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## Key Success Factors in Healthcare Ecology Integrated Tourism Development

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### Abstract

Along with the rising medical expenses, reducing public healthcare service quality, and population aging in various countries in the world, the development of healthcare ecology is largely changed. The demands for medical outsourcing has overseas medical tourism market with lower medical expenses, high-quality healthcare service, and vacation rapidly emerge. The output value of medical tourism presents great contribution to a country that the combination and cooperation of medical industry and tourism industry becomes the key development of healthcare ecology. Aiming at supervisors and employees of healthcare ecology members, as the research objects, 250 copies of questionnaire are distributed. Total 204 valid copies are retrieved, with the retrieval rate 82%. The research results reveal that 1. "ecological competition" is mostly emphasized in Hierarchy 2, followed by "ecological characteristics" and "ecological stage" and 2. top 5 the most emphasized indicators, among 13 evaluation indicators, are ranked healthcare quality, cross-industry cooperation, government certification, marketing awareness, and key leader. According to the results, suggestions are proposed, expecting to provide essential assistance in the tourism development for domestic healthcare ecology.

**Keywords:** healthcare ecology, tourism development, medical tourism, factor

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### INTRODUCTION

The lack of control and even constantly fostering large hospitals expanding the scale in the past had healthcare ecology appear overtime care and medical expense overdraft. It was the sorrow for the public, as hospitals grow by having the public see doctors even without sickness in order to "well utilize" and "break even" the expensive instrument, while regional hospitals become clinics or even bankrupt to result in abnormal healthcare ecology. It is rather unhealthy for the healthcare ecology network. Under the unhealthy healthcare ecology with rising medical expenses, reducing public healthcare service quality, and population aging, patients might appear the need for "medical outsourcing" because of inadequate medical resources, long waiting time and unaffordable medical expenses domestically, the pursuit of high-quality medical care, and the induction of medical insurance. It therefore enhances the rapid emergence of overseas medical tourism market with lower medical expenses,

high-quality healthcare service, and vacation. Medical tourism could drive the overall economy of a country. Due to the potential development of medical tourism industry, lots of countries support medical tourism and believe in medical tourism being able to provide medical choices which could not be offered in domestic clinics. In the long term, medical tourism could enhance domestic medical system to provide better, more accessible, quality, and cheap medical care.

To enhance the international image of quality healthcare, the combination of tourism and healthcare becomes more important. There are many cases of cross-industry alliance of medical tourism industry in Taiwan. However, the essence of medical industry and tourism industry is different that the mutual match and cooperation for the overall development of medical tourism industry should be carefully considered. Currently, medical businesses and tourism businesses show distinct intention on the development of medical

tourism. Medical businesses present higher intention on the development of medical tourism and expect to present the medical strength through rich tourism resources. Tourism businesses, on the other hand, consider tourism and healthcare as different domains, in consideration of the development focus and the market need of medical tourism. The integration and alliance between medical industry and tourism industry is therefore a key point in the development of medical tourism industry. In this case, the critical factors in healthcare ecology and tourism development are discussed in this study.

## LITERATURE REVIEW

### Healthcare Ecology and Tourism

Liu et al. (2016) mentioned that the origin of medical tourism could be traced back to the hot spring treatment in Baden, Germany, in 17<sup>th</sup> century. Meanwhile, Japan and European countries promoted sea-bathing and hot spring tours for enhancing health and attracting tourists. It was regarded as the earliest tourism healthcare. Hajikhani et al. (2016) indicated that medical industry broadened the service coverage with the development from original leisure health to health checks and plastic surgery. Sharma (2016) stated that medical tourism covered high invasive medical behaviors and low invasive micro-plastic surgery, including organ transplantation, plastic surgery, heart surgery, ophthalmologic surgery, health check, and medical behavior related tourism activities. Besides, “medical tourism” and “tourism healthcare” were regarded as mutually exchanged terms (Abdelkafi and Täuscher 2016). Woodman (2017) indicated that medical tourism could have people be relaxed and happy and even enhance the health. Matin et al. (2016) defined medical tourism as patients leaving the country for overseas healthcare service to seek for non-urgent healthcare service. Filieri and McLeay (2014) described that medical tourism occurred when patients left the living areas for medical treatment, including outbound, inbound, and intra bound medical tourism. Umath et al. (2015) indicated that people sought for more suitable healthcare service, because of expensive or incomplete healthcare service in the living areas, and combined it with tourism to form the new industry. Connell (2006) pointed out four stages of healthcare ecology in tourism development, and healthcare ecology, crossing medical, tourism, banking, and transportation industries, to cooperatively work on medical tourism customer service and participate in medical tourism new products. Healthcare ecology in tourism development is discussed as followings.

- (1) Development: Bocken et al. (2015) stated that, in medical tourism industry, medical institutions had to step out the professional medical field and ally with tourism, information, tourism industry, and insurance industry. Roome and Louche (2016) mentioned that medical tourism related industries should understand customer needs and ideas, design suitable medical tourism products aiming at customer needs, and then cooperate with medical tourism related industries. Besides, they could provide better service or develop better medical tourism products aiming at currently promoted medical tourism products in the medical tourism market.
- (2) Expansion: Standing et al. (2014) mentioned that the expansion of medical tourism required supplier-medical institution, tourism industry, and other medical tourism industry for cooperatively enhancing the supply and expanding the market. With health checks as the example, Martins et al. (2015) indicated that some travel agents, when undertaking large group customers, would designate nurses to the hotels and restaurants for interpreting health check affairs and health education to customers, reserve exclusive healthcare service on the check day, conduct health seminars, and then continue the itinerary after the checks (Chuang et al., 2014).
- (3) Authority: Moreira and Silva (2015) pointed out the mutual competition of medical tourism industry. In terms of health check centers, in addition to the health management center or health check center of hospitals, various health check clinics had the authority leaders in healthcare ecology. Similarly, the ecology of medical tourism also needed a leader for coping with external threats and challenges.
- (4) Update: Castaldo et al. (2016) indicated that better medical tourism products should be designed for medical tourism ecology to cope with social trend and maintain good quality. As the example of health check tourism, various health check tours to cope with social topics and epidemiology could be combined to attract customers (Reim et al. 2015).

### Critical Success Factor

Li et al. (2014) stated that “Critical Success Factor” (CSF, or Key Success Factor, KSF), promoted by Massachusetts Institute of Technology, was used for

defining organizational information needs. Berdonosov et al. (2015) indicated that Dael considered that a corporate information system should go through differentiation and selection as well as focus on success factors in the industry; most industries presented 3-6 decisions as the critical success factors. More research on critical success factors appeared after 1979 to show gradually consistent opinions about critical success factors. Most researchers advocated that critical success factors were assets, techniques, resources, activities, and managers' performed abilities, with uniqueness. To succeed in the industry, a manager should present such conditions to be more competitive than other industries and receive permanent advantages. Chou (2014) mentioned that the characteristics of critical success factors should be taken into account for critical success factors. For this reason, the common basic characteristics, according to researchers' analyses, are organized as below.

- (1) Critical success factors would change with time.
- (2) Critical success factors would change with industry, product, and market.
- (3) Critical success factors would change with industry life cycle.
- (4) Critical success factors should take future development trend into account.
- (5) It would result in investment failure before understanding critical success factors in an industry.
- (6) A manager should concentrate on specific affairs or key work to determine critical success factors.
- (7) A manager should focus the management on critical success factors.
- (8) A manager should deeply understand critical success factors and devote to it for the basis to make strategic plans.

## RESEARCH DESIGN AND METHOD

### Delphi Method

The AHP dimensions in this study are established according to Delphi Method. With Delphi Method, also named expert survey, questions are separately mailed to experts for the opinions which are organized for the comprehensive opinions. Such comprehensive opinions and predicted questions are further sent back to the experts for further opinions and organization.

After several runs of inquiries, a more consistent predicted result is acquired.

According to the system program, anonymous opinions are offered in Delphi Method, i.e. no mutual discussions among experts, but merely the contact with the researchers. Opinions for the proposed questions are repeatedly inquired, deduced, and revised for several runs to eventually form the basically consistent opinions of the experts as the predicted result. Such a method presents broad representativeness and is more reliable.

### Establishment of Evaluation Indicator

The questionnaire is emailed to the experts in various fields. The first feedback is organized for the considerations in medical and tourism industries. Such considerations with similar properties are classified and emailed back to the experts for opinions. The major classifications are eventually achieved after several runs of email inquiries. An expert meeting is then conducted to set the critical factors in tourism development in healthcare ecology, including ecological competition, ecological characteristics, and ecological stage. Such critical factors are regarded as the AHP dimensions, and the correspondent classifications are applied to establish the AHP questionnaire. The research criteria after the Delphi Method revision are organized as below.

- (1) Ecological competition: price, marketing awareness, language & culture, healthcare quality.
- (2) Ecological characteristics: cross-industry cooperation, key leader, member link, integrated platform, complementary product.
- (3) Ecological stage: policy improvement, government certification, dispute resolution, popular packaging.

### Research Object

Aiming at supervisors and employees of healthcare ecology members, 250 copies of questionnaire are distributed, and 204 valid copies are retrieved, with the retrieval rate 82%.

### DATA ANALYSIS RESULT

After completing the weights of all hierarchies, the evaluation indicators are distributed the relative importance, showing the importance of indicators in the entire evaluation system. The overall weights of factors in tourism development in healthcare ecology are organized in **Table 1**.

**Table 1.** Overall weight of factors of healthcare ecology in tourism development

Dimension	Hierarchy 2 weight	Hierarchy 2 sequence	Indicator	Overall weight	Overall sequence
ecological competition	0.374	1	price	0.059	9
			marketing awareness	0.102	4
			language & culture	0.038	12
			healthcare quality	0.125	1
ecological characteristics	0.356	2	cross-industry cooperation	0.119	2
			key leader	0.092	5
			member link	0.046	11
			integrated platform	0.064	8
			complementary product	0.083	6
ecological stage	0.270	3	policy improvement	0.077	7
			government certification	0.107	3
			dispute resolution	0.055	10
			popular packaging	0.033	13

**CONCLUSION**

According to the empirical analysis results, the following conclusions are summarized.

In Hierarchy 2, the most emphasized dimension is “ecological competition”, with the weight 0.374, about 37.4% of overall weight, followed by “ecological characteristics” (weighted 0.356) and “ecological stage” (weighted 0.270). Accordingly, ecological competition is the most emphasized dimension in tourism development in healthcare ecology.

In the Hierarchy 3, the weights of evaluation indicators are sequenced as followings.

1. The evaluation indicators in ecological competition are sequenced healthcare quality, marketing awareness, price, and language & culture.
2. The evaluation indicators in ecological characteristics are sequenced cross-industry cooperation, key leader, complementary product, integrated platform, and member link.
3. The evaluation indicators in ecological stage are sequenced government certification, policy improvement, dispute resolution, and popular packaging.

According to the overall weights of critical factors in tourism development in healthcare ecology, top 5 indicators, among 13 evaluation indicators, are ranked healthcare quality, cross-industry cooperation, government certification, marketing awareness, and key leader.

**SUGGESTION**

According to the conclusion, the following suggestions are proposed in this study, expecting to

provide definite guidance and directions for the tourism development in healthcare ecology.

1. It is suggested to focus on disease treatment for promoting healthcare internationally. With the strength of disease treatment, the international brand image of healthcare is reinforced and good quality management and certification are maintained to attract foreign people. The government therefore should promote and manage the quality control of tourism development in healthcare ecology.
2. It is more expensive to ask a network company for the webpage design that the personnel in the center would hold the concurrent post of webpage design and match with the art designer of the hospital to upload webpages. It is therefore suggested that a medical institution could cooperate with a network design company and a public relationship company to improve and reinforce current international healthcare webpages, reinforce webpage design and marketing in the future strategies, and construct word-of-mouth marketing with examinees’ experience sharing.
3. For the combination of healthcare ecology members, it is suggested that healthcare ecology members should precede alliance strategies and establish partner alliance, e.g. allowing medical tourism guests doing plastic surgery in the hospital and meridian-collateral therapy in Chinese medicine in the hospital in the alliance. It could have guests enjoy different health treatment and checks in different hospitals and the combination of tourism promotion and itinerary arrangement.

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