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The Service Innovation Model of Aromatherapy Industry-dyadic perspective

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Abstract: This study aimed to explore the service innovation model of the aromatherapy industry in Taiwan. The different dimensions of innovation in the process of development constituted the foundation of our classification scheme. The four dimensions of service innovation proposed by Avlonitis, Papastathopoulou, and Gounaris (2001, p.324-342) were adopted to develop the main norms for selection of this study. Then, the researcher's practical experience was combined with the dyadic perspective of different backgrounds of peer businesses and customers to delve into the industry and its future development. This study first analyzed the talks in the form of expert interviews and then established a theoretical framework and designed a questionnaire. The questionnaires were distributed among businesses and customers, and the weights of the dimensions were analyzed according to the research results based on the Analytic Hierarchy Process (AHP).

The research subjects included 12 businesses in the aromatherapy industry and 12 aromatherapy customers. The AHP expert questionnaire was employed to discuss the relative weights of the dimensions so as to understand businesses' and customers' interpretations of and in-depth views on service innovation in the aromatherapy industry.

Keywords: *Aromatherapy, Innovation, Service innovation, Dyadic perspective.*

Introduction

Preventive medicine plays a main role in the 21st century, and the demand on medicine and health care has become correspondingly stronger. Currently, combining adjuvant and alternative therapies with modern medicine and preventive medicine has become popular and has been widely applied. According to the literature, aromatherapy attracted great attention in the late 20th century and has prevailed in the 21st century. Because of its importance, popularity and wide application, it is recognized as a scientific therapy (Esposito et al., 2014, p.79). People in the modern era face increased life pressure and thus suffer physical and mental problems and imbalanced hormone secretion. Aromatherapy can help neural cells resume functions, alleviate physical and mental fatigue, and strengthen our immune systems. In the past, many experts and scholars were committed to studies on the application and medical effects of essential oils and demonstrated their positive effects. However, few substantial efforts have been made to facilitate the market exposure and business expansion of the aromatherapy industry.

Aromatherapy is one of the supplementary therapies which uses essential oils as the main medical agent to cure diseases. An increase has been seen in the application of essential oils (EO) in many industries, including food, beverages, medicine, aromatherapy, sanitation, and cosmetics (Al-Dayel et al., 2011, p.1-11). Some enterprises have even added odors into commodities to increase profits, and that has become a trend (Lin and Sun,

2018). In the global aromatherapy market, sales volume is expected to rise from USD 4.3521 billion in 2016 to USD 8.2131 billion in 2024, and the compounded annual growth rate is expected to be 8.4% during the period from 2017 to 2024 (Business Wire, 2017).

With the increasingly frequent global economic interaction the studies on service innovation are interdisciplinary ones, and innovation requires many creative ideas. It is safe to say that all industries need service innovation. With the advancement of Internet communication, robot-making technologies, and global competition, organizations are trying various innovative designs to deploy their businesses.

In the past decade, marketing scholars and enterprises discussed marketing need, how sales persons can join in the value making process, and the importance of sales persons. What these debates share is that as custom needs increase in the trend of globalization, the distribution of purchase and sale outlets, the quantity of supplies, technical progress, competition and challenge, and market complexity caused by buyers' acquisition of information have increased on a daily basis (Hartmann et al., 2018; Hunter and Perreault, 2007, p.16-34; Jones et al., 2004, p.439-456; Rackham and DeVincetis, 1998; Schmitz and Ganesan, 2014, p.59-77; Sheth and Sharma, 2008, p.260-269). All this literature emphasizes the importance of the internal and external participants of enterprises in marketing and the process of marketing (Bolander et al., 2015; Plouffe et al., 2016).

In the past, scholars focused on product and service quality, customer satisfaction, and technological applications in studies on service innovation; however, the number of studies on the application of service innovation to the aromatherapy industry is still small. To find out the effects of service innovation on the aromatherapy industry, this study adopted the literature research method, the dyadic perspective of the businesses and customers of the aromatherapy industry, and the AHP to analyze the relative importance of the dimensions of the service innovation model of the aromatherapy industry in Taiwan.

Literature Review

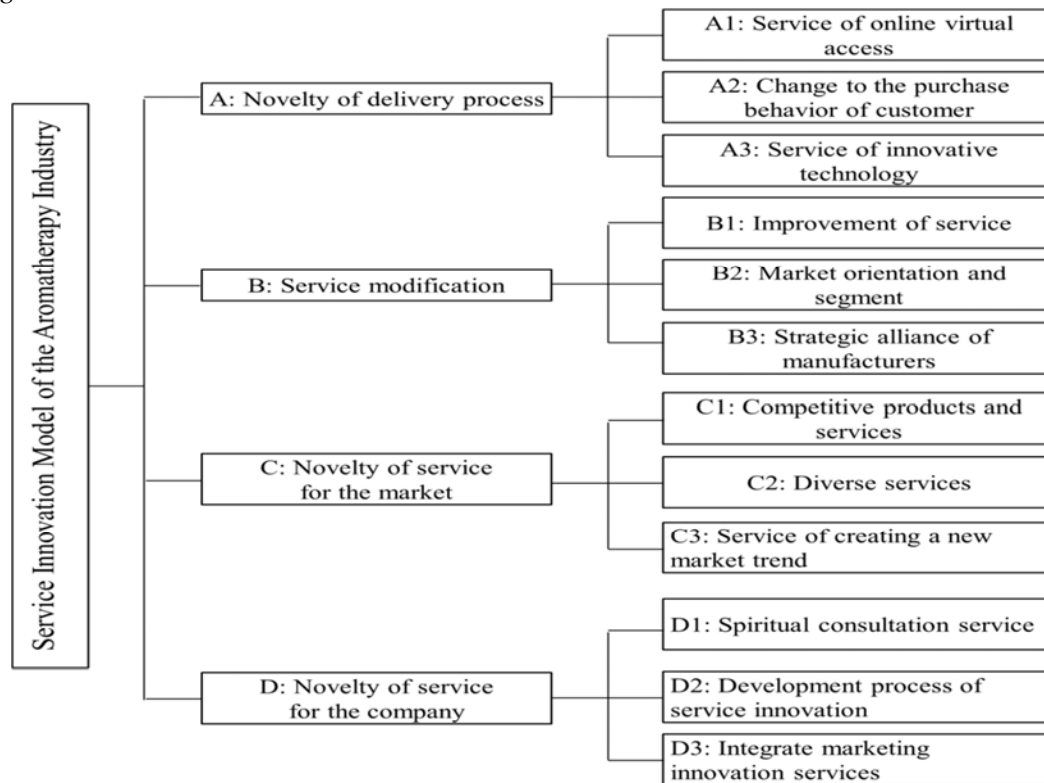
This study drew on the so-called golden triangle experience from the manufacturing industry in Taiwan (using operation management optimization, the combination of market and customers, and business innovation) to establish the service innovation model of the aromatherapy industry. Service innovation can be defined as innovation in the concept, content, or form of service. In other words, enterprises must constantly broaden the service field and deepen services with new service ideas, forms, contents, and methods to improve service. This study believed that the service innovation of the aromatherapy industry must be measured through four aspects: the improvement of the operation process, the modification of supporting services, the market's acceptance of new services, and employees' support for new services. In other words, innovation-oriented activities must be held according to the four dimensions of service innovation proposed by Avlonitis, Papastathopoulou, and Gounaris (2001), including a new client interface, "novelty of service for the market", a new service concept, "novelty of service for the company", a creative technical item, "service modification", and a new service delivery system, "novelty of delivery process". These four activities were taken as the norms to measure the service innovation of the aromatherapy industry.

Research Framework

This chapter discusses the exploration, development, and construction of the Study of the Service Innovation Model of the Aromatherapy Industry. The main norms of selection of this study were derived from the four dimensions of service innovation developed by

Avlonitis, Papastathopoulou and Gounaris (2001), and the industry and its future development were explored according to the practical experience of the researcher and the interviews with peer businesses and customers from the perspective of the dyadic perspective. By doing so, this study attempted to understand businesses' and customers' interpretation of and in-depth views on service innovation in the aromatherapy industry.

Figure 1: Research Framework



(Source: Avlonitis, Papastathopoulou and Gounaris, 2001, p.324-342)

Research Subjects and AHP Questionnaire Development

The construction of the service innovation measurement model of the aromatherapy industry of this study was divided into two parts. First, the main and secondary norms for the evaluation were made for the preliminary hierarchy of the service innovation model of the aromatherapy industry, and the original preliminary hierarchy was modified into a defined hierarchy. Then, the main and secondary norms of evaluation in the defined hierarchy were combined with Expert Choice 2000, a piece of decision-making support software, to calculate the AHP weights.

The selection of the research subjects was as follows:

Opinion interviews with businesses

This study interviewed practical businesses which could make in-depth descriptions of the research topic, with the hope the service innovation model of the aromatherapy industry of this study would truly meet practical needs. First, the researcher contacted the interviewees for their permission to be interviewed via email, Line and telephone. Then, the times and locations for the interviews were set.

Subjects of the AHP Questionnaire

The questionnaire of this study was designed for the businesses and customers of the aromatherapy industry in Taiwan. A total of 24 copies of the AHP questionnaire were distributed, with 12 copies for businesses and the remaining 12 for customers. All of the 24 copies were retrieved. This study aimed to be an empirical study of the service innovation models of the aromatherapy industry in Taiwan.

Empirical Results of the Service Innovation Model of the Aromatherapy Industry

First, this study tested the consistency indicator and rate of the retrieved AHP questionnaires to check if the AHP questionnaire was appropriate. If the test results showed that it was appropriate, the relative weights of the main norms of evaluation and evaluation indicators in the AHP questionnaire would be calculated to obtain the empirical analysis results.

Consistency test

The consistency test of this study was based on the method proposed by Saaty (1980). According to Saaty, if CR value is close to 1, it means that the test is a random one; if the CR value is close to 0, it indicates that the consistency is high. In principle, if $CR \leq 0.1$, the requirement for consistency is met; if $CR > 0.1$, it means that the results of the test are inconsistent and that another test needs to be conducted.

In this study, 24 questionnaire copies were distributed, with 12 copies given to businesses and the remaining 12 given to customers. All copies were retrieved. According to the test results, all the AHP questionnaire copies met the requirement for consistency and were thus valid.

Calculation of relative weight

After the consistency of the questionnaire was tested, the relative weights of the main norms of evaluation and evaluation indicators were calculated (Table 1, Table 2; Figure 2, Figure 3). The results of the calculation were interpreted as follows:

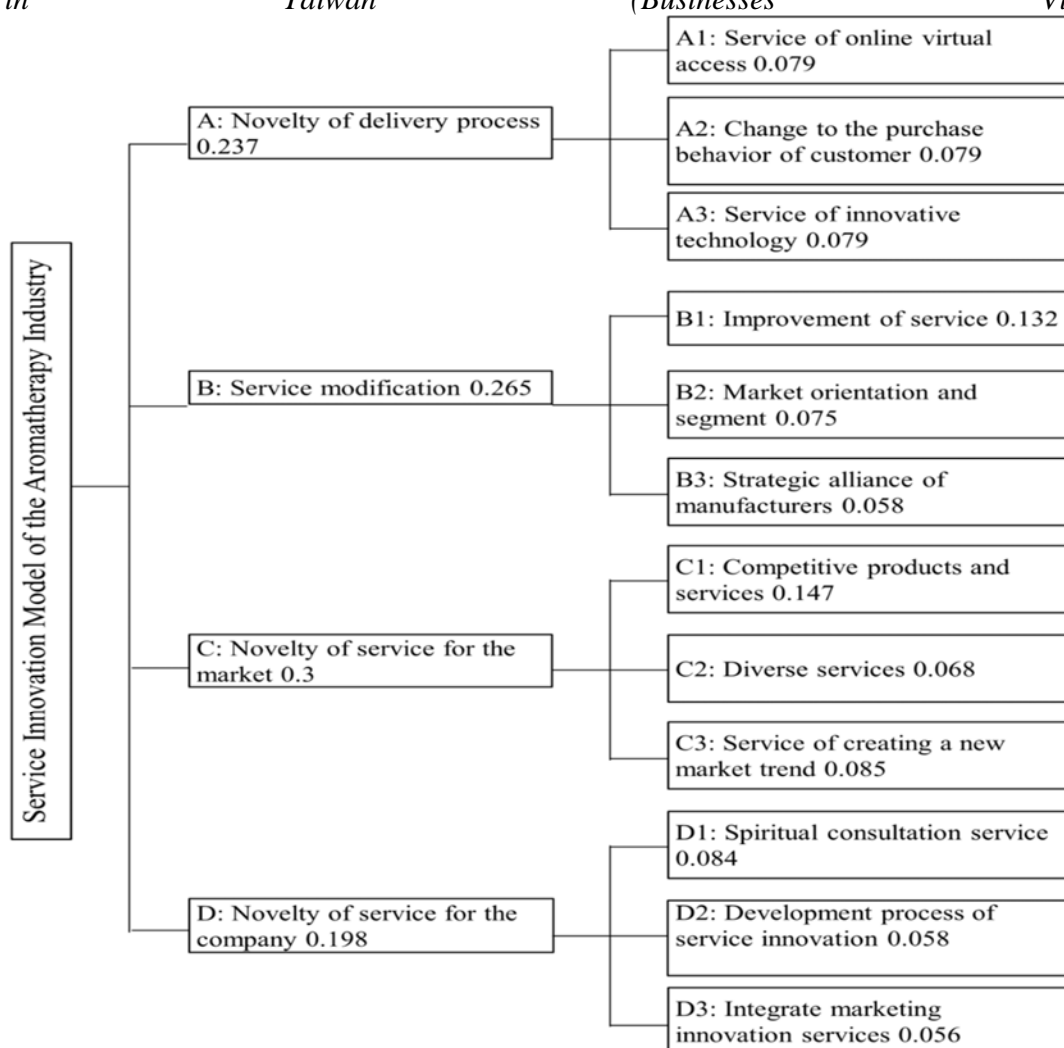
Table 1 Relative Weights of the Main Norms of Evaluation (Businesses of the Aromatherapy Industry)

First Level (Main Dimension of Evaluation)	relative weight	C.I. Value	C.R. Value	Ranking
Novelty of delivery process	0.237	0.001	0.001	3
Service modification	0.265			2
Novelty of service for the market	0.3			1
Novelty of service for the company	0.198			4

Table 2 Relative Weights of the Main Norms of Evaluation (Customers of the Aromatherapy Industry)

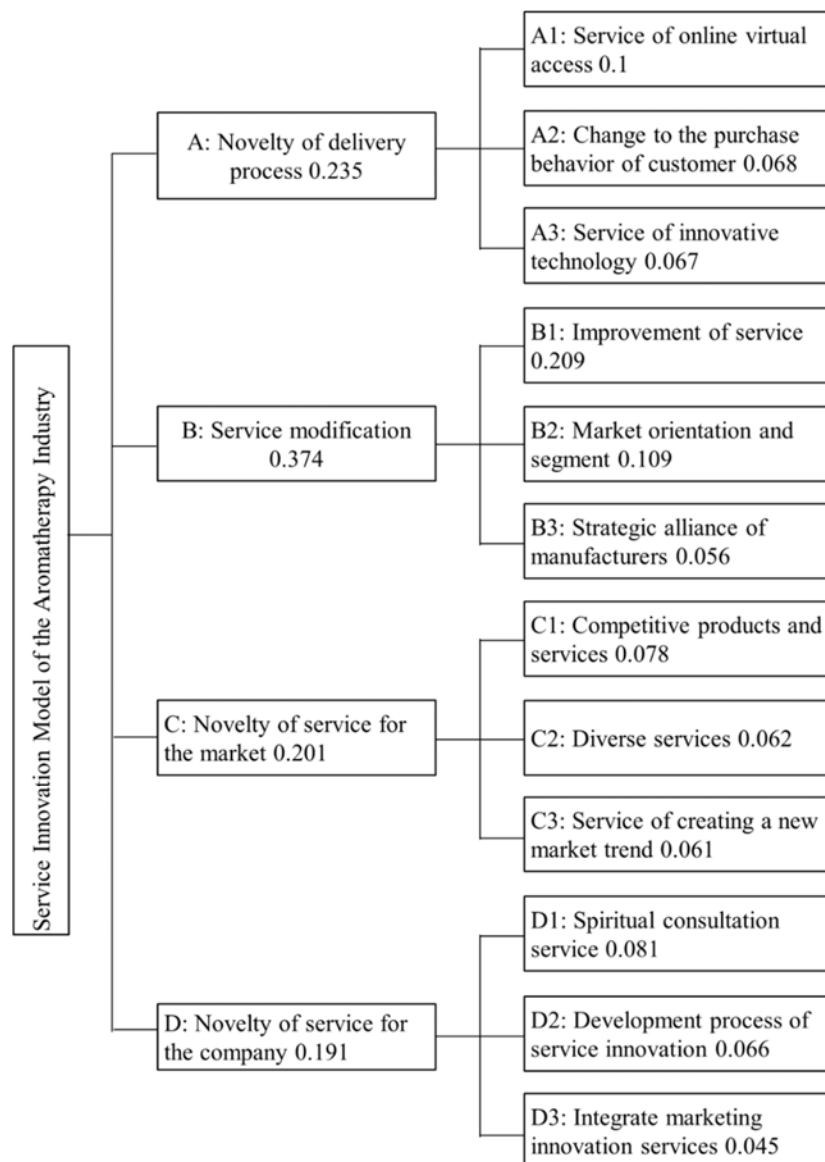
First Level (Main Dimension of Evaluation)	relative weight	C.I. Value	C.R. Value	Ranking
Novelty of delivery process	0.235	0.001	0.001	2
Service modification	0.374			1
Novelty of service for the market	0.201			3
Novelty of service for the company	0.191			4

Figure 2: Relative Weights of the Service Innovation Model of the Aromatherapy Industry in Taiwan (Businesses' Views)



(Source: Avlonitis, Papastathopoulou and Gounaris, 2001, p.324-342)

Figure 3: Relative Weights of the Service Innovation Model of the Aromatherapy Industry in Taiwan (Businesses' Views)



(Source: Avlonitis, Papastathopoulou and Gounaris, 2001, p.324-342)

Results and Discussion

The 21st century is an era of competition for the service industry as well as the aromatherapy industry. Aside from maintaining quality, enterprises need to offer new services according to the change to the global market. Businesses must adjust their internal conditions in response to the changing external environment. Only by achieving service innovation can they push forward the transformation of their internal organization and thus enhance their competitiveness.

Research propositions

Proposition 1: Among the main dimensions of the service innovation model of the aromatherapy industry in Taiwan, “novelty of service for the market” was the most important for businesses among the first level of the main evaluation norms. For customers, the most important one was “service modification”. Both agreed that “novelty of service for the company” was the least important.

Proposition 2: Among the main dimensions of the service innovation model of the aromatherapy industry in Taiwan, the three secondary dimensions of “novelty of delivery process”, namely “service of online virtual access”, “change to the purchase behavior of customer” and “service of innovative technology” had the same weight, showing that they were equally important for the businesses. For the customers, “service of online virtual access” was the most important. Enterprises’ greater investment in cloud services will have positive effects on service innovation, perceived value, brand image, customer satisfaction, and customer loyalty.

Proposition 3: Among the main dimensions of the service innovation model of the aromatherapy industry in Taiwan, “improvement of service”, a secondary dimension of “service modification”, was the most important for businesses and consumers. Influenced by customers, competitors, relevant industries and the external environment, commodities are publicized with special marketing strategies in terms of quality, payment requirements, and after-sale service. This will lead the aromatherapy industry into a new market and improve the operation performance of the aromatherapy industry.

Proposition 4: Among the main dimensions of the service innovation model of the aromatherapy industry in Taiwan, “competitive products and services”, a secondary dimension of “novelty of service for the market”, was the most important for businesses and consumers. This indicated the expectation of demand of the aromatherapy industry on service innovation. Changing the purchase behavior of customers with apps is a trend, but it is difficult to popularize at present because the majority of customers with a solid financial foundation are older and are reluctant to accept new technologies. Some elderly customers are unfamiliar with how to use smart phones and access the Internet.

Proposition 5: Among the main dimensions of the service innovation model of the aromatherapy industry in Taiwan, “spiritual consultation service”, a secondary dimension of “novelty of service for the company”, was the most important for businesses and consumers.

Suggestions and Research Limitations

This study was a preliminary discussion on the aromatherapy industry through practical and theoretical demonstrations, but it still needs to be improved. Therefore, the following suggestions were proposed for future studies.

1. The scale of this study was designed on the basis of the four dimensions of service innovation developed by Avlonitis, Papastathopoulou, and Gounaris (2001). Aside from the subjective indicators for the interviewees, measurable objective indicators for experts and scholars can be added. Additionally, it is suggested that an interview be held with practitioners in the industry and a questionnaire for experts and scholars be made and revised by experts and scholars in the academic and business communities to make the scale more complete and rigorous.
2. The AHP questionnaire of this study was distributed among 12 businesses and 12 customers. The number of the respondents was too small. It is suggested that future studies seek more interviewees and have an in-depth analysis of and discussion on the topic of this study with other theoretical frameworks of management.
3. Because of some factors, all the respondents who completed the scale of this study were either businesses or customers of the aromatherapy industry in Taiwan. As a result, the external validity was restricted. It is suggested that future studies solve this

problem and advance the research on the service innovation of the aromatherapy industry.

Conclusion

1. According to the results obtained under the measurement framework of the dyadic perspective, “novelty of service for the market” was the most important for the businesses, while the customers attached the greatest importance to “service modification”. Both agreed that “novelty of service for the company” was the least important. This revealed that the operation process norms of the aromatherapy industry are widely accepted and have been followed for many years. If enterprises want to create new operation processes, they cannot do it all by themselves. In the measurement model of service innovation of the aromatherapy industry in Taiwan, “service modification” was the main evaluation norm most valued by the customers as well as the secondary main evaluation norm for the businesses.
2. According to the results obtained under the measurement framework of the dyadic perspective, there were three evaluation indicators in the main evaluation norm of “service modification”, including “improvement of service”, “market orientation and segment” and “strategic alliance of manufactures”. Both customers and businesses registered the highest weight for “improvement of service”. As has been mentioned above, if major breakthroughs are expected for the service model of the aromatherapy industry and efficiency is to be increased, enterprises have to offer better services through constant modification to assure and improve quality.
3. According to the results obtained under the measurement framework of the dyadic perspective, there were three evaluation indicators in the main evaluation norm of “novelty of service for the market”, including “competitive products and services”, “diverse services” and “service of creating a new market trend”. Both customers and businesses registered the highest weight for “competitive products and services”, showing the expectations and demands for the service innovation of the aromatherapy industry. Enterprises need to have various operation strategies, increase the number of cooperative accesses, diversify products and business models, apply financial technology, and expand services to create a greater development space for the aromatherapy industry and become outstanding.
4. According to the results obtained under the measurement framework of the dyadic perspective, there were three evaluation indicators in the main evaluation norm of “novelty of service for the company”, including “spiritual consultation service”, “development process of service innovation” and “integrate marketing innovation services”. Both customers and businesses registered the highest weight for “spiritual consultation service”, showing that “spiritual consultation service” was a novel innovation of the companies. This was consistent with the way modern people seek relief under physical and mental pressure.

According to what has been mentioned above, both businesses and consumers agreed that “novelty of service for the company” was the least important among the four main dimensions. However, they agreed on three items of the secondary dimensions, believing that “improvement of service”, “competitive products and services” and “spiritual consultation service” were the most important. Therefore, the theoretical framework of this study could be used as a practical measurement model and as a reference for follow-up theory building and practical development..

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