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## **Revista de Cercetare si Interventie sociala**

ISSN: 1583-3410 (print), ISSN: 1584-5397 (electronic)

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Revista de cercetare și intervenție socială, 2018, vol. 62, pp. 129-139

The online version of this article can be found at:

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Published by:

Expert Projects Publishing House



On behalf of:

„Alexandru Ioan Cuza” University,  
Department of Sociology and Social Work  
and  
HoltIS Association

**REVISTA DE CERCETARE SI INTERVENTIE SOCIALA**

is indexed by Clarivate Analytics (Web of Science) -

Social Sciences Citation Index

(Sociology and Social Work Domains)

# Correlation between Innovation Strategy and Operational Performance in Tourism based on Competitive Advantage

Kuang-Chin CHEN<sup>1</sup>, Yu Jing CHIU<sup>2</sup>

## Abstract

Along with the changes in social environment, the public demands for leisure and recreation become stronger that tourism gradually becomes an important industry. In the operation of tourism, the sustained-yield management based concept also needs constant pursuit of advance. For this reason, innovation becomes an inevitable part of business operation. Tourism is facing lots of tests, and the operation is getting difficult. Under such a difficulty situation, the enhancement of competitive advantage through innovation strategy would be a practicable method. Aiming at tourism, the supervisors and employees in tourism in Taichung City, as the research objects, are distributed 420 copies of questionnaire. Total 317 valid copies are retrieved, with the retrieval rate 75%. The research results show positive relations between 1.innovation strategy and competitive advantage, 2.competitive advantage and operational performance, and 3.innovation strategy and operational performance. According to the results, suggestions are proposed, expecting to assist domestic tourism in enhancing competitive advantage and operational performance with innovation strategy to achieve the sustainable development.

*Keywords:* tourism, innovation strategy, competitive advantage, operational performance.

## Introduction

Along with the changes in social environment, citizens have changed the income and increased the leisure time that most people has got rid of the lifestyle for satisfying basic living needs and changed to enhance the requirement for quality of life. Tourism and recreation have become key factors in the enhancement of social peace, harmony, and spirit. The stronger public requirements for leisure and recreation have tourism gradually become an important industry. For long, people

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have been striving for the progress of the entire society, and even individual, and innovation undoubtedly opens a door for people who are seeking for advance. Similarly, the operation of tourism, based on sustained-yield management, should constantly pursue advance. Accordingly, innovation becomes an important part of business operation. In the fiercely competitive, short product-lifecycle, and rapidly changing environment, innovation capability has become the most effective tactic to enhance competitive advantage in tourism. In the 21<sup>st</sup> century, there are lots of tests and unpredictable difficult environment in tourism. When the business becomes more difficult, it is wondered how tourism could create good performance under the political and economic impact, in spite of the past brilliant performance. The promotion of competitive advantage through innovation strategy could be a practicable way. In the customer-oriented era, tourism businesses therefore should grasp market fluctuation and understand customers' real perception and ideas, carefully take innovation behaviors, and aim at "emphasizing customers' sound" and "active customer concern" to further guarantee customer rights and take care of customer profits to satisfy the needs of served objects. The effect of innovation strategy on competitive advantage and operational performance in tourism is therefore studied, expecting to enhance the competitive advantage and operational performance in domestic tourism with innovation strategy and achieve the sustainable development.

## Literature review

### *Innovation strategy*

Lee, Wu, & Pao (2014) considered that the method to create a completely different advantage was innovation. Innovation was a new product, method, or system, presented potential, could create a brand-new market, or was able to change competitors' or customers' behavior models. Akgun, Keskin, & Byrne (2014) indicated that the match of industrial conditions, company capability, and basic competitive strategy should be taken into account when drawing up innovation strategies. Since technological change would affect industrial structure and competitive advantage, innovation strategy became the essential element in the overall competitive strategy of an enterprise. According to the factors in strategic planning, Mario & Henar (2016) divided strategic planning into 8 types of product or service concept driving, market or customer driving, capacity driving, technology or know-how driving, sales or marketing method driving, distribution method driving, natural resource driving, and scale, growth, or reward, profit driving. Campbell *et al.* (2015) pointed out innovation strategy as breaking the pattern, forgetting the success, grasping the future, actively and positive creating

changes, and prospecting and concentrating core resources on strategies to master the future.

Referring to Lin *et al.* (2016), the following dimensions for innovation strategy are used in this study: (1) *Difference*: A product is divided into tangible product and intangible service. Difference innovation contains three tactics of physical method, mechanical method, and chemical method; (2) *Creativity*: “Creation” is making things up, the creativity, and a new invention. “Creative value” is to utilize it, to dig out and discuss the characteristics, and to understand the characteristics required for customers receiving benefits and further appearing trading value and use value; (3) *Additionality*: It is to find out the use of a product, to generate trading value, and to reinforce the use of the product, i.e. to further dig out or increase the characteristics of a product to enhance the advantages and user benefits.

### ***Competitive advantage***

Wang Tseng, & Yen (2014) mentioned that key success factors and competitive advantage played the role to lead an enterprise permanently maintaining high competitiveness in the business. In this case, key success factors and the relationship with competitive advantage should be taken into account when discussing competitive advantage of an enterprise. Nissen *et al.* (2014) regarded key success factors as the variables of some managers making decisions; such variables would change with different industries. Meanwhile, key success factors also deeply affected the competitive status of an enterprise in the entire industry. Akgun *et al.* (2014) indicated that the competitiveness of an enterprise, in a short term, depended on the success of the final product; however, the strength of competitiveness, in a long term, relied on the core competence of the enterprise. Leng (2014) explained that long-term competitive advantage should be generated from the core competence of an enterprise. In this case, an enterprise, in order to enhance the competitive advantage, should focus on developing or cultivating the core competence, rather than stressing on short-term success of the final products. Chatterji & Fabrizio (2014) argued that competitive advantage should exist in the memory and process of an organization, rather than long-term relying on individual intelligence. When the competitive advantage of an enterprise came from the intelligence of certain individuals in the enterprise, the elements to maintain the competitive advantage of the enterprise would be taken away when such individuals left the enterprise. For this reason, an enterprise should internalize individual specific knowledge and skills as the overall intelligence or action of the organization so as to continuously enhance the competitive advantage.

Referring to Yong, Lee, & Song (2015), the following dimensions for competitive advantage are used in this study: (1) *Efficiency*: An enterprise is a tool to transform inputs into outputs. Basic production elements, such as labor, land, capital, and management, are the inputs, while service or products are the outputs of an enterprise; (2) *Quality*: A better-quality product refers to a product or

service being trustable; (3) *Customer response*: When more rapidly providing what a customer needs than competitors and satisfying what a customer really needs, the customer would be willing to pay for the higher value to form the differential competitive advantage.

### ***Operational performance***

Yuan & Pangarkar (2015) considered that financial performance and marketing performance were generally used for representing the operational performance of a company; return on investment, return on sales, profit before tax, sales amount, and sales growth were to stand for financial performance; and, market share was applied to stand for marketing. Brautzsch *et al.* (2015) regarded operational performance as the actual performance and outcome of an organization. In other words, an organization with performance could effectively apply resources, satisfy the members' needs, achieve the set goals, and adapt to the changes in external environment. Maniak *et al.* (2014) further indicated that performance should be measured non-financially. Operational performance was therefore made the time segment; a short-term goal should take the value of shareholders into account, while a long-term goal aimed to balance the sustained-yield management and survival of an enterprise. Chen (2014) pointed out operational performance as the measurement of an organization attaining the goal. Business performance in general industries was referred to the accounting return in the financial statement, including return on total assets, return on stockholders' equity, or return on investment. Nevertheless, in addition to pursuing the maximum profits, the pursuit of market share and employee satisfaction was also the business goals of an enterprise. Reijssen *et al.* (2015) indicated that operational performance would appear distinct standards because of different needs of a group and an organization. The evaluation of performance could understand the application of resources in the past, and the results could guide the future business strategy and resource distribution direction of an organization.

Referring to Yoon *et al.* (2015), the measurement of the overall operational performance of an organization contains: (1) productivity, covering employees' productivity, capacity utilization, and product defect rate; (2) profitability, including return on investment and return on asset, and (3) growth capability, containing growth of market share and growth of revenue.

### ***Relationship between innovation strategy and competitive advantage***

Lin *et al.* (2016) mentioned that no one could predict innovation to become a large enterprise or a small enterprise. However, when the innovation was not prepared to acquire the leadership, it could not establish the territory. Jean, Sinkovics, & Hiebaum (2014) pointed out two innovation strategies, including the acquisition of control of a market or a production process and the monopoly of

the entire market or a part of process. Campbell *et al.* (2015) proposed a common goal of all strategies as the acquisition of leadership within certain range so that an enterprise could establish the competitive advantage. Mario & Henar (2016) considered that a successful innovator could have innovation become an important part of corporate strategy. A lot of organizations could succeed because of the application of knowledge, technology, and experience as well as the creation of innovation product, process, and service. Vijay (2015) regarded innovation as a new method for product production of an enterprise. The enhancement of competitive advantage contained four elements of efficiency, quality, innovation, and customer service. Innovation was a primary basis to establish competitive advantage. In long term, competition could be regarded as the process driven by innovation. Accordingly, the following hypothesis is inferred.

H1: *Innovation strategy presents positive relations with competitive advantage*

### ***Relationship between competitive advantage and operational performance***

Leng (2014) indicated that innovation was a beneficial method to protect and maintain the competitive advantage of an enterprise and keep the growth of operational performance in a growing and mature market. Ritala *et al.* (2015) mentioned that early comers had the optimal opportunity to develop customer cognition and approach channels so as to create defensive status in the market and take it as the competitive advantage. Wang, Tseng, & Yen (2014) stated that later comers could also create the competitive advantage with the development of market segmentation, technology related discontinuity, or early comers' waste of their advantages to compete with early comers. Yong, Lee, & Song (2015) pointed out the close relationship between innovation strategy and competitive advantage of an enterprise. Different innovation strategies might result in distinct competitive advantages. Chatterji & Fabrizio (2014) argued that innovation would affect the competitive advantage as well as the operational performance of an enterprise. As a result, the following hypothesis is inferred.

H2: *Competitive advantage shows positive relations with operational performance.*

### ***Relationship between innovation strategy and operational performance***

From resource-based view (RBV), Yoon *et al.* (2015) mentioned that identifying an organization to maintain the sustainable competitive advantage should focus on the development of single innovation strategy through unique resource combination to enhance the business performance. Sandvik, Duhan, & Sandvik (2014) considered that an enterprise adopting innovation strategy could utilize the resources and technology for various combinations to generate distinct innovation strategy and guide the enterprise to acquire, develop, and apply innovation in order to practice the company strategies and promote the company performance.

Taking a biotechnology company as the research sample, Yuan & Pangarkar (2015) found out the positive effect of innovation strategy on organizational business performance. Tangaraja *et al.* (2016) discussed the exploratory innovation and applied innovation of products and discovered that reusable resources could better support the development of product innovation strategy and result in excellent performance and long-term rewards for an organization. Accordingly, the following hypothesis is inferred.

H3: *Innovation strategy reveals positive relations with operational performance.*

## **Sample and measuring indicator**

### ***Research sample and object***

Aiming at tourism, supervisors and employees in tourism in Taichung City are distributed 420 copies of questionnaire, and 317 valid copies are retrieved, with the retrieval rate 75%.

### ***Reliability and validity test***

Validity refers to a measuring tool being able to really measure the question which a researcher would like to measure. Validity is generally divided into content validity, criterion-related validity, and construct validity. The question items in this study are referred to domestic and international researchers' research items, and the formal questionnaire is distributed after a pretest. The questionnaire therefore presents certain content validity. To test the causal relations among innovation strategy, competitive advantage, and operational performance, the linear structural relation model is utilized for the analysis. The data input is based on the correlation coefficient matrix of above observation variables. The linear structural relation model analysis results reveal the overall model fit achieving the rational range that it presents favorable convergent validity and predictive validity. Item-to-total correlation coefficients could be used for testing the construct validity of the questionnaire, i.e. reliability analysis. The calculated item-to-total correlation coefficients are used for judging the questionnaire content. The item-to-total correlation coefficients in this study are higher than 0.7, showing certain construct validity of the dimensions in the questionnaire.

To further understand the reliability and validity of the questionnaire, reliability and validity analyses are preceded. The higher Cronbach's  $\alpha$  reveals the better reliability. The formal questionnaire in this study is developed according to the standards, and the measured Cronbach's  $\alpha$  appears in 0.80~0.90, apparently conforming to the reliability range.

## Results and discussions

### *LISREL model evaluation indicator*

LISREL (linear structural relation) model combines factor analysis and path analysis in traditional statistics and is added simultaneous equations in econometrics. It is a research tool being able to calculate multi-factors and multi-causal paths at the same time. The model fit could be evaluated from preliminary fit criteria, overall model fit, and fit of internal structure of model.

The data in this study are organized in Table 1. The preliminary fit criteria, fit of internal structure, and overall model fit are explained as followings.

Table 1 shows that three dimensions for innovation strategy (difference, creativity, additionality) achieve the significant explanation of innovation strategy ( $t > 1.96$ ,  $p < 0.05$ ), three dimensions for competitive advantage (efficiency, quality, customer response) achieve remarkable explanation of competitive advantage ( $t > 1.96$ ,  $p < 0.05$ ), and three dimensions for operational performance (productivity, profitability, growth capability) achieve the notable explanation of operational performance ( $t > 1.96$ ,  $p < 0.05$ ). Apparently, the overall model presents good preliminary fit criteria.

Innovation strategy shows positive and significant correlations with competitive advantage (0.867,  $p < 0.01$ ), competitive advantage reveals positive and remarkable correlations with operational performance (0.822,  $p < 0.01$ ), and innovation strategy appears positive and notable correlations with operational performance (0.853,  $p < 0.01$ ), showing that H1, H2, and H3 are supported.

The overall model fit standards  $\chi^2/Df=1.377$ , smaller than 3, and  $RMR=0.007$ , revealing that  $\chi^2/DF$  and  $RMR$  are proper. Furthermore, chi-square is sensitive to sample size that it is not suitable for directly judging the fit. The overall model fit standards  $GFI=0.967$  and  $AGFI=0.905$  are higher than 0.9 (the closer  $GFI$  and  $AGFI$  to 1 showing the better model fit) that this model presents better fit indicators.

Table 1. Overall linear structural relation analysis result

Evaluation item	Parameter/evaluation standard	result	t	
Preliminary fit of criteria	Innovation strategy	difference	0.655	8.66**
		creativity	0.673	9.45**
		additionality	0.664	8.97**
	Competitive advantage	efficiency	0.691	11.22**
		quality	0.688	10.46**
		customer response	0.681	10.13**
	Operational performance	productivity	0.702	12.17**
		profitability	0.714	13.32**
		growth capability	0.721	13.89**

Fit of internal structure	innovation strategy→competitive advantage	0.867	43.15**
	competitive advantage→operational performance	0.822	31.48**
	innovation strategy→operational performance	0.853	37.29**
overall model fit	X <sup>2</sup> /Df	1.377	
	GFI	0.967	
	AGFI	0.905	
	RMR	0.007	

Note: \* stands for  $p < 0.05$ , \*\* for  $p < 0.01$ , and \*\*\* for  $p < 0.001$ .

Table 2. Hypothesis test

Research hypothesis	Correlation	Empirical result	p	Result
H1	+	0.867	$P < 0.01$	supported
H2	+	0.822	$P < 0.01$	supported
H3	+	0.853	$P < 0.01$	supported

## Conclusion

The research results show high correlations between innovation strategy and competitive advantage in tourism. The proper application of innovation strategy could enhance the growth and development of tourism businesses to more effectively make progress. Besides, the excellent competitive advantage allows a tourism business outstanding other competitors under the changeable environment. Generally speaking, creativity is considered as the optimal choice. Moreover, innovation of selection process could be practicable. In order to enhance market-oriented competitive advantage in tourism, additionality innovation could rapidly respond to customer needs and meet the market demand. To enhance the competitive advantage for diversified business capability in tourism, creativity innovation is still the optimal choice. Regardless of efficiency, quality, and customer response, the higher degree of promotion would enhance the business performance. In this case, tourism businesses could promote the competitive advantage and further enhance the business performance.

## Recommendations

Aiming at the research results and findings, the following practical suggestions are proposed in this study.

(1) Tourism businesses are suggested to continuously develop and explore new product/service and market with innovation strategy and evaluate the conditions to compete with competitors in the same trade in order to develop the differential innovation strategy and occupy a piece of land in the huge tourism market.

(2) In consideration of long-term development, tourism businesses should reinforce the profit stability and take diversified channels as the business goal to provide flexible shopping time for consumers choosing the suitable channels. Besides, the omnidirectional service of products could smoothly satisfy consumer needs as well as promote customer loyalty.

(3) Tourism businesses could attempt to break through the geographic boundary and take cross-border platform cooperation as the business goal. In past years, domestic online shopping market seems to accept more foreign products. In this case, tourism businesses are suggested to devote to “cross-regional” innovation by establishing cross-border online shops with large platforms in Asia or establishing reciprocal mechanism with cross-border shops. The huge oversea e-commerce market should not be underestimated.

### **References**

- Akgun, A.E., Keskin, H., & Byrne, J.C. (2014). Complex adaptive systems theory and firm product innovativeness. *Journal of Engineering and Technology Management*, 31(1), 21-42.
- Akgun, A.E., Keskin, H., Byrne, J. C., & Ilhan, O. O. (2014). Complex adaptive system mechanisms, adaptive management practices, and firm product innovativeness. *R & D Management*, 44(1), 18-41.
- Brautzsch, H.U., Gunther, J., Loose, B., Ludwig, U. & Nulsch, N. (2015). Can R&D subsidies counteract the economic crisis? - Macroeconomic effects in Germany. *Research Policy*, 44(3), 623-633.
- Campbell, D., Datar, S, Kulp, S. L., & Narayanan, V.G. (2015). Testing Strategy with Multiple Performance Measures: Evidence from a Balanced Scorecard at Store 24. *American Accounting Association Journal of Management*, 27, 39-65.
- Chatterji, A.K., & Fabrizio, K.R. (2014). Using users: When does external knowledge enhance corporate product innovation? *Strategic Management Journal*, 35(10), 1427-1445.
- Chen, D. (2014). Executive Corruption, Contagion Effect, and Investor Protection - Empirical Evidence from the BaiPeizhong Case. *China Accounting and Finance Review*, 16(3), 1-62.
- Jean, R.J.B., Sinkovics, R.R. & Hiebaum, T.P. (2014). The Effects of Supplier Involvement and Knowledge Protection on Product Innovation in Customer - Supplier Relationships: A Study of Global Automotive Suppliers in China. *Journal of Product Innovation Management*, 31(1), 98-113.
- Lee, C.Y., Wu, H.L., & Pao, H.W. (2014). How does R&D intensity influence firm explorativeness? Evidence of R & D active firms in four advanced countries. *Technovation*, 34, 582-593.
- Leng, R. (2014). *Policy making of Blue Economic Zone: utilizing advanced methods of analysis and tools*, Malta: University of Malta.

- Lin, C. & Chang, C.C. (2015). The effect of technological diversification on organizational performance: an empirical study of S&P 500 manufacturing firms. *Technological Forecasting and Social Change*, 90, 575-586.
- Lin, C.L. (2015). A novel hybrid decision-making model for determining product position under consideration of dependence and feedback. *Applied Mathematical Modelling*, 39(8), 2194-2216.
- Lin, C.L., Shih, Y.H., Tzeng, G.H., & Yu, H.C. (2016). A service selection model for digital music service platforms using a hybrid MCDM approach. *Applied Soft Computing*, 48, 385-403.
- Maniak, R., Midler, C., Beaume, R., & von Pechmann, F. (2014). Featuring Capability: How Carmakers Organize to Deploy Innovative Features across Products. *Journal of Product Innovation Management*, 31(1), 114-127.
- Mario, D.P., & Henar, A.H. (2016). STI and DUI innovation modes: Scientific-Technological and Context-Specific Nuances. *Research Policy*, 45, 747-756.
- Nissen, H.A., Evald, M.R., & Clarke, A.H. (2014). Knowledge sharing in heterogeneous teams through collaboration and cooperation: Exemplified through public-private-innovation partnerships. *Industrial Marketing Management*, 43(3), 473-482.
- Reijssen, J., Helms, R., Batenburg, R., & Foorthuis, R. (2015). The impact of knowledge management and social capital on dynamic capability in organizations. *Knowledge Management Research & Practice*, 13, 401-417.
- Ritala, P., Olander, H., Michailova, S., & Husted, K. (2015). Knowledge sharing, knowledge leaking and relative innovation performance: An empirical study. *Technovation*, 35, 22-31.
- Sandvik, I.L., Duhan, D.F., & Sandvik, K. (2014). Innovativeness and profitability: an empirical investigation in the Norwegian hotel industry. *Cornell Hospitality Quarterly*, 55(2), 165-185.
- Tangaraja, G., Rasdi, R.M., Samah, B.A., & Ismail, M. (2016). Knowledge sharing is knowledge transfer: a misconception in the literature. *Journal of Knowledge Management*, 20(4), 653-670.
- Vijay, S. (2015). Harnessing the Blue Economy. *Indian Foreign Affairs Journal*, 10, 39-49.
- Wang, H.K., Tseng, J.F., & Yen, Y.F. (2014). How do institutional norms and trust influence knowledge sharing? An institutional theory. *Innovation: Management, Policy & Practice*, 16(3), 374-391.
- Yong, W., Lee, D.Y., & Song, J. (2015). Alliance network size, partner diversity, and knowledge creation in small biotech firms. *Journal of management & Organization*, 21(5), 614-626.
- Yoon, H., Yun, S., Lee, J., & Phillips, F. (2015). Entrepreneurship in East Asian Regional Innovation Systems: Role of social capital. *Technological Forecasting & Social Change*, 100, 83-95.

Yuan, L., & Pangarkar, N. (2015). Performance implications of internationalization strategies for Chinese MNCs. *International Journal of Emerging Markets*, 10(2), 272-292.