

Evaluation of Busan Marine Tourism Cluster by the Concordance Test

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Abstract : *By employing primarily the Kendall's Concordance Test, the paper attempted to conduct an experts' evaluation on the interaction among the agents in Busan marine tourism cluster and recommend some measures for policy consideration for the cluster's activation. For this purpose, a conceptual framework was developed to guide the assessment by using inter-agent cooperation and network approaches regarding the nature of the marine tourism cluster. Such factors as cooperation, competition, relationship marketing, and networking were identified as critical. Findings of the study imply that Busan marine tourism cluster is at its embryonic stage and needs desperate measures for improvement in the inter-organizational cooperation and networking, the major regional characteristics that determine the competitiveness of marine tourism.*

Key words : *Industrial cluster, Marine tourism cluster, Interaction, Kendall's concordance test*

1. Introduction

Marine resources have an attractive force in the tourist's decision making. In fact, a considerable amount of tourism occurs along coastal areas and the mystical attraction of the waterfront continues to grow. Furthermore, the opportunities for all to have access to the waters have been provided and improved because of the establishment of infrastructure and development of various tourist resorts mainly supported by government initiatives.

Meanwhile, consumer behavior in tourism consumption has been changing and developing more segmented, specialized, and sophisticated markets aiming at unique experiences available at destinations. Tourism is getting more dominated by personal experiences, memorable economic offerings (Pine and Gilmore, 1998) and destinations are making greater efforts to compete successfully in responding to tourists' specific interests and needs by providing adequate products and services staged for the unique experiences (Novelli *et al.*, 2006).

In this context, interest has been growing in beefing up the competitiveness of tourism destinations through business cluster formation. Most of the studies on industrial clusters, however, have dealt mainly with the manufacturing and high technology industries. Few studies have ever addressed the implications of cluster formation and development in the tourism sector.

Given the intense competition tourism destinations are faced with, it is important to understand how businesses' critical masses are formed and how the agglomeration economies are produced in the tourism cluster. Attention should also be directed at increasing synergies through cooperation, competition, relationship marketing, and networking among the agents in the tourism cluster. Inter-agent interaction in the tourism cluster, as in the business cluster, may be regarded as a framework providing firms with innovative opportunities to compete both locally and in a globalized business environment (Saxena, 2005).

This study, therefore, was conducted to identify how the embryonic Busan marine cluster can enhance its competitive advantages, based on its evaluation by employing Kendall's coefficient of concordance test in the ranking of the experts' evaluation. For this purpose, a framework was developed using inter-agent cooperation and network approaches to examine the nature of the marine tourism cluster. Likewise, the experts' evaluation on the importance of interaction in the marine tourism cluster was compared with the current status on the degree of the interaction in its counterpart in Busan.

2. Theoretical Background

2.1 Marine Tourism Cluster

The concepts in the industrial cluster may be applied to

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those in the marine tourism cluster. A marine tourism cluster may be defined as centered on certain major natural or man-made tourism attractions along, under, or over the sea including adjacent areas, with firms geographically concentrated and interconnected. Firms agglomerate around attractive marine resources in order to take advantage of the benefits from the economic impacts through localization. This may be consistent with the rationale of external economies behind the industrial cluster.

A lot of different firms specializing in different stages on the value chain contribute to tourism products, services, and experiences offered at the destination in order to add utility to the tourist. And to optimize the value chain, the linkages among firms should be well coordinated. In case of the marine tourism cluster, the distinct features may be related to excellent qualities of marine resources, and the common benefits may definitely be related to the advantage taken of from natural environment of the destination.

The cluster approach involves making more efficient use of collective knowledge and building constructive relationships due to the interaction mechanism typical of the business cluster. Cluster policies are designed to strengthen industry competitiveness on the basis of differentiation and specialization rather than of competition through imitation or price discount among firms. The cluster approach also emphasizes buildup of cooperative relationships based on differentiated businesses.

In summary, a marine tourism cluster may be characterized by the importance of location around natural or manmade marine tourist attractions, partnerships among organizations, the importance of interaction, and the synergies achieved through competition and cooperation among differentiated firms. Such traits are embedded in the cluster theory of competitive advantage as a means of strengthening the linkages between and among related as well as supporting industries within a context for firm strategy structure on the regional dimension (Porter, 1998).

2.2 Cooperation and Competition

The existence of cooperative links among firms may be regarded as a key concept in the marine tourism cluster. The firms in the marine tourism cluster are interdependent because they make up components of different phases of the production system. Inter-firm cooperation is also expected to materialize in the nature-based marine tourism cluster because the environment is the major trait that determines the competitiveness at the destination (Huybers and Bennett, 2003). Cooperation between firms requires mutual trust and cultural proximity is considered important

since cooperation is an human phenomenon.

Firms cooperate to preserve the natural environment and to do successfully in collective inter-regional competition on the basis of the region's distinctive features. At the same time, they compete with each other in certain areas on the basis of individual strengths of their own since global competitiveness can be fostered with local elements of competitive advantage.

Cooperation and competition approaches in the tourism cluster may result from a change in the competitive strategies because of the volatility and sensitivity inherent to the tourism industry. A radical change has been occurring in the tourism industry with a focus shifted on quality and more sophisticated consumers. This requires agents in the tourism cluster to consider which of their resources and activities are most sensibly combined to cope with the changing environment in the tourism industry (Palmer, 1998).

Therefore the notion of simultaneous cooperation and competition may be a paradox, but it is central to the concept to the marine tourism cluster.

2.3 Relationship Marketing and Networking

As Morgan and Hunt (1994) suggested, the key concepts and elements in relationship marketing value the relational exchange, trust, commitment, interactivity, exchange and mutual fulfillment of promises, and a shift of emphasis from products and firms to people, organizations, and social processes. Such key elements may build relationships between and among stakeholders, help achieve policy goals, and create competitiveness in the marine tourism cluster.

In this approach, the role of relationship marketing could be understood as a process achieved through collaboration and cooperation between and among the firms engaged in the marine tourism cluster. Through relationship marketing, firms can realize the objectives of environmental conservation, recreation, and access for public benefits.

The concept of network may closely be connected with relationship marketing. Networking is built upon social interactions and relationships, which provide security and trust among agents. As defined, business network is an integrated and coordinated set of ongoing economic and non-economic relations embedded within, among, and outside business firms. Firms in the marine tourism cluster may exhibit a considerable degree of intraregional networking (Gordon and McCann, 2000), characterize untraded interdependencies extending beyond traditional customer and supplier relationships and embrace formal and informal collaborative and information networks as well as

rules for developing communications and interpreting knowledge (Keeble *et al.*, 1999). In a case study on tourism destination at Waitomo, New Zealand, Pavlovich (2003) claimed that network approach illustrates the self-governing nature of small firms within interdependent systems, and the way such a process assists the destination in building tacit knowledge for competitive advantage. The relationship marketing and networks among agents may form part of the social capital, which contributes to mutual learning, information exchange, and the innovation process in marine tourism cluster.

Therefore, a combination of these approaches along with those of cooperation and competition was used to elucidate the interaction among different actors in the marine tourism cluster. That is, to explain the nature of linkages and relationships among actors in the marine tourism cluster, four constructs of cooperation, competition, relationship marketing, and networking were selected as the key attributes representing the interaction in the marine tourism cluster.

3. Methodology

A structured questionnaire was prepared to test experts' perceived evaluation on interaction among agents both in an ideal marine tourism cluster and in Busan marine tourism cluster. While the items used were based on prior research (Berg *et al.*, 2001; Jackson and Murphy, 2006), almost all of the items were adapted so that each item content matched the traits of the marine tourism cluster. A focus group interview was conducted with five experts in marine tourism and the interview explored their perception related to the concepts of inter-firm cooperation, competition, relationships marketing, and networking among the agents in the marine tourism cluster.

On the final questionnaire administered, all items were measured by using five-point Likert scales anchored from *not agree at all* (1) to *strongly agree* (5). This assessment included respondents' perception on marine tourism cluster in terms of the importance of cooperation, competition, relationship marketing and networking among agents. It also involved the assessment of respondents on the degree of interaction among agents in Busan marine tourism cluster in terms of cooperation, competition, relationship marketing and networking

In conducting the survey, a sampling frame was used to obtain from each of the four groups of regional tourism experts including research fellows, practitioners at the management level, civil servants, and university professors in

Busan. Within these strata, systematic samples were selected, ensuring adequate representation from the various segments of the region as well as from each field. Each respondent was contacted through personal visit, e-mail, or fax for two months from January to February in 2007. The data collection procedure resulted in 70 usable surveys being completed, representing a response return rate of 70 percent.

4. Results

4.1 Characteristics of the Sample

Table 1 shows the profile of the respondents. Along gender, 54 (77%) of the respondents are male and 16 (23%) are female. By occupational segment, there are 16 fellows engaged in research and development 19 civil servants 19 in managerial positions and 16 university professors. In terms of educational attainment, about half of the respondents are currently in pursuit of their Ph.D. program or with Ph.D. degree. Related to work experience, the majority of the respondents have more than five-year work experience while the rest have more than ten years.

Table 1 Characteristics of the Sample

Variable	Item	frequency (n=70)	ratio(100%)
Gender	Male	54	77.1
	Female	16	22.9
Occupation	Researcher	16	22.9
	Civil servant	19	27.1
	Firm Professional	19	27.1
	Professor	16	22.9
Age	< 29	5	7.1
	30 - 39	21	30.0
	40 - 49	32	45.7
	> 50	12	17.1
Education	college	21	30.0
	Masters' program	15	21.4
	Ph,D program	34	48.6
Work Experience (years)	< 3	7	10.0
	<3 - 5	7	10.0
	<5 - 10	19	27.1
	<10 - 20	24	34.3
	> 20	13	18.6

4.2 Reliability

The reliability estimates of the measurement items were verified by using Cronbach's alpha to assess the internal consistency of the constructs in the proposed study. The Cronbach's alpha values ranged from 0.688 to 0.693 (Table 2), exceeding the minimum hurdle of 0.60. The results indicated that the items were reliable in measuring each construct. This study did not conduct the factor analysis since each of the factors was categorized beforehand.

Table 2 The result of reliability

Factor	Item	<i>a</i>
Cooperation & Competition	Improving productivity by efficient use of resources	.688
	Imitation of successful tourism firms	
	Innovation in tourism products & services	
	Participation in organizations involved in destination marketing	
	Building relationships with local suppliers & customers	
	Differentiation in tourism products & services	
	Cooperation among marine tourism firms	
	Competition with other destinations at home and abroad	
	Competing location of leading firms at home and abroad	
	Organized councils of various members	
	Seeking opportunities for cooperation among firms	
	Competition among local tourism firms	
	Cooperation for the preservation of marine resources	
Relationship Marketing & Networking	Specialization in the marine tourism industry due to agglomeration	.693
	Regular meetings for activating marine tourism industry	
	Sharing information with firms in partnership organizations	
	Organic networks with local support organizations	
	Formal & informal meetings for the exchange of knowledge & information	
	Exchange of information through informal contacts among firms	
	Knowledge transfer through linkages to local universities and research institutes	
	Joint marketing for the destination	

4.3 Concordance Test on Cooperation and Competition

As it is possible to test for order correlation with ranked data, in this study, Kendall's coefficient of concordance was used to ascertain the degree to which the four survey groups of respondents agree in their ranking of a set of items. The resultant coefficient takes a value in the range 0-1. A zero would mean that there was no agreement among the four groups whereas 1 would indicate total agreement. It is more likely that an answer somewhere in between these two extremes would be found. In the test, a significant statistics should be found to interpret and chi square was used in this study.

Table 3 presents a summary of the rankings by the 70 tourism experts. The experts strongly agreed on the importance of the questions along the importance of cooperation and competition in marine tourism cluster (Kendall's coefficient of concordance .193, $p = .000$). They agreed that the question of differentiation in tourism products and services is the most important while that of competition among local tourism firms is least important to marine tourism cluster. Their evaluation varied with respect to the other questions though they rated all the questions highly important as components of the marine tourism cluster.

On the other hand, an analysis of the rankings in cooperation and competition behavior in the marine tourism cluster in Busan show that despite a marginal agreement among the experts (Kendall's coefficient of concordance is .032, $p = .008$), opinions of the experts imply that Busan tourism cluster is at an embryonic stage and much more in inter-firm cooperation and competition is in a great need.

Table 3 Kendall's coefficient of concordance in cooperation and competition

Item	Marine Tourism Cluster	Busan Tourism Cluster
Improving productivity by efficient use of resources	4.34(.508) [7.84]*	2.49(.676) [7.09]*
Imitation of successful tourism firms	3.91(.583) [5.60]	2.56(.673) [7.51]
Innovation in tourism products & services	4.54(.530) [8.99]	2.46(.652) [6.94]
Participation in organization involved in destination marketing	4.11(.578) [6.54]	2.49(.697) [7.03]
Building relationships with local suppliers and customers	4.03(.636) [6.08]	2.44(.651) [6.89]
Differentiation in tourism products & services	4.59(.551) [9.18]	2.33(.696) [6.22]
Cooperation among marine tourism firms	4.19(.572) [6.95]	2.36(.638) [6.39]
Competition with other destinations at home and abroad	4.10(.705) [6.71]	2.49(.654) [6.83]
Competing location of leading firms from home and abroad	4.20(.580) [6.95]	2.49(.864) [7.00]
Organized councils of various members	4.06(.679) [6.32]	2.50(.631) [7.11]
Seeking opportunities for cooperation among firms related to marine tourism	4.13(.612) [6.67]	2.51(.583) [7.29]
Competition among local tourism firms	3.63(.641) [4.21]	2.73(.700) [8.41]
Cooperation for the preservation of marine resources	4.56(.605) [8.96]	2.33(.696) [6.30]
Kendall' W	.193	.032
Chi-square	161.976	26.803
Asymn. Sig	.000	.008

* Mean(Standard Deviation)[Mean Rank]

4.4 Concordance Test on Relationship Marketing and Networking

In summary, Table 4 presents the ranking by the respondents' evaluations on relationship marketing and networking in the marine tourism cluster. The experts rather strongly agreed on the importance of the questions on networking (Kendall's coefficient of concordance .159, $p = .000$). They were all in accord that the questions of joint marketing for the destination and specialization in the marine tourism industry were the most important while that

of information exchange through informal contacts among firms was least important to marine tourism cluster. Their opinions varied slightly with respect to the other questions but nevertheless they rated all the questions highly important as components of marine tourism cluster.

With regard to the eight questions about the current status of Busan marine tourism cluster in terms of networking among agents, Kendall's coefficient of concordance was 0.008, $p = .796$, indicating a lack of consensus among the experts in the ranking of the items. This situation indicates a diversity of opinions among the experts on the current status of networking in Busan marine tourism cluster. As identified in Table 4, there is relatively less support to such items as regular meetings for the activation of marine tourism industry and the knowledge transfer through linkages to local universities and research institutes. These results could be interpreted as showing common awareness among the respondents on the shortfall of Busan marine tourism cluster in the prerequisites for the business cluster relating to wide involvement and networks among agents.

Table 4 Kendall's coefficient of concordance in relationship Marketing and Networking

Item	Marine Tourism Cluster	Busan Tourism Cluster
Specialization of the marine tourism industry due to agglomeration of related industries	4.37 (.663) [5.46]*	2.41 (.577) [4.54]*
Regular meetings for the activation of marine tourism industry	3.84 (.581) [3.66]	2.34 (.634) [4.29]
Sharing information with firms in partnership	4.14 (.572) [4.61]	2.49 (.697) [4.69]
Organic networks with local support organizations	4.27 (.563) [5.05]	2.44 (.651) [4.59]
Formal & informal meetings for the exchange of knowledge & information	3.93 (.573) [3.92]	2.44 (.629) [4.52]
Information exchange through informal contacts among firms	3.80 (.528) [3.46]	2.39 (.597) [4.36]
Knowledge transfer through linkages to local universities, research institutes	4.06 (.634) [4.35]	2.36 (.660) [4.29]
Joint marketing for the destination	4.39 (.572) [5.49]	2.46 (.652) [4.72]
Kendall' W	.159	.008
Chi-square	77.780	3.856
Asymn. Sig	.000	.796

* Mean(Standard Deviation)[Mean Rank]

5. Conclusion & Policy Implications

5.1 Conclusions

In recognition of the increasing importance of the marine tourism cluster as an important developmental tool for enhancing competitiveness of the tourism destination, this

paper addressed the importance of the interaction among agents in regionally-based marine tourism clusters and evaluated the current status of the marine tourism cluster in Busan. Findings show that generally, there was a great support for the importance of interaction among agents in the marine tourism cluster in terms of cooperation, competition, relationship marketing and networking. In case of Busan, however, there appeared to be a much less appreciation of the existence of the horizontally-lined local cluster with a strong local leadership in support of linkages among firms.

With regard to relationship marketing and networking, there was also a great support for the importance of the partnerships that may facilitate an integrated approach to the competitiveness of the tourism cluster. But the marine tourism cluster in Busan was evaluated as being at an underdeveloped stage. Among other things, the respondents pointed to a deficiency of networking among agents in Busan, which entails a need for an effective network of competent and well-equipped destination development practitioners.

At this juncture, it may be implied that a lack of local government support to local firms' needs remains one of the main factors inhibiting a wider acceptance of cooperation and network initiatives. Since the majority of the businesses in Busan marine tourism cluster are small firms in nature, there is a lack of cooperation and networking among firms. Therefore, government intervention is needed to support a good deal more collective work to be realized through linkages among the firms.

In conclusion, in developing the marine tourism cluster in Busan, it seems desirable to take more self-sufficient top-down approach to regional development with horizontal linkages incorporating partnerships between private and public sectors and those among firms. The development of the marine tourism cluster by government initiatives could support linkages between related and supporting industries, resulting in increasing economic efficiency and welfare, reducing the likelihood of opportunistic behavior and enhancing firms' capabilities of adapting to changing circumstances.

5.2 Policy implications

The development of a marine tourism cluster can be a great opportunity for cooperation, involvement in government initiatives, and successful business operations. However, it is necessary that consideration be given to the process rather than to the outcomes. In this paper, the following policy implications may be suggested in the

process of activating the marine tourism cluster in Busan.

First of all, Busan needs to register some non-profit organizations as the marine tourism cluster council charged with a mandate to develop and implement initiatives for industry competitiveness in the marine tourism sector. The key objective of Busan marine tourism cluster may be to develop and implement a strategy for competitiveness designed to increase the average spending per tourist. For this purpose, the council needs to reposition Busan as a destination recognized for sustainable and various products, services, and experiences that command a premium price.

Second, the council should recognize the importance of the spatial focus inherent in the concept of tourism clusters. Then, policy interventions are needed to encourage the collaboration processes and provide strong incentives for active participation of small and medium enterprises. As a possible solution to this, such a support program as vocational training workshops may effectively enhance the collective and individual experiences already embedded in regional communities.

Third, the council needs to work closely with tourism professionals and environment experts. There should be an ongoing wide-based involvement to ensure that the principles of sustainability and conservation focus are maintained. Since tourists are getting more sensitive to the environment, the council should educate and raise higher level of awareness and undertake long-term conservation and regeneration activities. This scenario requires developing partnerships and networking with local universities, government and non-government agencies, and local communities to improve management of marine resources.

Fourth, national government and local government authorities should provide appropriate communication, transportation, legal, educational, and economic infrastructures. They should also provide assistance in institutionalizing the linkages and relationships among agents that will ensure the long term survival of the marine cluster.

Lastly, the government should create policies to support education in hospitality and tourism, which provides an intellectual infrastructure that facilitates innovation and value enhancement. In the process of developing the cluster, the government needs to seek the experts' advice from those in the academia and also ensure their active involvement as members of the well-informed workforce in the development of the cluster.

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