# BASIC STUDY FOR STRUCTURING TOURISM MODEL BASED ON SENSITIVITY VALUES A CASE STUDY OF OGUNI TOWN, KUMAMOTO PREFECTURE

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# ABSTRACT

In Oguni Town, Kumamoto-ken, there are attempts to structure "New Business Model" for establishing "Tourism" by offering "New Experience Programs" to urbanites.

To prepare the basic data to deploy ideas for structuring New Business Models, we focused on sensitivity values of recognition and evaluation of tourism in Oguni held by local businesses, tourist organizations, a transportation company and visitors, and studied the domain of "HOW" to offer "WHAT" to "WHOM".

To determine "WHOM", we conducted questionnaire interviews and used the evaluation grid method of 30 people from nearby Fukuoka-ken (10 each men and women in their 20s and five each aged between 40 and 59) whom we assumed as typical tourists visiting Oguni. Questions were related to "hot springs", "waterfalls" and "Japanese-style inns", and "how one spends time at travel destinations".

To examine "WHAT", we conducted hearings of local business people and tourist organizers to extract resources useful to encourage tourists to visit Oguni. We conducted another hearing of transportation businesses to probe the current tourism trends. Additionally, we conducted a questionnaire survey and hearing of tourists visiting Oguni to define its source of attractions.

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As for "HOW", we collected materials related to "experience programs" of other areas of Japan, sampled and sorted methods of retrieval on home pages, methods of program classifications, and points contrived.

We then proposed guidelines for the programs introduced from the investigative analysis regarding "WHAT" and proceeded with programs introduced from the analysis regarding "HOW" classified by three target users introduced from the analysis regarding "WHOM".

**Keywords:** Sensitivity Values, Tourism Model, Evaluation Grid Method, SWOT Analysis, Design Strategy

# 1. INTRODUCTION

Oguni Town in Kumamoto Prefecture is making attempts to structure "a new business model" by offering novel experience programs to urbanites and to establish a new concept of "tourism". Aiming to gather the basic data useful for deploying the idea, we studied "HOW" to offer "WHAT" to "WHOM" [1] in the domain of tourist business [2]. Regarding "WHOM" and "HOW", we focused on sensitivity values such as preferences and attraction of Oguni as held by local businesses, local tourist organizations, a transportation company and tourists, and probed their ideal forms.

We conducted the study as a part of "Oguni Brand Creation Project" proposed and agreed by Kyushu University Faculty of Design and Township of Oguni.

#### 2. OGUNI-TOWN

Oguni is located at the approximate center of Kyushu Island in the northmost area of Kumamoto Prefecture, outside the outer rim of Aso Volcanoes in the up-stream of Chikugoriver (Figure 1). It extends for 18 km east to west, 11 km south to north, and covers a total of 136.72 km<sup>2</sup>, 74% of which being used for agro-forestry, its basic industry. Forestry has a long history and the town is known for its abundant and excellent "Oguni Cedars". It is also known for dairy farming and vegetable growing taking advantage of cool summers.

Recently, attention is focused on exchanges with outside, which may initiate new life styles for inhabitants by encouraging local industries to shift to "exchange-type" with other areas and re-evaluating regional resources. More particularly, the objective is to activate regional economy by promoting health-related industries and increasing the number of people participating in exchange programs: "Green tourism or Health tourism" emphasizing "food resources, forestry resources and hot springs" is incorporated in the regional rejuvenating project in addition to the promotion of agro-forestry.



Figure 1: Location and scenes of Oguni; Tsuetate Spa, Nabegataki Waterfall, Mokkonkan-wooden building used for training, Oguni dome-gymnasium, and Youstation-shop selling local marchandise, clockwise from top left.

## 3. EVALUATION STRUCTURE OF TOURISM RESOURCES

#### 3.1. Purpose

This study aims to study target users (WHOM) of the business model by delineating what tourists prefer and find attractive.

## 3.2. Method

A total of 30 people in four groups from Fukuoka Prefecture, 10 each men and women in their 20s - future mainstream of tourists - and five each men and women in their 40s and 50s current group of tourists - were studied. We evaluated Oguni's four major tourism resources - "spa", "waterfall" and "Japanese-style inns", and "how tourists spend time at destinations", which may be regarded as a comprehensive concept of tourism. An interview survey using the evaluation grid method [3] was conducted to sample rationales for preferences based on the past "experiences" of interviewees related to the four tourism resources.

#### 3.3. Results

The result was sorted according to the following three steps; (1) Diagram preparation; we drew diagrams for survey subjects and tourism resources by classifying sampled reasons into three levels of "primary concepts" used for judging abstract values, "secondary concepts" of sensitivity understanding which induced the primary concept, and "tertiary concepts" of objective and concrete understanding which induced the secondary concepts; (2) Diagram integration: four tourism resources x 30 subjects = 120 diagrams were integrated into 16 diagrams of four tourism resources x four subject groups (four resources x men, women and

two age groups) = 16 diagrams (Figure. 2); and (3) Total; the number of subjects sampled at each level and that of subjects by combining reasons were totalled.

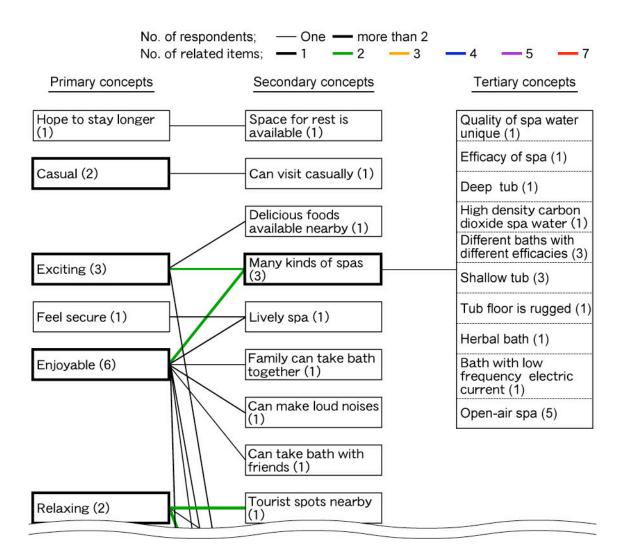


Figure 2: Part of integrated diagram (Spa/male/20s)

As for "the primary concept" indicating directions of interviewees' preferences of tourism resources, 13 concepts were sampled by more than 2 subjects such as "feels good", "relaxing" and "enjoyable" regarding "spa". Regarding "waterfall", 8 concepts were sampled including "feels good", "enjoyable", "healed", etc. Regarding "stay at inn", 10 concepts such as "feels good", "enjoyable" and "pleasing" were sampled. As for "how one spends time at travel destinations", 15 concepts such as "enjoyable", "relaxing" and "interesting" were sampled.

Regarding 4 tourism resources, primary concepts cited by more than 2 respondents were compared. Many common to plural tourism resources are shown in Table 1. Their breakdown shows abstract values of "healing" seeking "soothing" and "relaxing", abstract values of seeking "change of moods" such as "feels good" and "refreshing", and values of seeking "pleasure" such as "enjoyable" and "pleasing".

Table 1: Relation between four tourism resources and abstract concepts sampled

				H	lea	alin	g		C	ha	ing	e c	of n	noo	ods	5		PI	ea	sure	е
	Soothing	Relaxing	Composing	Feels good	Enjoyable	Healing	Pleasing	Satisfying	Assuring	Refreshing	Casual	Exciting	Relaxing	Tranquil	Carefree	Novel	Fresh	Lively	Interesting	Want to come back	Happy
Spa	0	0	0	0	0	0	0		0	0	0	0	0		0						-
Waterfall	0	0	0	0	0	0		0		0											
Stay at inn	0	0	0	0	0	0	0	0	0		0										
Time spent at destination	0	0	0	0	0		0	0				0		0		0	0	0	0	0	0

## 4. TOURISM RESOURCES OF OGUNI

## 4.1. Purpose

In order to examine the items of appeal (WHAT) in the business model, we conducted SWOT analysis [4] of Oguni Town to clarify its resources that should be utilized as its "Strengths".

## 4.2. Method

The subjects included five inn-keepers, one spa business, one restaurant; and two tourist organizations, one transportation company. A total of 76 respondents or 38 men and 38 women participated. A hearing survey was conducted for local private businesses, tourist organizations and a transportation company. The local businesses and local tourism organizations were asked to indicate good and bad points of Oguni, the current situation in tourism facing Oguni whereas the transportation company was asked to describe the current situation of domestic tourism. Tourists were asked to participate in the questionnaire and hearing surveys and tell their reasons for choosing Oguni as their destination, and their opinions regarding selection of tourist spots in general.

# 4.3. Result

The result of surveys conducted among local businesses, local tourist organizations and a transportation company is presented in five steps; (1) verbal data obtained by hearing were transcribed; (2) transcriptions were classified by the study members into "Strengths (S)", "Weaknesses (W)", "Opportunities (O)", "Threats (T)"; (3) transcriptions were summarized into precise and simple items; (4) items were stream-lined, and (5) items were classified into six - human resources, material resources, monetary resources, information resources, time-related resources, and others.

Results of questionnaire survey conducted among tourists were simply added up, and those of hearing survey processed as above (2) and (3) based on notes taken by interviewers.

Regarding Strengths (S) to be appealed to tourists, local businesses, local tourist organizations and a transportation company pointed out the human resource of pleasant exchanges with local inhabitants, the material resources of spas, nature and location as well as street scenes and good foods, the monetary resource of reasonable fees, and the time resource of adequate travel time from home (see Table 2). No Strengths were found regarding the information resource.

As shown in Table 3, tourists found attractive the material resources of spa, nature, scenic beauty, location, and excellent facilities and foods served. As for the monetary resource, reasonable fees were cited, and for the time resource, adequate travel time from home was cited. No Strengths were found regarding the human resources and the information resources.

		S	
Human resource	Gives comfort to visitors	Good service	Develops good relations with local people
Material resource	Good quality spa water	Many kinds of spas	Abundant spa water
	Attractive tourist spots	New Facilities	Not too touristy
	Streets create nostalgia	Delicious foods	Distinctive seasonal scenes
Monetary resource	Reasonable fees		
Information resource	-		
Time-wise resource	Pleasant drive time from Fukuoka		
Other resources	No rivals		

 Table 2: Part of Strengths (S) cited by local businesses, local tourist organizations and a transportation company

Table 3:	Part of Strengths	(S) c	ited by	tourists
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		S	
Human resource	-		
Material resource	Good quality spa water	Many kinds of spas	Spas situated in natural environment
	Old fashioned spas	Appearances of facilities & buildings good	Parking lots attached to facilities
	Nice waterfall	Street scenes match nature	Delicious foods
Monetary resource	Reasonable fees		
Information resource			
Time-wise resource	Adequate driving distance (for day-trip)		
Other resources	-		

## 5. SURVEY OF SIMILAR PROGRAMS IN OTHER AREAS

## 5.1. Purpose

In order to examine how the new experience programs in this business model should be proposed (= HOW), similar programs offered in other areas were studied and points that should be noted presented.

## 5.2. Method

Services offered by on website by Japan Travel Bureau, Inc. (CHAKUTABI [5] – see Figure 3), and Kabusiki Kaisha Aida (TIKITABI [6] - see Figure 4), were studied. A total of 16 programs were selected for study; eight each programs selected arbitrarily from the experience programs introduced in these two websites. The study consisted mainly of sampling and classifying the items for 16 programs. Retrieval methods for "experience programs" were also studied for use in study of website deployments for Oguni Town.



Figure 3: Home page for CHAKUTABI (http://www.jtb.co.jp/kokunai/chakutabi/)

地域観光情報ボータルサイト - 体験プログ	ラム チキタビ	•		サイトマップ <u>№ 855</u> 文字サイズ 小 👳 📩
・ ニッボンを体感する!	地域発!最新ニュース	注目! 体験スログラム	必見! イベント	アモシロクチコミ
日本 日本 10 10 10 10 10 10 10 10 10 10		<ul> <li>ウインナー手代</li> <li>陶芸・盛物・梁</li> <li>人間芸・盛物・梁</li> <li>後間(1)体験</li> <li>ド炭焼き)体験</li> <li>ド炭焼き)体験</li> <li>「炭焼き)体験</li> <li>「炭焼き)体験</li> <li>水 働プログラム-</li> <li>工場体験</li> <li>電気(1)手約</li> </ul>	●体験 -覧へ	byチャッピ かまたシロクチョミ発信 発生中
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Figure 4: Home page for CHIKITABI (http://tikitabi.com/)

# 5.3. Result

As shown in Table 4, the survey revealed four items for classifying the contents of experience programs; "time required", "number of contents", "modes of transfer", and "number of persons receivable". Items were further classified: "Time required" were classified into "less than two hours", "between two and four hours" and "more than four hours"; "number of contents" into "one" and "two or more"; "modes of transfer" into "no

transfer", "on foot", "by car or bus", and "other"; and "number of persons receivable" into "six or less", "between six and ten", "11 or more".

As for retrieval of experience programs on website, "CHAKUTABI" focused on the experience programs per se by selecting "type" from the onset. "CHIKITABI" focused on the areas where the programs were to be experienced by selecting "a prefecture from the map" and then selecting "type of program". As for the types of programs, the former adopted "two layer structure" comprising eight categories and 59 sub-categories. The latter, on the other hand, adopted "one layer structure" comprising 40 categories.

Items	Category					
Hours spent	2 hours or less					
	Between 2 hours and 4 hours					
	4 hours or more					
Number of contents	One					
	Two or more					
Mode of transfer	No transfer					
	On foot					
	By bus or car					
	Other vehicles					
Numbers of visitors accepted	Six or less					
	Between 6 and 10					
	11 or more					

Table 4: Classification items of new experience programs

#### 6. PROPOSED GUIDELINES FOR BUSINESS MODEL STRUCTURING

Based on the above, guidelines for deploying ideas are described. Guideline 1: Those seeking "healing effects" are targeted by limiting the area to a specific place, the time spent to less than 2 hours, the content to one, no transfer and small number of visitors received six or less. Ex. Esthetic services making use of spas. Guideline 2: Those seeking "change of moods" are targeted by limiting the area to a specific region and its neighborhood, the time spent to more than 2 but less than 4 hours, the number of contents to one or several, the mode of transport on foot or by car, and the number of visitors received to 6 to 10 by combining, for example, trekking and spa bathing. Guideline 3: Those seeking "pleasure" are targeted by designating the whole area of Oguni town, limiting the time spent to more than 4 hours, the content to more than 2, the mode of transport to on foot, car or bus, and the number of visitors to more than 11. For instance, visitors may eat, enjoy spa and stay at different places, and combine walks with transfer, thus enjoying new experiences.

If the experience programs are to be carried on the Oguni website, the method of retrieval should preferably be "one layer structure" based on "types" in view of the fact that these programs are limited to Oguni town, as mentioned above.

#### 7. CONCLUSION

This study aimed at structuring a new tourism business model by making use of the new experience programs based on the fundamental data and proposed guidelines for deploying the ideas for structuring a new type of tourism model. In making the business model, further review from multiple viewpoints such as profitability is needed, and continued surveys are warranted. Another important challenge is to create a system within the region that may carry out the programs on their own.

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## REFERENCES

- 1. Fukuoka Chamber of Commerce and Industry, Kyushu Tourism Master Certification Class 1 Test, Official Text Book, ISBN 978-4-924308-68-8, p.55, 2007 (in Japanese)
- 2. Nakahasi K, Shibata G, ed., *Keiei Senryaku Soshiki Jiten*, Tokyo Keizai Shuppan Jouhou, ISBN4-88709-109-5, pp.93-96, p.264, 2001 (in Japanese)
- 3. Architectural Institute of Japan, *Guide to Investigation Methods for Environmental Psychology for Creating Better Environment*, Gihoudou Shuppan, ISBN4-7655-2444-2, p.13, pp.57-64, 2000 (in Japanese)
- 4. Globis Management Institute ed., *MBA Management Strategy*, Diamond-sha, ISBN4-478-37243-8, pp.15-21, 2005 (in Japanese)
- 5. Services to introduce attractive programs of novel experiences of areas described on their Home pages, March 25, 2008. The number of programs introduced is 465 (as of March 9,2009).
- Website to offer local tourism information such as Experience Programs offered by local autonomous bodies and tourist associations. The website was opened on April 11, 2008. The number of programs offered is 6901 (as of March 13, 2009).