

# Antecedents and Consequences of Service Innovation: An Empirical Study of Touring Business in the Southern Part of Thailand

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## Abstract

The objectives of this study was to investigate the relationships between the antecedents affecting service innovation, namely, entrepreneurial orientation, market orientation, service co-production, information technology adoption, human resource practice, and their relationships with service innovation affecting consequences, which was service performance taking into consideration business environments in selecting strategic factors leading to organizational competitive potential development. The subjects of the study were entrepreneurs and executives of 340 touring businesses in the Southern part of Thailand. The data were collected through structural equation modeling. The results of the study revealed the following. 1) Marketing orientation and human resource practice had positive direct effects on service innovation. 2) Entrepreneurial orientation, service co-production, and information technology adoption had indirect effects on service innovation. 3) Service innovation had positive direct effects on service performance and 4) the goodness of fit of the statistical model fitted well to the evident data.

**Keywords:** Service innovation, touring business, factors

## 1. Introduction

Presently, the service sector plays an important role in development and economic growth at the world level as well as the national level. Business growth in the service sector has a significant impact in terms of economic value and proportion of the labor force (Maglio *et al.*,

2006). Similarly, tourism in Thailand is considered a large service sector, which is an income source with economic value, and the country's GDP is with a growth rate of more than six percent (Department of Tourism, 2010). Tourism is an important mechanism that creates employments and a variety of occupations scattering throughout the country. However, tourism is an industry with continuous fluctuations and changes in addition to facing with world competition in terms of product and service (Sundbo *et al.*, 2007). Most tourism entrepreneurs in Thailand has not yet been able to adapt to the high market dynamics and fluctuations, especially when Thailand has to be ready to enter the free trade area in 2015. Organizations in the government sector, therefore, provide support for research on service innovation, which is a body of knowledge necessary for development of competence for competitiveness among tourism entrepreneurs (Department of Tourism (2012). Therefore, understanding related factors and important components of service innovation under the tourism context is important for forming strategies to develop service innovation in organizations. This prompted the researcher to conduct this study.

## 2. Objectives

- 2.1 To investigate the relationships between the antecedents affecting service innovation
- 2.2 To investigate the relationships between service innovation and service performance

## 3. Research Methodology

### 3.1 Population and Subjects

In this study the unit of analysis is organization. The population of the study consisted of 2,054 touring businesses in three southern provinces of Thailand, which are Phuket, Surat Thani, and Songkhla. The subjects were business owners, entrepreneurs or high-level management of 340 business organizations who are related to service management and know their organizations very well. The data were collected through a questionnaire, one questionnaire for one organization.

### 3.2 Research Instrument

The instrument for data collection of this study was a questionnaire developed by adapting from those developed by various academics. The questionnaire employed Likert scale rating 1 – 5 from Least Practiced (1 mark) to Most Practiced (5 marks) to measure components of antecedents and service innovation. For measuring the consequences, the scale ranged from Least Operated (1 mark) to Most Operated (5 marks). The reliability of the questionnaire was analyzed using Cronbach's Alpha, and the reliability of the entire questionnaire was 0.973. The reliability of each variable is also shown in Table 1.

Table 1. Reliability Coefficients

Variable	Items	Alpha	Adapted from
Entrepreneurial Orientation (Eo)	12	0.886	Nasution et al. (2011)
Risk taking (rik)	4	0.776	Baker & Sinkula (2009)
Proactiveness (pra)	4	0.768	Li et al. (2008)
Innovativeness (int)	4	0.819	

Marketing Orientation (Mo)	12	0.902	Jaw et al. (2010)
Customer orientation (cso)	4	0.823	Cheng & Krumwiede (2010)
Competitor orientation (cpo)	4	0.848	Narver & Slater (1990)
Interfunctional coordination (ifc)	4	0.870	
Service Co-production (Cov)	8	0.876	Chen et al. (2011)
Customer cooperative (coc)	4	0.823	Auh et al. (2007)
Partner cooperative (cop)	4	0.848	
Information Technology Adoption (Ita)	12	0.913	Chen & Tsou
IT infrastructure (inf)	4	0.800	(2007)
Strategic alignment (sra)	4	0.865	
Individual learning (ndl)	4	0.856	
Human Resource Practice (Hr)	10	0.904	Nasution et al. (2011)
Job-related (jor)	6	0.868	Chen & Huang (2009)
Reward-related (rwr)	4	0.847	
Service innovation (Si)	10	0.917	Camisón & Monfort-Mir (2012)
Product innovation (pdi)	5	0.877	Grawe et al. (2008)
Process innovation (pci)	5	0.887	Avlonitis et al. (2001)
Service Performance (Pm)	6	0.896	Chen & Krumwiede (2010)
Market performance (mkp)	3	0.828	Avlonitis et al. (2001)
Financial performance (fap)	3	0.886	

### 3.3 Data Collection

Data were collected from two sources. 1) Data collected from the field—210 copies of the questionnaire were collected from the sites by the researcher. 2) Data collected via the post—200 copies of the questionnaire were mailed to the companies selected from the list available from the Office of Touring Business and Tour Guides Registration, Southern Branch, and 150 copies or 75 percent of the total 200 copies mailed were returned. Thus, the total number of copies of the questionnaire obtained was 360. However, only 340 copies were found to be complete.

### 3.4 Data Analysis

#### 3.4.1. Basic data

Basic data analysis was conducted using percentage to describe characteristics of the subjects. The results were that most of the questionnaire respondents or 54% of them were females, 46.2 % were between 36 – 54 years old, and 69.1% had experience in touring business between 11 – 20 years. Most of them or 55.6% were owners of the business, 55.0% has been in business between 7 – 14 years and had 5 – 15 employees in their organizations, and 87.1% used the Internet in their business to support their service.

#### 3.4.2. Data testing

Linear structure relationships between observed variables were tested to determine the distributions of the observed variables used in the development of the model. The test was performed using Pearson product moment correlation coefficients. It was found that the

variables had linear structure relationships but no pairs of observed variables were found to have a relationship of more than 0.8. Thus, there was no problem of multi collinearity as shown in Table 2.

Table 2. Pearson product moment correlation coefficients of observed variables

Observed variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. rik	1																
2. pra	.588	1															
3. int	.565	.616	1														
4. cso	.489	.525	.541	1													
5. cpo	.441	.520	.482	.487	1												
6. ifc	.455	.475	.491	.550	.614	1											
7. coc	.410	.463	.472	.509	.500	.550	1										
8. cop	.470	.485	.481	.541	.420	.454	.627	1									
9. inf	.447	.409	.410	.387	.477	.504	.496	.421	1								
10. sra	.441	.458	.459	.385	.483	.434	.542	.488	.635	1							
11. ndl	.391	.433	.398	.351	.415	.421	.439	.450	.587	.631	1						
12. jor	.433	.423	.440	.436	.466	.519	.546	.492	.534	.599	.582	1					
13. rwr	.401	.375	.380	.367	.460	.446	.503	.395	.464	.489	.469	.683	1				
14. pdi	.488	.465	.467	.488	.512	.534	.547	.468	.507	.554	.483	.614	.624	1			
15. pci	.433	.449	.465	.392	.479	.536	.528	.459	.477	.548	.520	.605	.561	.687	1		
16. mkp	.419	.439	.449	.441	.448	.487	.458	.440	.467	.422	.479	.574	.546	.620	.608	1	
17. fap	.400	.360	.443	.343	.452	.428	.442	.398	.445	.469	.422	.552	.552	.584	.609	.691	1

### 3.4.3. Measurement Model

The measurement model is a model that specifies linear relationships between latent variables. In this study, there were 7 latent variables and 17 observed variables. Goodness-of-fit index of the measurement model was tested and found that the measurement model fitted the empirical data at good levels ( $\chi^2=147.592$ ,  $df=98$ ,  $p<.001$ ,  $RMSEA=0.036$ ,  $CFI=0.985$ ,  $SRMR=0.010$ ). The results of the measurement model estimation revealed that the component weights of every observed variable had a statistical significance of .001, and the observed variable with the highest standard component weight was job-related (regression weight = 0.864,  $p<.001$ ) and the prediction value was 0.738 as shown in Table 3.

Table 3. Measurement data estimates

Variables	Regression weights	Estimates	S.E.	t	R2	CR	AVE
Entrepreneurial Orientation						0.745	0.501
Risk taking	0.735***	0.904	0.067	13.498	0.541		
Innovativeness	0.780***	1.033	0.072	14.371	0.609		
Proactiveness	0.789***	1.000	-	-	0.623		
Marketing Orientation						0.750	0.500
Customer orientation	0.718***	0.765	0.058	13.200	0.516		

Competitor orientation	0.739***	0.912	0.067	13.627	0.547		
Interfunctional coordination	0.776***	1.000	-	-	0.603		
Service Co-production						0.680	0.503
Customer cooperative	0.827***	1.021	0.072	14.092	0.684		
Partner cooperative	0.758***	1.000	-	-	0.575		
Information Technology Adoption						0.751	0.500
IT infrastructure	0.765***	0.938	0.067	13.928	0.586		
Strategic alignment	0.829***	1.100	0.073	15.076	0.687		
Individual learning	0.764***	1.000	-	-	0.583		
Human Resource Practice						0.664	0.501
Job-related	0.864***	0.993	0.060	16.523	0.738		
Reward-related	0.791***	1.000	-	-	0.625		
Service innovation						0.668	0.502
Product innovation	0.840***	0.905	0.052	17.489	0.705		
Process innovation	0.818***	1.000	-	-	0.670		
Performance							
Market performance	0.847***	0.876	0.054	16.220	0.717	0.679	0.503
Financial performance	0.815***	1.000	-	-	0.665		

\*\*\*p<.001

## 4. Literature Review

### 4.1 Service innovation and Service performance

It is accepted among academics that service innovation leads to new services and indicates effective development of new services, processes, activities, or improvement of organizational management (Drejer, 2004; Mattsson *et al.*, 2005). At present, it is found that tourism business has to face with a high level of competition; therefore, companies must attach importance to integration of limited resources in order to utilize them effectively to make profits and maintain organizational survival (Roberts & Amit, 2003). Presenting new service products and a new service process or service innovation to respond to customers' value and needs can help improve the organizational image and lead to sustainable success in business operations. While the overall achievement of an organization is usually assessed by its business performance, many studies found that innovations in the service sector and service innovation have direct influence on business service performance. Therefore, service innovation can be compared to an instrument to meet the needs of the organization which can bring competitive advantages and directly affect organizational performance.

### 4.2 Factors affecting service innovation

#### 4.2.1 Entrepreneurial Orientation

Entrepreneurial orientation is to give importance to entrepreneurial personality and characteristics, and is an important mechanism for management that reflects organizational competence. According to Miller (1983), entrepreneurial-oriented organizations should have three components of operation, namely, risk taking, proactiveness, and innovativeness. These

components can support operations in risk taking even though the goal might not be achieved. Operations that are superior than competitors, and promotion of creativities can lead to new products or services. Entrepreneurial orientation is, therefore, an important factor in creating or pushing service innovation for the organization.

#### *4.2.2 Marketing Orientation*

Marketing orientation is the most efficient and most effective organizational culture for building personnel behavior, which leads to adding value for customers. Narver & Slater (1990) state that key components of marketing orientation are made up of customer orientation, competitor orientation, and inter-functional coordination. These components can make a process that creates inter-organizational activities related to data that meet customer satisfaction, and data for analyzing competitors' operations, and related to the importance to steps in coordination of cooperation among employees of the organization. The operations can be beneficial to strategies that are in line with the organizational goal. Thus, marketing orientation is a factor used as supporting data for decision-making in order to make a difference in competition, and eventually lead to service innovation of the organization.

#### *4.2.3 Service Co-production*

Service co-production is to give importance to those from outside of the organization who participated in designing the service system. These can be performed by many customers and clients in tourism businesses such as transportation, accommodation, restaurants or touring business. These businesses are all basic resources of creativities for information useful for development of new types of service. Service co-production has influence on levels of customer satisfaction, and adds value to the products (Vargo & Lusch, 2004). In service delivery, the important component of service co-production is cooperation from customers and clients. Thus, service co-production is a business strategy created for that particular organization and it is difficult to imitate. Therefore, the challenge depends on the ability of the organization in managing conflict with customers.

#### *4.2.4 Information Technology Adoption*

Information technology adoption is information technology management by an organization that leads personnel to decide, change, perceive, and adopt it for its service improvement process. Scott (1991) focuses on importance of information innovation under technological pressure from external environments that force an organization to adopt it and adapt to it. The organization can do this by attaching importance to IT infrastructure, strategic alignment, organizational structure, and individual learning. Information technology adoption is, therefore, a factor that the new generation of management should take into consideration because it can help reduce steps in service and business operations to better respond to customers' needs.

#### *4.2.5 Human Resource Practice*

Human resource practice is the operation of activities that an organization holds for personnel in order to develop work that can fulfill the organizational goals. Quality of personnel is important for business opportunity and growth, especially service business because the nature

of service is that it is abstract. Hence, to achieve service innovation development depends on employees' attitudes and skills (Chang *et al.*, 2011). It is important for activities organized for employees to be job-related. These activities include training on job skills development, preparation of facilities for work, search for participating potential, promotion of understanding of career advancement, etc. These activities can create job satisfaction that is reward-related (Nasution *et al.*, 2011), thus, rewards or returns are important for work motivation. It can be said that development of service innovation in an organization cannot be complete without importance given to human resource practice because employees in an organization are important cogs that drive the entire process of practice.

#### 4.3 Relationships between Variables

In this study, literature related to service innovation and innovations in the business sector was reviewed in order to find out relationships of variables with direct and indirect influence on service innovation as illustrated in Table 4.

Table 4 Factors influencing service innovation

Variables	Literature reviewed
Entrepreneurial Orientation	Baker & Sinkula (2009); Maatooft & Tajeddini (2011); Marino <i>et al.</i> ; Nasution <i>et al.</i> (2010);
Marketing Orientation	AL-Dmour & Basheer (2012); Agarwal <i>et al.</i> (2003); Cheng & Krumwiede (2010); Jaw <i>et al.</i> (2010); Mavondo <i>et al.</i> (2004)
Service Co-production	Chen <i>et al.</i> (2011); Cheung & To (2011); Hongqi & Ruoyu (2012); Ordanini & Pasini (2008)
IT Adoption	Chen & Tous (2007); Ismail & Mamat (2012); Lee & Xia (2006)
Human Resource Practice	Chang <i>et al.</i> (2009); Mavondo <i>et al.</i> (2004); Nasution <i>et al.</i> (2010)
Service Performance	Aas & Pedersen (2010); Cheng & Krumwiede (2010); Grawe <i>et al.</i> (2009); Thakur & Hale (2012)

## 5. Research Results

The results of the study on the relationships between the structural equation modeling of the antecedents and the consequences of the service innovation of the touring business in the Southern part of Thailand had direct effects (DE), indirect effects (IE), and the total effects (TE) on service innovation as shown in Table 5. The results of goodness of fit test of the model to the empirical data are shown in the table below:

Table 5 Coefficients of Direct effects (DE), Indirect effects (IE), and Total effects (TE)

Casual Factors	Cause Factors											
	Hr			Mo			Si			Pm		
	DE	IE	TE	DE	IE	TE	DE	IE	TE	DE	IE	TE
Eo	-	-	-	0.499***	-	0.499***	-	0.198***	0.198***	-	-	-
Mo	0.283***	-	0.283***	-	-	-	0.334***	-	0.334***	-	-	-

Cov	-	-	-	0.478***	-	0.478***	-	0.211***	0.211***	-	-	-
Ita	0.619***	-	0.619***	-	-	-	-	0.219***	0.219***	-	-	-
Hr	-	-	-	-	-	-	0.648***	-	0.648***	-	-	-
Si	-	-	-	-	-	-	-	-	-	0.886***	-	0.886***
R <sup>2</sup>	0.715			0.836			0.847			0.785		

\*\*\*p<.001

5.1 The results of the study on the relationships between causal factors on service innovation of touring business in the Southern part of Thailand were as follows.

5.1.1 Entrepreneurial orientation (Eo) had indirect effects on service innovation through marketing orientation ( $\beta$  0.198,  $p < .001$ ).

5.1.2 Marketing orientation (Mo) had positive direct effects on service innovation ( $\beta$  0.334,  $p < .001$ ).

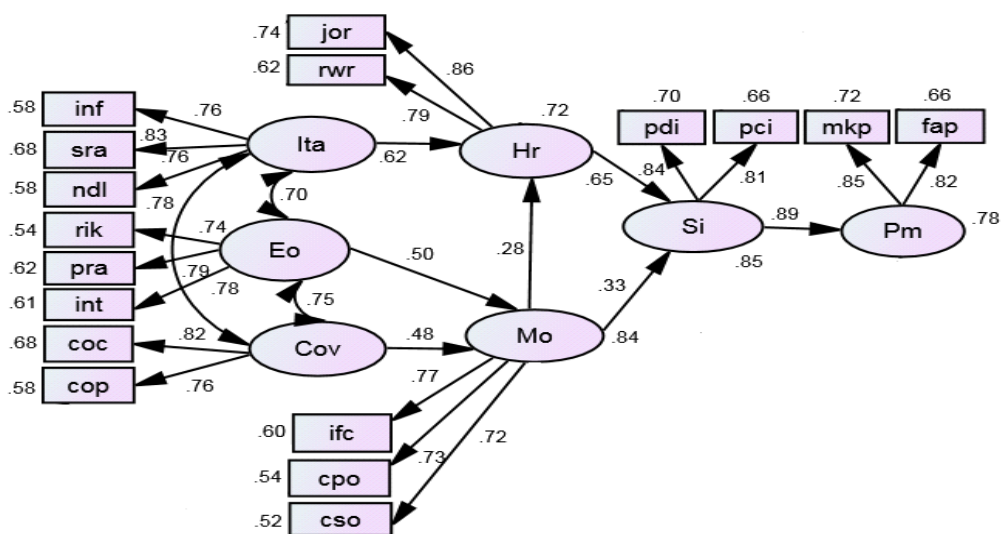
5.1.3 Co-production orientation (Cov) had indirect effects on service innovation through marketing orientation ( $\beta$  0.211,  $p < .001$ ).

5.1.4 Information technology adoption (Ita) had indirect effects on service innovation through human resource practice ( $\beta$  0.219,  $p < .001$ ).

5.1.5 Human resource practice (Hr) had positive direct effects on service innovation ( $\beta$  0.648,  $p < .001$ ).

5.2 The results of the relationship of service innovation of the touring business in the Southern part of Thailand. It was found that service innovation had positive effects on service performance ( $\beta$  0.886,  $p < .001$ ).

5.3 The outputs of the causal and effect model analysis and the effects of service innovation revealed that the model fitted well to the empirical data at a good level. The chi-square statistics was 155.412 at the degrees of freedom of 109, the goodness of fit index was at 0.949, and the root mean square residual was at 0.035 as shown in the figure1 below.



Chi-Square = 155.412, df = 109, p-value = 0.002, RMSEA = 0.035, GFI = 0.949

Figure 1. Path coefficient output of SEM analysis



5.4 The result of this study apparently reveal that the strategy of service innovation lead to a success in service performance. According to a several studies, it is suggested that service innovation affects positively to service performance (Chan *et al.*, 2009; Den Hertog *et al.*, 2010; Eisingerich *et al.*, 2009) and consequently contribute to competitive advantage (Gebauer *et al.*, 2011). While, the results of relationship among strategic factors proved that entrepreneur orientation is considered as a significant factors in leading activities of other related factors and contribute to the improvement of service innovation within the organization. (Li, 2008; Tajeddine, 2010)

## **6. Conclusion**

The problems under the tourism context of Thailand prompted the researcher to conduct this study. Reviewing related literature was performed to identify factors influencing service innovation to be used in the study to find out the relationships between causal factors and the effects on service innovation. The results of the study are as follows:

6.1 The factors that had direct effects on service innovation were marketing orientation and human resource practice, which had the highest influence. It can be seen that human resource is the factor that plays a very important role in service innovation.

6.2 The factors that had indirect effects were entrepreneurial orientation, co-production orientation, and information technology adoption. These factors are important for development of service innovation even though support from other factors is needed.

6.3 The model fitted well to the empirical data at a good level, which indicated that the concepts obtained from the literature reviews fitted well to the empirical data at a good level, too.

## **7. Recommendations**

The study on Antecedents and Consequences of Service Innovation: An Empirical Study of Touring Business in the Southern Part of Thailand contributes to development of the body of knowledge necessary for competency development among entrepreneurs in the tourism industry. It can help them see the importance of factors influencing service improvement. For related individuals in the government sector, they can use the study results in developing and forming guidelines for promotion of potential in creating service innovations in tourism organizations.

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