาหาร เพื่อสร้างความเชื่อมั่นด้านสุขอนามัยและความปลอดภัยในการใช้บริการให้กับลูกค้า ผลการศึกษาพบ นวัตกรรมการบริการทางอาหารและเครื่องดื่ม 6 รูปแบบที่ถูกสร้างขึ้นเพื่อเพิ่มประสิทธิภาพการทำงานในห้องอาหาร และเครื่องดื่ม 3) ด้านการนำเทคโนโลยีเข้ามาช่วยในการบริการ 4) ด้านความรับผิดชอบต่อสังคม 5) ด้านการจัดการทรัพยากรบุคคล 6) ด้านกระบวนการบริการจากพนักงาน

**คำสำคัญ:** นวัตกรรมการบริการ, นวัตกรรมการบริการทางอาหาร, นวัตกรรมการบริการในอาหารและเครื่องดื่ม, นวัตกรรมการบริการในร้านอาหาร, วิธีชีวิตรุ่งใหม่

## Introduction

The food and beverage service industry is the main industry that generates tourism revenue. A report from the Department of Business Development found that the spending value of both Thai and foreign tourists on food and beverage ranked third after accommodation and transportation spending. The reputation of Thai food and the concrete support of the government and private sectors are all factors that have driven the restaurant business to grow steadily in the past in the main cities and secondary cities of Thailand (Department of Business Development, 2019). However, the Covid-19 crisis has greatly affected the food and beverage service industry. Revival in this industry is essential to building trust with customers or tourists. To use the food and beverage service again, new forms of service innovations were introduced during this new normal pandemic, such as social distancing, sanitation measures in service, the use of technology to assist in receiving the food orders, and the technologies for payment, etc.

This research focuses on the emergence of service innovation in food and beverages during the Covid-19 crisis. That has adopted various forms of safety and hygiene measures in the restaurant business during the new normal pandemic. These restaurant measures create the confidence for customers to return to the restaurant business and build the confidence for entrepreneurs or the service provider itself. This led to the question in the research were the factors that cause food and beverage service innovation in a new normal pandemic and what does it look like for the patterns of food and beverage service innovation in a new normal pandemic. The results from this research will be useful as a guideline for the management of the food and beverage service industry in the future.

## Research objectives

1. To study the factors that cause food and beverage service innovation during the new normal pandemic.
2. To study the patterns of food and beverage service innovation during the new normal pandemic.

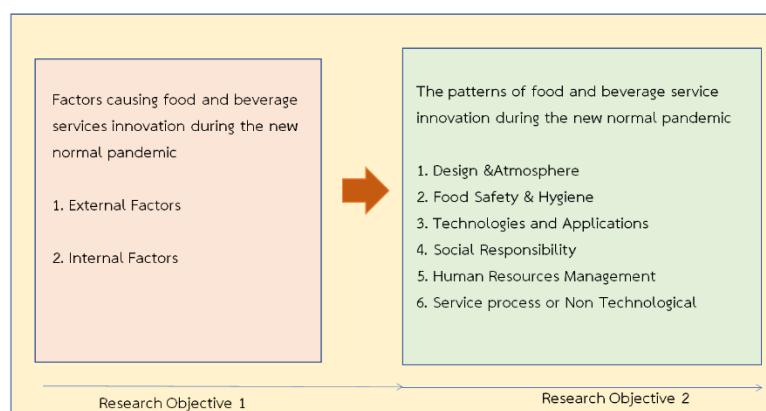
## Scope of the study

This qualitative research study used documentary research, participant observation, and in-depth interviews to provide three rich sources of data.

1. The study began with data collection from documents related to Service Innovation, Food, and Beverage Service Innovation, New Normal. The data was collected from both government and private agencies, including academic reports, research, books, academic articles and journals, and online databases.
2. The participant observation was undertaken at the hotel restaurants during breakfast and lunch operating hours.
3. The data collection approach used semi-structured interviews. Interviews were recorded by the audio recorder and personal notes for 30-45 minutes interview each and later transcribed.

The population is a purposive sampling of the fine dining restaurants of a five-star hotel in Thailand. The data were collected by in-depth interviews with food and beverage managers or management levels who understand the food and beverage operation and their policies. Data were collected from 12 managers of hotel restaurants in 4 tourist destinations in Thailand; Bangkok, Pattaya, Phuket, and Chiang Mai during January-August 2021.

## Conceptual Framework



## Literature review

### Service Innovation

The study of service innovation emerged in the late 1980s by the father of this concept Barras, he suggests that innovation in the hospitality industry should be separated from the factory industry. Because the hospitality industry has its own unique reverse product cycle, Barras (1986) presents a service innovation cycle consisting of three-part;

1. Efficiency improvement, 2. Quality improvement, and 3. For the emergence of new products by focusing on new technologies investments to increase efficiency and quality of work and create new products. Moreover, service innovation also contributes to the development of products, services, and distribution channels. Service innovation is an activity that includes bringing new innovations by using creativity, developing the idea, media use, and goal-building. Those are applied in practice to create new methods. Service innovations add new value to the industry by using technology as the key to solving problems (Gadrey et al., 1995). Service innovations maintain or strengthen the company's image. Barras also said that the technology itself has limitations. As some service innovations themselves do not always rely on technology, the emergence of service innovations may arise from non-technology approaches.

A study of service innovation in the hotel industry in Sengupta and Dev's (2011) study of hotels in India. The results of the study describe the problem-solving process in customers such as rescheduling arrival time, re-arrange restaurant or kitchen set up, or the process of preparing guest rooms can be improved to increase customer satisfaction and increase hotel profits. They named this service innovation "Model 7-1". This work also describes the conceptual framework of these emerging service innovations. Similar to Mahmoud, Robert, and Patrick (2017), their study unveiled that a service company's ability to achieve customer satisfaction is dependent on how telecommunication operators harness and deploy their service innovation activities. In addition, the study showed that customer value creation mediates the relationship between service innovation and customer satisfaction. Thus, service innovation must create value for customers to enhance customer satisfaction. In addition, Junkrachang, Chareanporn, Chaisanit, and Klakayan (2021) showed that food storytelling is one of the service innovation in the hospitality business. Their study identified food stories and the interaction between chefs and customers increase the competitive advantages in Chefs' table restaurants.

Makoto Usui (2012) compiled his ideas to define and hypothesize the term "Service Innovation" as follows: Service innovation is to enhance efficiency and increase the effectiveness of service levels and create value-added. Makoto Yusui (2012) said that successful service innovation management must take into account 4 factors: 1) Use the concept "customer comes first". 2) Reforming the existing company's framework.

3) Creating an infrastructure that is a platform that is suitable for the service business. 4) Service with the nature of participation in the collective thinking and co-existence of the company with the customer or the acceptance of opinions. Sometimes the customer wants to participate in the creation of a new service.

From the aforementioned meaning, it can be concluded that service innovation is bringing new ideas, new operating procedures, or technologies to create customer satisfaction. Service innovation is also increasing the effectiveness of the service and adding value to the business. Also, service innovation can occur from the 1) Internal factors such as reforming the existing company's framework, and creating infrastructure platforms for the service business. 2) External factors such as using the customer wants to participate in the creation of a new service (Makoto, 2012).

### **Food and Beverages Service Innovation**

Jen-Son Cheng and Chia-Wei Liu (2015) have studied the characteristics (Typology) of service innovation in the food and beverage industry in Taiwan. Their work categorizes service innovations into two categories: 1. Innovation principle is the concept of new service design, consisting of: 1.1 Integration 1.2 Expandability 1.3 Details. The integration concept is resource management and simplifies the service process. For example, the use of POS systems to help in the integration between food ordering, food preparation, serving food, and payment process into a single system. The concept of expandability is the expansion of products to other services. For example, Chocolate companies can serve coffee or tea for free of charge to their customers and raise the standard of good service. The third aspect, customer details are trying to understand the customers. For example, a restaurant can record a customer's birthday and send an invitation to the customer before his or her birthday. This innovative service will make customers feel special. 2. Innovation Regime is divided into using Information and Communications Technology (ICT) to develop new service innovations or the introduction of new technologies to enhance the efficiency or increase the quality of services. Non-technological innovation to help develop service innovation, for example, service providers can convey service and corporate culture to customers by creating a special personal touch by using communication strategies. With this concept, the service is more flexible and more impressive to the customers.

A study by Milan Ivkov, Ivana Blešić, Karolina Simat, Dunja Demirović, Sanja Božić, and Vidoje Stefanović (2016), is an exploratory study of innovation in the restaurant industry through the attitudes of managers of full-service dining restaurants in three countries. Innovations in restaurants can be found in 5 important areas as follows: 1) Design and atmosphere such as interior, exterior, colors used, music played in the restaurant, etc. 2) Food and beverages such as food size, new ingredients, allergen-free, etc. 3) Use of technology and applications such as PMS systems, POS systems, online booking systems, various applications on the phone, and the use of social media in various channels, etc. 4) Responsible Business such as business ethics, environmental friendliness, waste reduction or recycling, etc. 5) Human resources management such as educating about customer care and service, relationship with the organization, job inspiration, kitchen hygiene knowledge, training on different products in the shop, etc.

To summarise, the study of the pattern of food and beverage service innovation can be found in the 5 areas above (Milan et.al, 2016). Also, it is possible to see in Non-technological area of the restaurant (Jen-Son Cheng and Chia-Wei Liu, 2015)

### **New Normal**

Tourism and hospitality enterprises around the world reported the greatest pressure and loss; financial problems were most commonly seen in restaurants and hotels followed by the greatest decrease in their workforce, thereby contributing to their closure in most countries (Kim & Lee, 2020). Under this high growing threat of the pandemic and due to social distance criteria, consumers notably avoid visiting restaurants and bars. So, the restaurant industry was one of the industries most affected by the COVID-19 pandemic (Gössling et al., 2020).

Since covid-19 is a current infectious disease, there are not so many studies on the restaurant during covid-19. Found that Elshaer (2021) studied the restaurant's response to the Covid-19 Pandemic in Egyptian Independent restaurants. The study found that there are four aspects used in adapting restaurants in response to Covid-19. Which are 1) leadership practice e.g. the role of managers to encourage their employees to complete their tasks with good safety and hygiene practices. 2) managing stakeholders' cooperation e.g. sharing kitchen space, supply with nearby enterprises or partnering with others for

purchasing materials, etc. 3) operation procedures that have been changed to be more consider on sanitation issues e.g food safety and hygiene, social distancing, the technology used for contactless, etc. and 4) marketing the reputation by using social media to strengthen the restaurants' cleaning procedures and develop online food delivery service.

It can be concluded that new normal is sometimes called a new way of life, a new lifestyle. The new normal is happening from the loss of the epidemic during the Covid-19. People start changing their behavior to survive safely in terms of food, dress, public health hygiene, education, communication and doing business, etc. In terms of business, consumers are increasingly interested in the standards of cleanliness and safety of products and services. Technology is used to help work for contactless, convenience, and sterilization of products and services, while the technology has to be safe and maintain privacy for customers. The construction technology is shifting toward integrated software platforms that better serve customer needs. Businesses should be conducive to environmental protection. Consumers have access to goods and services without exception and tend to pay more attention to health issues.

## **Research Methodology**

This qualitative research study used documentary research, participant observation, and in-depth interviews to provide three rich sources of data. The study began with data collection from documents related to Service Innovation, Food, and Beverage Service Innovation, New Normal. The data was collected from both government and private agencies, including academic reports, research, books, academic articles and journals, and online databases. Second, participant observation was undertaken at the hotel restaurants. The third data collection approach used semi-structured interviews. Interviews were recorded by the audio recorder and personal notes and later transcribed.

The 12 samples are the purposive sampling of the fine dining restaurant of five-star hotels in Thailand. The data were collected by in-depth interviews with 12 food and beverage managers or management levels who understand the food and beverage operation and their policies. Most of them are relatively insecure and difficult to access information without personal relationships or prior acquaintances. Therefore, it is necessary to get advice from acquaintances for interview requests or to gather insights. Data were collected from 12 managers of 12 hotel restaurants in 4 tourist destinations in Thailand;

Bangkok, Pattaya, Phuket, and Chiang Mai from January-August 2021. Data analysis for this study comprised content analysis of interview transcripts, observation file notes, and all collected documents. Furthermore, the analysis was based on thematic analysis by using the constant comparative method to identify and refine new categories. Examining research data to establish the credibility of research findings uses a triangular data validation method. Triangulation is a method that reflects that research results analyzed from the collected evidence are accurate, credible, and factual. Comparisons are made from multiple perspectives to determine and check the accuracy of the information. The validity of the data was assured by reviews and comments from different experts (Khongsawatkiat, 2013; Havanon, 2009).

## Study Results

### 1. Factors causing food and beverage services innovation during the new normal pandemic

The results of the study revealed that the factors that cause food and beverage service innovation during the new normal pandemic are divided into 2 factors- external factors and internal factors.

#### 1.1 External Factors

1.1.1 Covid-19 epidemic: As a result of the situation of the epidemic of the Covid-19, the number of foreign tourists visiting Thailand in the first quarter of 2020 decreased by 38.01% from the same period in 2019. The tourists from East Asia dropped the highest rate of 46.12% from the same period in 2019. The number of foreign tourists that generate the highest income for Thailand is still Chinese tourists, followed by Russia, the United Kingdom, Malaysia, Japan, France, the United States, and Germany, respectively. The revenues from all countries declined compared to the same quarter of 2019, especially Chinese tourists which dropped 63.96%. While the number of Thai visitors traveling domestically decreased by 30.77 percent compared to the same period last year. As a result, the spending value of Thai visitors traveling domestically in the first quarter of 2020 decreased by 31.53% (Board of Economics Tourism and Sports, 2020). Based on interviews with the samples of 12 hotels, it was found that all hotels have been adjusting due to the COVID-19 pandemic in Thailand since January 2020.

*“Our guests have decreased a lot. But we are preparing online training during the closing of the hotel. Learn new measures from companies that will continue to work in the New Normal era...”*  
*Manager no.3 said similar to other restaurant managers*

The government's declaration of a state of emergency on the 26th. March 2020. As a result, many hotels and restaurants were closed during this period and can be reopened around the mid of 2020. With the epidemic situation and the announcement of lockdown having a huge impact on the service business, many hotels announced work from home policy. The situation is so severe in some hotels that they announced the leaving without pay, cutting staff salaries, or laying off some employees during a lockdown.

1.1.2 SHA standards: The government sector under the work of the Ministry of Tourism of Thailand, Ministry of Tourism and Sports together with the Ministry of Health has launched a project to raise the Thai tourism industry safety standards called SHA (Amazing Thailand Safety & Health Administration) by bringing safety measures in public health combined with quality service standards of the establishment. To assure tourists that everyone will have a good experience and sanitation safety from products and services in Thailand. In this regard, restaurants that wish to participate in the SHA will need to improve their service patterns to be in line with the preliminary standards set by the project. There are covering the following details: Hygiene of the workplace and its facilities, cleaning equipment to prevent the spread of viruses and bacteria, protection for workers, and the code of conduct for restaurant owners and service providers (Amazing Thailand Safety & Health Administration, 2020). From research, it was found that all 12 hotel restaurants joined the SHA program to receive sanitary safety standards from the organization of the state and ensure that the customers will come back to use the service again.

*“We are one of 20 hotels in Chiangmai cooperating with TAT and the Department of Health to request the SHA logo. This makes customers confident of our safety and hygiene.”. Manager no.7 said*

## 1.2 Internal Factors

1.2.1 Reforming within the organization from the existing operation. Every hotel is starting to reform the organization by paying more attention to safety standards and hygiene to prevent the spread of COVID-19 and build confidence for customers and employees. Apart from following the government campaign (SHA), the study showed that

10 of the 12 hotels had measures to ensure safety and hygiene under self-made hotel projects such as the “Commitment to clean” from Marriott hotels, “Stay with Peace of Mind” from Anantara. While, IHG hotels apparently, the health safety care program has been developed from the original “IHG Way of Clean” (2015) to “IHG Clean Promise” (2020). Their working principles are consistent with the standards of the World Health Organization, Centers for Disease Control & Prevention, and other public health organizations based on local in each country around the world. While the local chains or Asian brands such as U Hotels & Resorts, have adapted by introducing the “We Care” program and Dusit Thani hotels launched the “Dusit Care” program to manage on hygiene safety of customers and employees. Meanwhile, Two Thai five-star independent hotels have raised their in-house hygienic safety standards in line with the Thai government campaign (SHA). The reforming of organization by issuing sanitary safety measures under various projects that the company has set. These brought about the development of new working procedures in each department within the hotel restaurants.

1.2.2 The introduction of new technologies to increase sanitary safety standards. The study found that all 12 hotels have used technology to help them work more conveniently in terms of communication between people in the organization. Such as the use of technology to help in organizing training and knowledge on measures to prevent the spread of the virus. For example, there are training courses to educate about working in a new normal pandemic in the form of E-learning. Employees can study online from home to learn about new measures and methods of work. In addition, technology is used in marketing communications to ensure that customers are aware of the various safety standards established by the hotels. To ensure that hotels are ready to return to welcome customers again. These forms of public relations are conveyed through articles, photos, or videos through various channels including hotel websites, Facebook and Youtube, etc. At the same time, the restaurants use technology to help integrate the service process to be more convenient and prevent a confrontation between service providers and customers for example; using an online booking system, online food menu, e-payment usage, customer tracking, or online service evaluation.

**Table 1: The table theme of the factors causing food and beverage services innovation during the new normal pandemic**

Theme	Subtheme
<b>1. External Factors</b> <ul style="list-style-type: none"> <li>● Covid-19 epidemic</li> <li>● SHA</li> </ul>	<ul style="list-style-type: none"> <li>● Lockdown/ temporary close restaurant/Work from home/leave without pay/non-pay status/ cutting salaries/ lay off</li> <li>● Follow SHA standards to ensure the customers of the sanitation safety in restaurants</li> </ul>
<b>2. Internal Factors</b> <ul style="list-style-type: none"> <li>● Reforming within the organization</li> <li>● New technologies to increase sanitary safety standards</li> </ul>	<ul style="list-style-type: none"> <li>● In house safety &amp; hygiene measures</li> <li>● New working procedures during the new normal pandemic</li> <li>● Online training/ E-learning/online marketing/online reservation/online food menu/E-payment/Customer tracking system/ online service evaluation</li> </ul>

## **2. The patterns of food and beverage service innovation in the fine dining restaurant during the new normal pandemic**

2.1 Design and Atmosphere of the restaurant: The results of the study indicated that restaurant service innovations occurred in the new normal pandemic to build trust in service to customers and service providers. Physically, the design of the shop and the atmosphere inside the restaurant has been modified from the original. For example, there is providing a one-way entrance to the shop as the screening point. There is a service point for body temperature measurement. Inside the restaurant keeps a minimum distance of 1 meter between dining tables or a limited number of people. An open-air service area or an air circulation facility is one of the compulsories of restaurant service recently. There is a hand washing service point or alcohol hand sanitizer for cleaning hands before entering the restaurant and various areas in the restaurant. The service area is cleaned regularly by the new strict working procedure.

2.2 Food Safety and Hygiene: The study found that there was a change in food and beverage patterns during a new normal pandemic. Food hygiene is becoming more and more important, such as strict purchasing of safe & hygiene raw material sources, food production hygiene, measures to prevent food contamination, emphasis on food hygiene, correct food temperature, and having containers to cover food completely throughout the service to prevent contamination. Service providers wear masks throughout the service and clients wear masks while walking in restaurants or other public areas in the restaurant.

2.3 Technologies Applications: The use of technology to assist in the service process, every hotel restaurant is using new technology to increase the standard of safety & hygiene. By using technology to help in the integration of service processes to be more convenient. Also, technology assists to prevent a confrontation between service providers and customers or reducing exposure during services to maintain preventive measures against the spread of COVID-19. There is a new working platform during the new normal such as using online reservation systems, online food menus, e-payments, customer tracking, online customer reviews, and online sales marketing channels. In addition, there will be technology that will help clean the restaurant to increase cleanliness and build confidence for both service providers and customers, such as cleaning with a UV and ozone cleaner. This machine can clean the surface more efficiently than using human force.

2.4 Social Responsible Business: Every hotel restaurant has changed its working process to pay more attention to the wider society. There is a project to help the economy in the community after the Covid-19 situation by subsidizing raw materials from local farmers to cook. In addition, there is also the matter of waste management by separating the infectious waste such as used face masks, and used gloves. Therefore, it does not cause harm to others and is convenient to manage.

2.5 Human Resources Management: Every hotel restaurant provides training for employees to have better service hygiene to be safe from the epidemic within the organization and between the organization and the customers. Moreover, the emergence of cleanliness measures during the new normal creates a new working procedure in each department. Therefore, there is requiring more training to educate employees than before.

2.6 Service Process: This is a newly emerged service process in a new normal pandemic. It can be regarded as the development of service processes by restaurant staff

to increase the quality of service and build confidence in the safety hygiene of food and beverages. The results of the study indicated that all 12 hotels were using individual services to replace the buffet service where guests serve themselves. This is to reduce exposure and maintain more restaurant safety hygiene standards.

### **Conclusions and discussion**

The study found two factors that contributed to the food and beverage service innovation during a new normal pandemic. 1) External factors; These include the spread of COVID-19 and the government's issuance of SHA health and safety standards. 2) Internal factors; including internal reforms of an organization and the use of technology to enhance the efficiency of restaurant operation. They use technology to build confidence in the safety and hygiene of the restaurant service similar to the work by Elshaer (2021), Makoto (2012). Also, this is consistent with the work of Makoto (2012) that successful service innovation management must take into account the four factors: Reforming the existing company's framework, creating an infrastructure or platform that is suitable for the service business and customer comes first. However, what was not found in this research was the idea of "the participation between a company and their customer" that emphasizes customer needs and the engagement between the company and their customers in the development of service innovations. The results of the research show that the Covid-19 outbreak is a sudden occurrence. Then, the companies need to urgently find a solution to this problem to keep their business running. The various reforms in the organization or the use of technology to help increase work efficiency are handled urgently without Customer Research and Development as they should be.

The results of the study pointed out that the food and beverage service innovation model is different from the normal situation without an epidemic. These 6 patterns of service innovations were created to increase the efficiency of restaurant operations. These service innovations are occurred to ensure safety and hygiene for customers and service providers during a new normal pandemic. The six patterns consist of; 1. Design and atmosphere of the restaurant 2. Food safety and hygiene 3. Technologies applications 4. Social Responsibility 5. Human Resources Management 6. Service process. The result of the study indicates that these 6 patterns of service innovations in the restaurant have emerged

during the new normal pandemic. This does not replace traditional service innovations. It is an addition to increasing the efficiency and effectiveness of the restaurant service operations in the sense of safety and hygiene standards. These can be role models to develop service innovation in other kinds of restaurants.

**Table 2: Synthesized table of factors causing and patterns of food and beverage service innovation in the fine dining restaurant during the new normal pandemic.**

Factors causing food and beverage services innovation during the new normal pandemic	The patterns of food and beverage service innovation during the new normal pandemic
<p><b>Factors causing food and beverage services innovation during the new normal pandemic</b></p> <p><b>1. External Factor</b></p> <ul style="list-style-type: none"> <li>• Covid-19 epidemic</li> <li>• SHA</li> </ul> <p><b>2. Internal Factors</b></p> <ul style="list-style-type: none"> <li>• <b>Reforming within the organization</b> to increase safety and hygiene standard, build confidence for customers and employees</li> <li>• <b>Using new technologies</b> to increase safety and hygiene standards such as online training, online sales marketing and other applications for service operation etc.</li> </ul>	<p><b>The patterns of food and beverage service innovation during the new normal pandemic</b></p> <p><b>1. Design &amp; Atmosphere</b> e.g. one-way entrance, screening points, measuring body temperature, alcohol stations, hand sanitation, spacing between dining tables, Air-circulation, food partitions etc.</p> <p><b>2. Food Safety &amp; Hygiene</b> e.g. preventing food contamination, focusing on the temperature of the food served, having a container of food cover, reliable of the suppliers, safety and hygiene of food production and service etc.</p> <p><b>3. Technologies and Applications</b> e.g. online booking systems, online food menu, E-payment , customer tracking, online service evaluation, online sales &amp;Marketing, UV and ozone cleaner machine etc.</p> <p><b>4. Social Responsibility</b> e.g. subsidizing raw materials from local farmers, waste management for the infectious waste etc.</p> <p><b>5. Human Resources Management</b> e.g. online and onsite safety hygiene training, training new normal working procedures.</p> <p><b>6. Service process</b> the newly emerged service process in a new normal pandemic e.g. individual or private service, chef private service, the procedure of cleaning during new normal.</p>

### Recommendations and future research

This research was studied in the context of fine dining restaurants in five-star hotels. The development of food and beverage service innovation is seen in this restaurant type due to these restaurants meet the standards of a five-star hotel with a relatively high working criterion. The food and beverage service innovation model derived from this research can be used as a model for other restaurants to increase the safety hygiene efficiency of the restaurant service. However, the research team recommends further study of food and beverage service innovations can do in other types of restaurants such as Fast-food restaurants, Street food, etc. This may be found in the different factors according to each context.

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