Organizational Learning and Organization Innovation in the Tourist Hotels - An Empirical Study

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ABSTRACT
In face of the rapidly changing environment and unpredictability of tourist hotels as well as rising consumer needs, constant learning is necessary for tourist hotels to maintain the competitive advantage and survival. Continuous learning is therefore required for organizations and individuals in tourist hotels; however, the learning levels and types are distinct. To enhance the international competitiveness, a tourist hotel has to effectively absorb, transfer, and even create new knowledge for the effective innovation. For this reason, “organizational learning” and “knowledge creation” become the keys in the future research on innovation. Total 360 copies are distributed, and 304 valid copies are retrieved, with the retrieval rate 84%. The research results are concluded as below. 1) Organizational learning shows significantly positive correlations with knowledge creation. 2) Knowledge creation reveals remarkably positive correlations with organization innovation. 3) Organizational learning presents notably positive correlations with organization innovation. 4) Knowledge creation appears mediation on the relationship between organizational learning and organization innovation. Finally, suggestions, according to the research results, are proposed, expecting to enhance the market share and profitability of tourist hotels and to maintain the sustainable management and development.

Keywords: tourist hotel, organizational learning, knowledge creation, organization innovation

INTRODUCTION
The approach of knowledge economy era reveals that knowledge is not simply the advantage of enterprises under the new economic era, but the mere source of advantage. This is now the era when service industry is the best, and tourism service industry is a service industry with multi-objectives and compound functions and presents great contributions to the foreign exchange earnings of tourism for the government. Tourist hotel enterprises are the power for the development of tourism business as well as the potential service industry due to consumers’ expenses and consumption in hotels. In such a knowledge economy era nowadays, traditional marketing for international tourist hotel enterprises could not adapt to such a changing commercial environment, and the satisfaction with customer needs becomes the key success factor in tourism marketing.

Hotel enterprises therefore should grasp the motivation, behaviors, and responses of actual customers and potential customers through the acquisition of market intelligence, understand competitors’ products and strategies, evaluate the resources of the organization, and respond to and satisfy with customer needs aiming at the needs and expectation of actual and potential customers. Under the changeable customer needs and fiercely
competitive environment, the product life cycle is shortening, and satisfying customers’ changeable needs with continuous innovation becomes a primary issue for Tourist Hotels.

Transforming labor-intensive into knowledge-intensive, applying market intelligence information into organizational learning to create knowledge, and further applying the knowledge to create Tourist Hotels value with innovative products, innovative services, and innovative strategies would be an issue worthy of in-depth understanding.

Contribution of this paper to the literature

• A tourist hotel should encourage the employees’ continuous learning, cohere with the corporate culture through learning, reinforce the employees’ working abilities, strengthen education and trainings, and enhance the communication and exchange in the organization.

• Organization innovation has become the primary survival condition for a tourist hotels. A tourist hotel organization therefore should continuously innovate, more rapidly understand and cope with current environmental changes than the competitors.

• A tourist hotel could present the competitive advantage by developing personal creativity, having organizational members share, help, and learn with each other.

LITERATURE AND HYPOTHESIS

Organizational Learning

Organizational learning is the revision and modification made for the misconception, abnormality, and contradiction of images or recognition (Gronum et al., 2012). Spillane (2015) regarded organizational learning as various adjustments for the fundamental belief, attitude & behavior, and structural arrangement in the process to cope with environmental changes in order to enhance the operating effectiveness and the permanent survival and development of enterprises or institutions. Such adjustments were realized through formal and informal interpersonal interaction (Kaiser et al., 2013). An organization would change the decision-making plans and directly perform on the information processing when detecting uncertainties and risks in the environment; organizational learning was the process for the change cycle (Carey et al., 2011). Organizational learning required the integration of an organization and the environment for maintaining the competitive advantage and innovation. In this case, an organization, based on the past experiences, had to present the potential of learning, unlearning, and relearning. Organizational adaptiveness was a strategy as well as the activity to adapt to external changing environments, as adaptiveness would guide an organization to constant learning (Lubik et al., 2013). Organizational learning is the knowledge and skills for changing behaviors and actions that it could help an organization cope with external
changing environments. Organizational learning was developed through vision, knowledge, mental model, and the share of past knowledge experiences as well as the major process to generate management innovation. It emphasized that organizational learning was the spontaneous output and process going through the past knowledge and experiential learning of an organization (Duggan, 2012). Organizational learning referred to organizational members constantly expanding the abilities, cultivating a brand-new and broad thinking method, and continuously learning how to learn (Phelps et al., 2012).

Referring to Chen et al. (2012), organizational learning covers three stages of information acquisition, information dissemination, and shared information interpretation. The sources of organizational information acquisition might be the internal organization, e.g. learning curve and empirical curve, or other external experiences, such as customer research survey or other second-hand data. Moreover, the source of information might be the organizational memory, which was transferred into knowledge from past experiences. Apparently, organizational learning becomes the internalized memory of an organization through the acquisition of intelligence, delivery & sharing, and further analyses and transformation to further become the source of organizational information.

**Knowledge Creation**

Fernhaber & Patel (2012) indicated that the economy and capability of modern enterprises lied in the knowledge and service, rather than the hardware assets of land, factories, or equipment. It revealed that the value of most products and services relied on knowledge-based intangible assets. Müller-Seitz (2012) considered that knowledge was the competitiveness of an enterprise, and the employees’ knowledge was the primary asset of the enterprise. “Service economy” would replace “manufacturing economy”, while knowledge workers would replace traditional laborers in the future. For most service enterprises, employees’ intelligence and wisdom were the key resources (Koolen, 2013). Ali & Yangaiya (2015) revealed that the basic requirement for the organizational design of knowledge creation was to provide a basic structure for processing organizational information so that the members could continuously and repeatedly acquire, create, and accumulate new organizational knowledge. The theory of knowledge creation explained that explicit memory could re-create knowledge through the acquisition of external intelligence, information, and knowledge. Besides, implicit knowledge depended on the open mental model of organizational members’ mutual sharing and circulation. Schildt et al. (2012) also stressed on the implicit knowledge in organizational members’ mind and indicated that the next economic growth would be the knowledge-based business. An enterprise had to become a knowledge-based organization to maintain the competitiveness, and the cultivation of organizational culture and the planning of incentive system could encourage enterprise employees being willing to share personal knowledge and experiences so that individual knowledge could be rapidly expanded to become the team knowledge and accumulate the organizational knowledge. Hoch (2014) revealed that employees’ knowledge and wisdom being thoroughly utilized and emphasized was the key of the sustainable management of an enterprise. Furthermore, knowledge creation was the new knowledge created by organizational members sharing the knowledge experiences with constant communication, sharing, and discussions.

Referring to Chen et al. (2014), knowledge creation is defined as organizational members applying market intelligence information to the analysis and thinking, with new concepts and new points of view, to further create new knowledge, which is disseminated to the entire organization and integrated into products and services.

**Organization Innovation**

Innovation is an endogenous variable of economic growth. In other words, engaging in affairs with different methods in any economic life could be innovation (Graen et al., 2013). All changes which could have existing resources present the potential to generate wealth could be innovation (Seebode et al., 2012). Innovation was a new idea, which could be applied to start or enhance certain products, processes, or services, including product innovation, new production process and technology, new structure and management systems, and new plans and management programs (Koskinen, 2012). Sustainable growth was about the key success factor of all
successful enterprises, and innovation was the key factor in the growth. An enterprise could acquire long-term success merely by constantly creating innovative products, systems, and services and the departments conforming to customer demands (Bergman et al., 2012). The definition of organization innovation could be explained from three points. (1) Organization innovation was the newly allocated creative process composing more than two existing ideas or entities that it showed the same meaning as invention. (2) Organization innovation lied in novelty that it could be regarded as a new creativity. (3) Organization innovation was the process of an individual or the social system accepting, developing, and executing new creativity (Hsieh, 2013). Organization innovation could be a new product, technology, service, management system, or organizational plan (Nieves et al., 2014). Organization innovation was the generation, acceptance, and execution of new concepts, procedures, products, or services, including four processes of product creativity, alliance creativity, realization creativity, and migration creativity. It covered the transformation and application of new knowledge, the connection of information, the change of service, and the reutilization of resources (Tidd & Bessant, 2014).

Referring to Chou & Lee (2015), dual-core model is used for exploring the types of organization innovation, from which two dimensions of “management innovation” and “technology innovation” are deduced.

(1) Management innovation: Referring to the contributions of plans, organizations, employment, leadership, and control, which are either purchased externally or existing internally, affirmed by organizational members.

(2) Technology innovation: Indicating the contributions of equipment, processes, and products, which are either purchased externally or existing internally, affirmed by organizational members.

**Relationship between Organizational Learning and Knowledge Creation**

Taylor (2013) revealed that an enterprise would seek for required intelligence and information from external organizations, such as suppliers, customers, distributors, or government departments, and even search for new clues or concepts from competitors to create new knowledge. Spillane (2015) proposed that an organization, in highly competitive environments, would acquire necessary intelligence and information through customers and competitors to create knowledge. When external environments were stable, old knowledge and experiences in the organizational memory were utilized for creating the knowledge required for the organization (Lubik et al., 2013). Chen et al. (2012) discovered that an enterprise systemized the past accumulated customer knowledge and accumulated distinct customer knowledge to create knowledge and further innovate the service. Furthermore, other cases also revealed that the source of innovative knowledge had to focus on the information of external markets, the information of customer knowledge changes, and the information acquired by employees (Duggan, 2012). Apparently, knowledge creation and innovation had to cover the search of internal organizational memory as well as stressed on the acquisition of customers’ and competitors’ intelligence information. The following hypothesis is then proposed in this study.

**H1:** Organizational learning shows significantly positive correlations with knowledge creation.

**Relationship between Knowledge Creation and Organization Innovation**

Whipple et al. (2015) regarded organizational knowledge creation as the key in enterprise innovation. An organization being able to create knowledge would guide the organization for innovation. Ali & Yangaiya (2015) discovered that the innovation of organizational service came from the application of knowledge. Specifying and systemizing the past served customers’ knowledge into the database of an organization could be the basis for providing customers with new value. In the research on the relationship of knowledge creation, organizational learning, and innovation with organization innovation performance, Su & Carney (2013) proved the significant effect of knowledge creation on organization innovation. In the research on the market orientation, market knowledge management, product innovation, and performance of hi-tech industry in Taiwan, Chen et al. (2014) revealed the positive effect of knowledge creation on product innovation. Accordingly, the following hypothesis is proposed in this study.

H1: Organizational learning shows significantly positive correlations with knowledge creation.
**H2:** Knowledge creation reveals remarkably positive correlations with organization innovation.

**Relationship between Organizational Learning and Organization Innovation**

Under same conditions, organizational learning could enhance the capability of organization innovation (Hsieh, 2013). Organizational learning showed close correlations with organization innovation (Su et al., 2013), and the learning climate in an organization could promote the innovation capability (Nieves et al., 2014). Accelerating an organization’s learning could enhance the management innovation and promote the competitiveness (Yen et al., 2012). In this case, mutual learning in the organization and observing the changes of external environments were the key factors in an enterprise coping with innovation, customer needs, technical turmoil, and uncertainties in the competitive environment (Graen et al., 2013). An organization devoting to learning could present stronger innovation capability than the competitors, mainly because the organization could closely detect the competitors’ market actions, understand the advantages and shortages of the competitors and learn the success, as well as learn the lesson from the failure (Wilden et al., 2013). Chou & Lee (2015) mentioned that in the unrest competitive environment, organization innovation was related to the survival of an organization, and the organizational learning culture could improve the innovation process (Koskinen, 2012). As a result, the following hypotheses are proposed in this study.

**H3:** Organizational learning presents notably positive correlations with organization innovation.

**H4:** Knowledge creation appears mediation on the relationship between organizational learning and organization innovation.

**RESEARCH DIMENSION AND METHODOLOGY**

**Definition of Research Dimension**

**Organizational learning**

According to Chen et al. (2012), the sources of organizational learning are divided into information acquisition, information dissemination, and shared information interpretation in this study.

1. Information acquisition: The sources might come from internal organization, such as learning curve and empirical curve, or other external experiences, e.g. customer research survey or other second-hand data. What is more, the source of information might be the organizational memory, which is transferred into knowledge from past experiences.

2. Information dissemination: Organizational learning is the dissemination of acquired intelligence through internal or external organization.

3. Shared information interpretation: Organizational intelligence is shared and further analyzed and transferred to become the internalized memory and further become the source of organizational information.

**Knowledge creation**

Referring to Chen et al. (2014), knowledge creation is defined as organizational members applying market intelligence information to the analyses and thinking, with new concepts and new points of view, to further create new knowledge, which is then disseminated to the entire organization and integrated into products and services.

**Organization innovation**

Referring to Chou & Lee (2015), innovation is defined to explore the type of organization innovation, with dual-core model, to deduce the dimensions of “management innovation” and “technology innovation”.
1. Management innovation: Indicating the contributions of various plans, organizations, employment, leadership, and control, which are either purchased externally or existing internally, affirmed by organizational members.

2. Referring to the contributions of equipment, processes, and products, which are either purchased externally or existing internally, affirmed by organizational members.

**Research Subject**

Aiming at international tourist hotels in Taipei areas, the supervisors and employees are distributed 360 copies of questionnaire. Total 304 valid copies are retrieved, with the retrieval rate 84%. The international tourist hotels in Taipei areas contain The Grand Hotel, The Ambassador Hotel, Mandarin Oriental, Imperial Hotel, Gloria Prince Hotel, Emperor Hotel, Hotel Riverview Taipei, Hilton Hotels & Resorts, Golden China Hotel, Asia Pacific Hotel, Brother Hotel, Santos Hotel, The Landis Taipei Hotel, United Hotel, Lai Lai Hotel, Taipei Fortuna Hotel, Sunworld Dynasty Hotel, Hotel Royal-Nikko Taipei, Howard Hotel, Taipei Fullerton Hotel, Grand Hyatt Taipei, Regent Taipei, The Sherwood Taipei, Shangri-La Hotel, and Leofoo Resort.

**Analysis**

Regression Analysis is applied to understand the relationship among organizational learning, knowledge creation, and organization innovation.

**ANALYSIS AND DISCUSSION**

**Factor Analysis of Organizational Learning**

The organizational learning scale, with Factor Analysis, is extracted three factors of “information acquisition” (eigenvalue=3.472, α=0.86), “information dissemination” (eigenvalue=2.551, α=0.83), and “shared information interpretation” (eigenvalue=2.136, α=0.88). The accumulative covariance explained achieves 79.662%.

The accumulative covariance explained of the knowledge creation scale, with Factor Analysis (eigenvalue=4.253, α=0.82), reaches 82.173%.

The organization innovation scale, with Factor Analysis, is extracted two factors of “management innovation” (eigenvalue=3.215, α=0.81) and “technology innovation” (eigenvalue=3.463, α=0.80). The accumulative covariance explained achieves 80.467%.

**Correlation Analysis of Organizational Learning and Knowledge Creation**

Regression Analysis is utilized in this study to test the hypotheses and the theoretical structure. The first regression, Table 1, reveals the significance of the regression equation (F=23.3428, p<0.001). Organizational learning shows significant effects on knowledge creation, where “information acquisition”, “information dissemination”, and “shared information interpretation” in organizational learning reveal remarkably positive effects on knowledge creation (β=2.433, p<0.01; β=1.862, p<0.05; β=2.517, p<0.001) that H1 is supported.

**Correlation Analysis of Organizational Learning and Knowledge Creation towards Organization Innovation**

Applying Regression Analysis to test the hypotheses and the theoretical structure, the first regression, Table 2, presents the significance of regression equation (F=18.512, p<0.001). Organizational learning shows notable effects on management innovation, where “information acquisition”, “information dissemination”, and “shared information interpretation” in organizational learning reveal significantly positive effects on management innovation (β=2.155, p<0.01; β=2.241, p<0.01; β=2.577, p<0.001). The third regression, Table 2, presents the significance of the regression equation (F=21.834, p<0.001). Organizational learning appears significant effects on
technology innovation, where “information acquisition”, “information dissemination”, and “shared information interpretation” in organizational learning show remarkably positive effects on technology innovation ($\beta=2.352$, $p<0.01$; $\beta=2.438$, $p<0.01$; $\beta=2.523$, $p<0.001$) that H3 is supported. 

The second regression, Table 2, reveals the significance of the regression equation ($F=22.433$, $p<0.001$). Knowledge creation presents notable effects on management innovation ($\beta=3.166$, $p<0.001$). The fourth regression, Table 2, shows the significance of the regression equation ($F=28.652$, $p<0.001$). Knowledge creation appears remarkable effects on management innovation ($\beta=3.227$, $p<0.001$) that H2 is supported. 

### Mediation of Organizational Learning and Knowledge Creation on Organization Innovation

The mediation of knowledge creation in this study is shown as Hierarchical Regression Analysis in Table 3. Organizational learning could notably explain management innovation ($F=18.512$, $p<0.001$). According to Model 2, where the effects of organizational learning and knowledge creation on management innovation are considered to discuss the mediation of knowledge creation, the $\beta$ of information acquisition significantly drops from 2.155 ($p<.01$) down to 1.896 ($p<.05$), revealing that knowledge creation would reduce the direct effect of information acquisition on management innovation. Second, the $\beta$ of information dissemination notably drops from 2.241 ($p<.01$) down to 1.945($p<.01$), showing that knowledge creation would reduce the direct effect of information dissemination on management innovation. Furthermore, the $\beta$ of shared information interpretation significantly drops from 2.577 ($p<.001$) down to 2.273 ($p<.01$), presenting that knowledge creation would reduce the direct effect
of shared information interpretation on management innovation. The research results show the partial mediation of knowledge creation on the relationship between organizational learning and management innovation.

Organizational learning could notably explain technology innovation ($F=21.834$, $p<0.001$). According to Model 2, where the effects of organizational learning and knowledge creation on technology innovation are taken into account to discuss the mediation of knowledge creation. The $\beta$ of information acquisition remarkably drops from 2.352 ($p<.01$) down to 2.021 ($p<.01$), revealing that knowledge creation would reduce the direct effect of information acquisition on technology innovation. Second, the $\beta$ of information dissemination notably drops from 2.438 ($p<.001$) down to 2.142 ($p<.01$), presenting that knowledge creation would reduce the direct effect of information dissemination on technology innovation. What is more, the $\beta$ of shared information interpretation significantly drops from 2.523 ($p<.001$) down to 2.234 ($p<.01$), showing the direct effect of knowledge creation on the relationship between shared information interpretation and technology innovation. Accordingly, knowledge creation appears partial mediation on the relationship between organizational learning and technology innovation that H4 is supported.

### CONCLUSION

The research results show that tourist hotels with high organizational learning would create higher knowledge. Knowledge creation of a tourist hotel relies on the knowledge transfer, and knowledge creation should present sufficient intelligence information. The knowledge required for a tourist hotel could be created by the organizational members analyzing the intelligence information and transferring to text information or becoming an experience and then analyzing with other members with open mental model. The organizational members of a tourist hotel constantly acquire knowledge, transfer knowledge, and restore knowledge through the operation of the knowledge system. More importantly, knowledge creation is based on a knowledge system, but requires the mutual exchange and discussion among organizational members. Such a delivery process is a social-pattern knowledge exchange theory. A tourist hotel has to properly apply knowledge exchange theory to create higher-level knowledge so as to generate new concepts and new ideas about intelligence and information. Knowledge creation of a tourist hotel relies on the real experiences; the responses of an organization is the execution of entire organizational members through brainstorming and in-depth discussions to achieve the consensus; the knowledge creation process requires the constant debate and thinking among the members to activate the knowledge and innovate the knowledge; and, knowledge creation of a tourist hotel is the accumulation of wisdom value, which is derived from knowledge creation, to thicken the organizational capital.

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**Table 3.** Hierarchical Regression of organizational learning and knowledge creation towards organization innovation

<table>
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<th>Management innovation</th>
<th>Organization innovation</th>
<th>Technology innovation</th>
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<tr>
<td></td>
<td>Model 1</td>
<td>Model 2</td>
<td>Model 1</td>
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<tr>
<td>Organizational learning</td>
<td>$\beta$</td>
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<tr>
<td>Information acquisition</td>
<td>2.155**</td>
<td>0.000</td>
<td>1.896*</td>
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<tr>
<td>Information dissemination</td>
<td>2.241*</td>
<td>0.000</td>
<td>1.945*</td>
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<tr>
<td>Shared information interpretation</td>
<td>2.577***</td>
<td>0.000</td>
<td>2.273**</td>
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<tr>
<td>Knowledge creation</td>
<td>3.438**</td>
<td>0.000</td>
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<tr>
<td>$F$</td>
<td>18.512</td>
<td>34.521</td>
<td>21.834</td>
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<td>$P$</td>
<td>0.000***</td>
<td>0.000***</td>
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<tr>
<td>R2</td>
<td>0.251</td>
<td>0.363</td>
<td>0.315</td>
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<tr>
<td>Adjusted R2</td>
<td>0.225</td>
<td>0.322</td>
<td>0.283</td>
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Note: * stands for $p<0.05$, ** for $p<0.01$, and *** for $p<0.001$
SUGGESTION

Aiming at the research results on organizational learning, knowledge creation, and organization innovation of tourist hotels, the following suggestions are proposed as following.

1. A tourist hotel should encourage the employees’ continuous learning, cohere with the corporate culture through learning, reinforce the employees’ working abilities, strengthen education and trainings, and enhance the communication and exchange in the organization. The information circulation and discussion among departments in a tourist hotel organization would help enhance the learning climate in the organization and enhance the colleagues’ understanding of the market and familiarity of organizational management.

2. In the fiercely competitive environment, organization innovation has become the primary survival condition for a tourist hotel. A tourist hotel organization therefore should continuously innovate, more rapidly understand and cope with current environmental changes than the competitors, and improve the products and services by understanding customers’ external knowledge so as to promote the overall knowledge creation and organization innovation of a tourist hotel organization.

3. In a tourist hotel system, a supervisor is likely not to put down the authority and to ignore others’ good suggestions because of the persistence in self-concept or different positions. In this case, a tourist hotel supervisor should open the mind and listen to others’ opinions. Tourist hotel employees, when encountering problems, should discuss with the supervisors, rather than simply listening to orders. Everyone has the traits. A tourist hotel could present the competitive advantage by developing personal creativity, having organizational members share, help, and learn with each other, and further has the tourist hotel organization form the natural learning relationship.

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