

IMPORTANCE-PERFORMANCE ANALYSIS OF THE MARINE TOURISM IN BAWEAN ISLANDS, INDONESIA

Akhmad Farid^{1,2}, Soemarno³, Marsoedi⁴, Budi Setiawan⁵

¹Agriculture Sciences Graduate Program, Brawijaya University, Malang, 65145, Indonesia

²Marine Science Department, Trunojoyo University, Bangkalan, Indonesia

³Soil Science Department, Brawijaya University, Malang, 65145, Indonesia

⁴Management of Aquatic Resources Department, Brawijaya University, Malang, 65145, Indonesia

⁵Agroeconomic Department, Brawijaya University, Malang, 65145, Indonesia

Abstract: *Bawean Islands has four main marine tourism objects among another marine tourism. The four of them are Noko island, White-sand beach, Mayangkara beach, and Sangkapura Harbor. Through years, the number of visitor coming to these islands gets decreased. That is why, an evaluation of visitor satisfaction and service quality of Bawean Islands is needed. The evaluation method used was importance performance analysis (IPA) by comparing performance and importance of supporting Bawean Island marine tourism development. Bawean can be considered to be accommodation facility, cleanliness performance, and availability of public bathing, washing and toilet facilities. From the importance rate, the visitors commonly think that beauty and originality of Bawean marine tourism object is quite important to develop Bawean marine tourism since ecologically, the four tourism objects have a super excellent ecology.*

Keywords: development, marine tourism, IPA, Bawean island, Indonesia

INTRODUCTION

Marine tourism is a kind of tourism basically referring to the ocean potential and it takes place in a certain location or area dominated with water or sea (Adalberto, 2007; Read, 2004). Those appeals can be in the terms of travelling by using sea transportation, marine natural resources, certain events held in beach, such as: fishing, surfing, diving, boat-sailing, beach tourism, boat rowing, traditional ceremony and culture of coastal area and marine people (Ioannis, Thanasis, Maria, Kondyli, Hristos, & Ioannis, 2008; Garin-Munoz, 2006). The concept of coastal and marine tourism is based on the view, natural uniqueness, ecosystem characteristic, cultural art and characteristic of native people as the basic strength owned by each region (Cejaz, & Sa´nchez, 2010; Fabinyi, 2008; Bagliani, Galli, Niccolucci, & Marchettini, 2006; Baorong, 2008).

Bawean island is a certain region of Indonesia having uniqueness and marine tourism potential being special appeal for the visitors of Bawean Island (Easterly, & Kraay, 2000; Baum & Calabresse, 2000). Particularly, the potential regions of Bawean Island marine tourism having great appeal for visitors are divided into four tourism objects respectively. The first tourism object is Noko Island with its coral reef characteristic, clear water, and white-sand beach. The next marine tourism is Mayangkara Beach with its big sea wave and wind. The third marine tourism object is white-sand beach having high quality of sand (white), good mangrove ecosystem, and good quality of water. The latest one is Sangkapura Harbour which has appealing sea panorama and its quay tourism for fishing in culinary appeal. From years to years, the number of visitors coming to these four islands gets decreased. The four marine tourism objects of Bawean Island will be the scope of this research.

Thus, the research of visitors satisfaction evaluation and service quality of Bawean marine tourism is needed (Burns, & Howard, 2003; Vanegas & Croes, 2003). The appropriate evaluation method for this research is Importance Performance Analysis (IPA). This method was developed by Martilla and James (1977) by comparing performance and satisfaction to support decision making management (Chen, Ruijs, & Wesseler, 2005; Sheng-Hsiung, Linb, & Lin, 2006).

METHODS

The subject involved in this study was visitors of the four tourism objects in Bawean Island, Indonesia from November until December 2012. Questioner distribution for each tourism object is as follow: Noko Island: 10 questioners, white-sand beach: 10 questioners, MYangkara Beach: 20 questioners, and Sangkapura Harbour: 20 questioners. In sum, all the respondent number is 60 respondents (questioners). The questioner contained two questions. The first one was about questioning visitor characteristics and the other one was about their satisfaction and importance rate (Chen, Ruijs, & Wesseler, 2005). There are seven items representing the motivation of visitors to visit marine tourism, namely: recreation, research study, enjoying beautiful scenery, sacred place visit and worship, vacation and vacation and refreshing. Questioner had 36 attributes representing eight components (ecology, safety, orderliness, cleanliness, comfort, friendliness, and uniqueness). The respondent chose importance and performance rate for each attribute item in five Likert's scale points from 1= very not important/very unsatisfied, until 5= very important/very satisfied (Chen, Ruijs, & Wesseler, 2005; Esteban & Pauline, 2008).

IPA Matrix was constructed by combining importance and satisfaction (36 operational attributes) into two dimensional grids. In accordance with Martilla and James (1977), x-axis point describes performance and z-axis point describes importance of each attribute item (Chen, Ruijs, & Wesseler, 2005). The determination of x and y point is used to determine coordinate point position being a standard procedure in plotting into four matrix quadrants: 'concentrate here', 'keep up the good work', 'low priority' and 'possible overkill'. As the result, each operational attribute is plotted into IPA matrix (Evanthie, Jeremy, & Paul, 2009).

RESULTS AND DISCUSSION

Respondent Characteristic

Most of respondents in this research were in the age of 16-25 years old (31.66%) and 30% of them is in the age of 26-35 years old, Senior High School education rate (36%), governmental official (31.66%). The motivation of the respondent in visiting Bawean maritime tourism were recreation (31.66%), enjoying beautiful scenery (31.66%). Most of them got information about Bawean Marine tourism from friends (41.66%), family (35%), and traveling agent (1.66%). In amount of 46.66% of respondent said that they visited Bawean island once a year, and the other was frequently enough to visit Bawean marine tourism.

Importance-Performance Analysis

The Importance-Performance Analysis of Bawean Marine Tourism in this research used 36 operational attributes (Sheng, Li, & Li, 2004). These attributes positioned into the IPA matrix in relating to performance and importance in accordance with the respondent (visitors). Since there were four tourism objects with characteristic of different kinds of tourism in this research, the analysis was also divided into four based on the tourism objects (Fortuny, Soler, Catalina, & Sa´nchez, 2008). The first was IPA of Noko Island. The IPA matrix of Noko Island was defined by two axes based on the importance point of total average (4.27) and performance (2.83) of 36 attributes (Figure 1).

Thirteen attributes are in 'Keep up the good work' and nine attributes are in 'concentrate here' quadrant. Eight attributes position in quadrant 'Low Priority' and only 6 attributes are in quadrant 'possible overkill' (Chen, Ruijs, & Wesseler, 2005; Rodr´guez, Lopez, & Estevez, 2007). This IPA result indicates that variable of ecology, beauty, friendliness, and uniqueness, respondents are quite satisfied and consider it as a very important factor (Goosling, 2001). While for variable of cleanliness, safety, and network access to the location, respondents were not satisfied and considered as very important factor in developing Bawean marine tourism of Noko island. Even though the result of research added item 'travel agent provided' (attribute 26) which is considered as less important today, however it will be influencing factor toward satisfaction of visitors visiting, especially their first visit to marine tourism object of Bawean Island, Indonesia (Hampton & Christensen, 2007; Wong, 1998; Jayawardena & Ramajeessingh, 2003).

Table 1: Importance Performance Analysis (IPA)Attribute

Variable	No.	Attribute
	1	Water quality
	2	Coral reef condition
	3	Fish resources
	4	Wave height
	5	Water apparent
	6	Fish species diversity
Ecology	7	Quality and quantity of white sand
	8	Beach slope
	9	Beach length
	10	Air temperature
	11	Water stream
	12	Mangrove ecosystem existence
	13	Security post provided
Safety	14	Parking lot provided
	15	Traffic and direction signs provided
Orderliness	16	Orderliness of tourism facilities and tools
	17	Information and service center provided
Cleanliness	18	Cleanliness of environment physical condition
	19	Sanitary facility provided (public bathing, washing and toilet facilities)
	20	Network access to the location
	21	Transportation provided
	22	Accommodation provided
Comfort	23	Ease of reaching location
	24	Restaurant facility
	25	Utility provided such as: electricity network, clean water, and communication
	26	Travelling agent facility
	27	Affordable ticket
Beauty	28	Beautiful natural object
	29	Beautiful artificial object
Friendliness	30	Giving pleasure and feel home condition
	31	Good for family or friend gathering
	32	Tourism object diversity offered
Uniqueness	33	Indigenous natural object
	34	Attraction of native culture and art
	35	Food with specific characteristic
	36	Unique souvenir

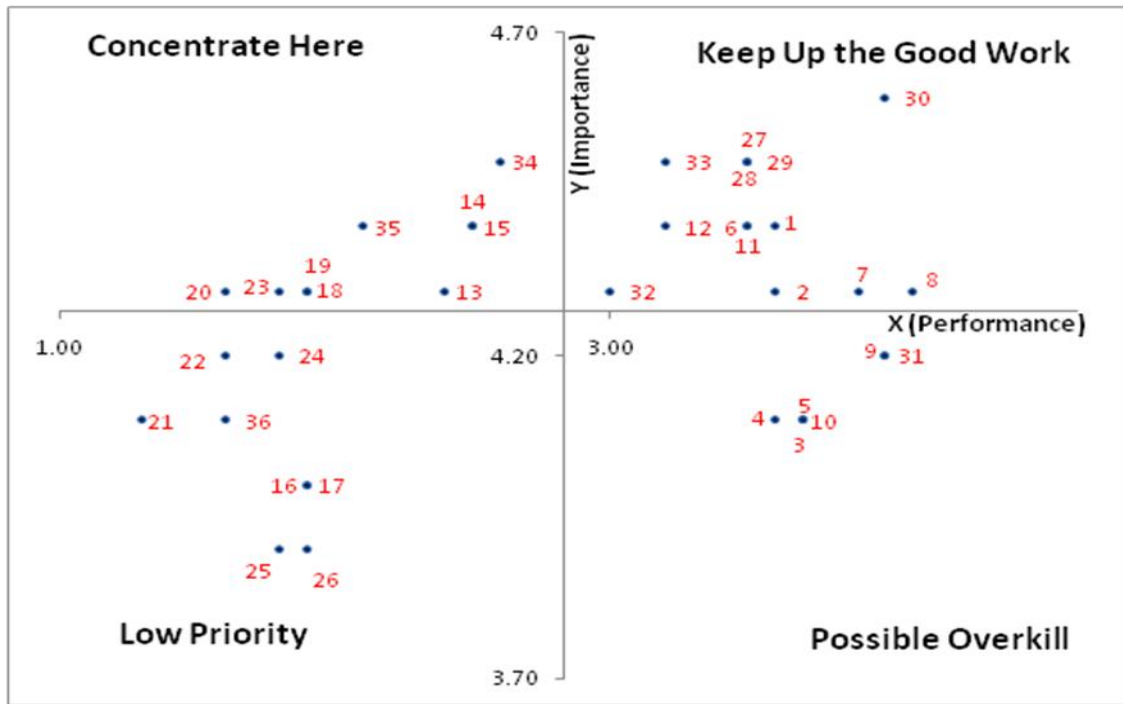


Figure 1: IPA Matrix of Noko Island Tourism Object

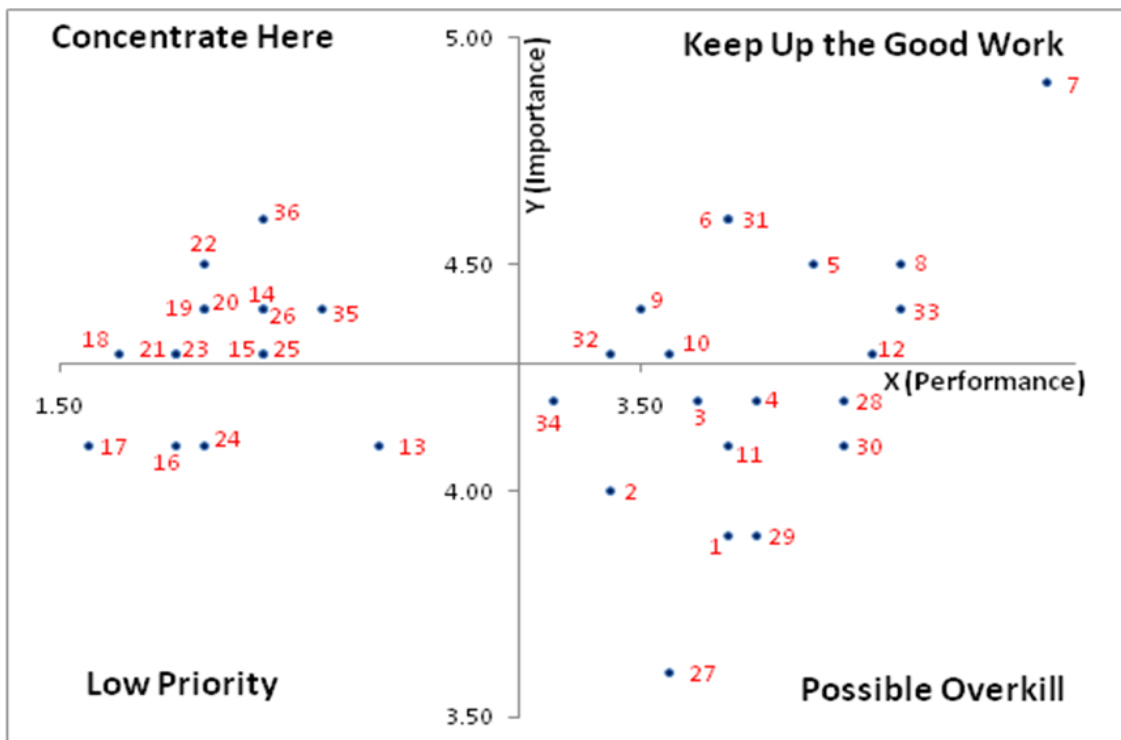


Figure 2: IPA Matrix of White-Sand Beach Tourism Object

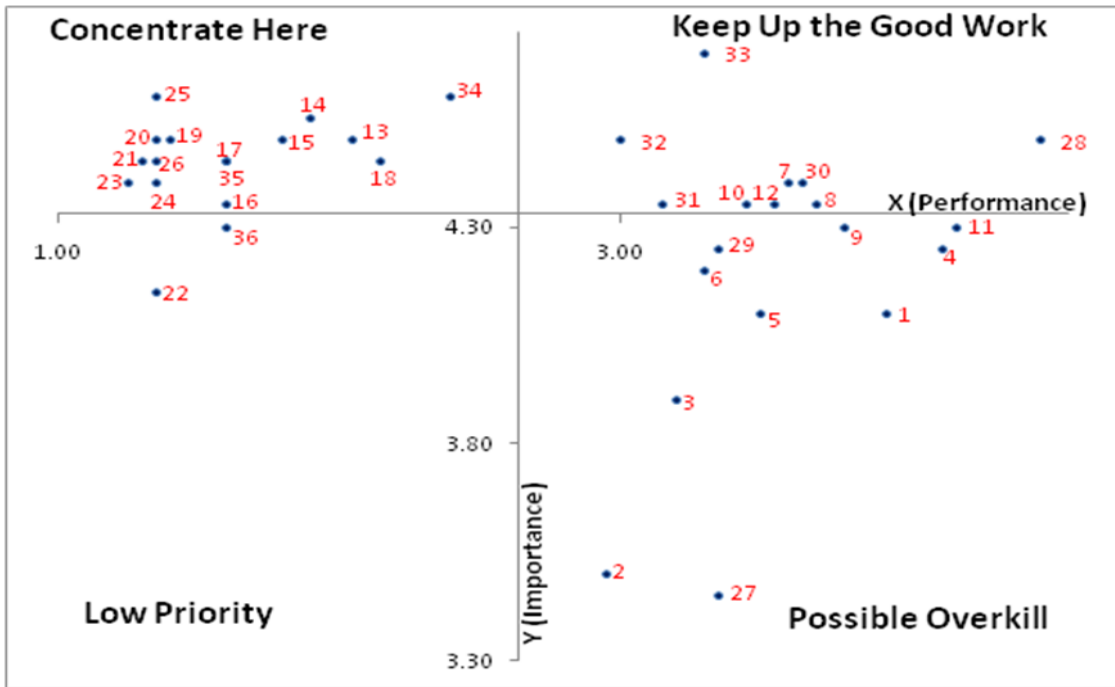


Figure 3: IPA matrix of Mayangkara Beach Tourism Object

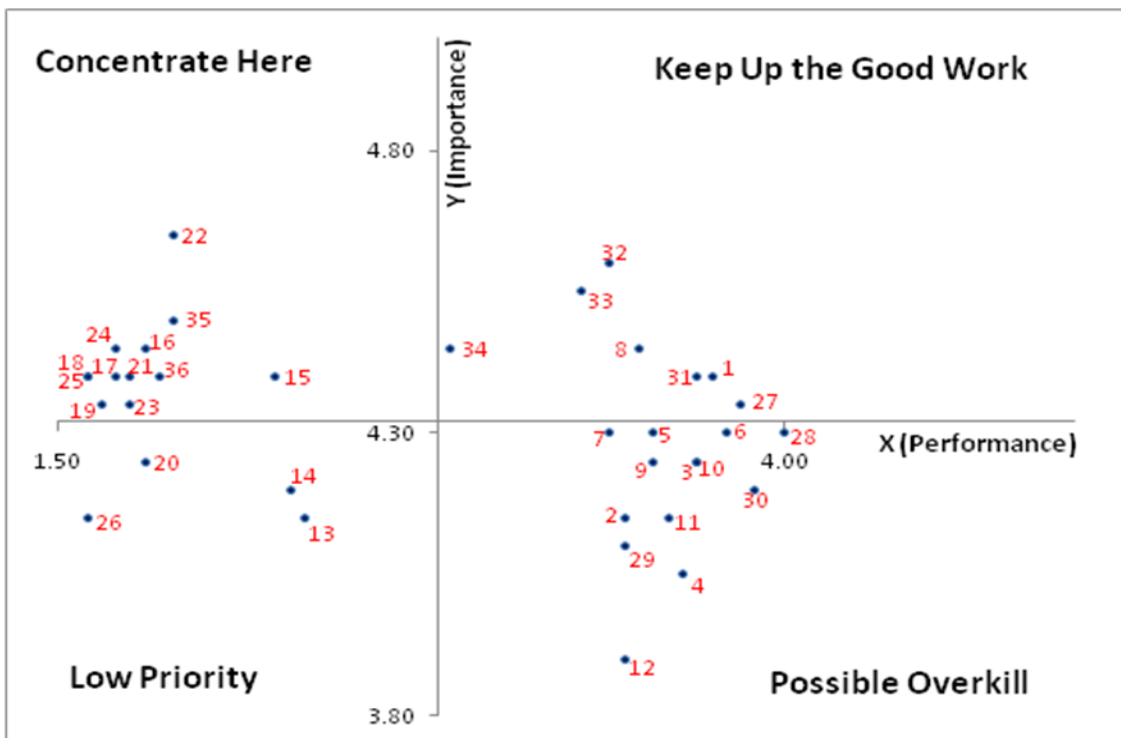


Figure 4: IPA Matrix of Sangkapura Harbor Tourism Object

The second IPA belongs to White-Sand Beach tourism object. It is defined with two axes based on total average of important point (4.28) and performance (3.08) from 36 attributes. Twelve attributes are in quadrant 'concentrate here' and every ten attributes are respectively in 'keep up the good work' and 'possible overkill' quadrant. Only four attributes considered to be in 'low priority' quadrant (Chen, Ruijs, & Wesseler, 2005; Jun-song, Zhao, Deng, & Duan, 2009). The result of this IPA explains that variable of safety, cleanliness, comfort, an uniqueness especially in the terms of food, drink, and specific souvenir of Bawean region around tourism object location, are important things to be much more developed since the respondents were not satisfied (Latimer, 1985; Martilla & James, 1977). Therefore, those variables must be the main concern in developing white-sand beach tourism object particularly the road network access to the location condition, the facility of transportation and accommodation (Modeste, 1995). While ecological variable especially in quality and quantity of white sand (attribute 7), respondents felt so satisfied and consider this as very important factor in managing tourism object of white-sand in Bawean which must be maintained (Mullen, 1993). Respondents also think that the availability of information and service center of white-sand tourism object today, are not satisfying so it must be the main concern in the management system of marine tourism object in Bawean island in the future (Oyewole, 2001).

The third IPA belongs to Mayangkara tourism object. It is defined with two axes based on total average of important value (4.33) and performance (2.64) from 36 attributes (Figure 3). Fifteen attributes are in 'concentrate here quadrant' and ten attributes are in 'possible overkill' quadrant. Nine attributes are in the position of 'keep up the good work' quadrant and only two attributes are in 'Low priority' quadrant (Chen, Ruijs, & Wesseler, 2005). This IPA result describes that variable of safety, orderliness, cleanliness, and comfort according to respondents are not satisfying enough especially the ease of access to the location. Respondents see the beauty natural object attribute (attribute 28) as something must be maintained since the respondents felt that this attribute was the most satisfying. While the ecology variable especially high sea-wave and water stream are quite suitable for surfing tourism. Now, enjoying marine tourism object of Mayangkara beach does not need any ticket fare, however the management system must be programmed in the future (Jun-song, Zhao, Deng, & Duan, 2009).

The fourth IPA belongs to Sangkapura Harbor tourism object. It is defined with two axes based on total average of important value (4.32) and performance (2.81) from 36 attributes (Figure 4). Thirteen attributes are in 'Possible overkill' quadrant and twelve attributes are in 'concentrate here' quadrant. Seven attributes are in 'keep up the good work' quadrant and only four attributes are in 'low priority' quadrant' (Chen, Ruijs, & Wesseler, 2005). The result of IPA describes that the availability of accommodation facilities such as: inn, indigenous food/drink, attraction of Bawean art and culture considered to be important factor in developing marine tourism object of Sangkapura Harbor (Velde, Green, Vanclouster, & Clothier, 2007). Respondents felt satisfied with items in variable of 'uniqueness' such as the diversity of tourism object offered, authentic natural object and indigenous art-cultural attraction. That is why these attributes must be maintained since they are important enough in developing marine tourism object. For safety variable, the availability is not satisfying enough, yet it must be the concern in the future. In accordance with the IPA result, Sangkapura Harbor considered to be suitable resort for family or friends gathering even though the souvenirs provided are not satisfying enough. That is why, the development strategy of Sangkapura Harbor marine tourism is by increasing the performance of operational attributes being in 'concentrate here' quadrant aggressively (Robertico, 2004).

This research contributes to the development of science particularly about satisfaction and loyalty of visitor, which thereby it can provide optimal value for the management of ecotourism. Necessary to note that ecology is the most attractive variable in the management of ecotourism. This research also positively contributes for further research, particularly concerning about the quality of services, services orientation, and the strategy of services.

This research generates several ideas about the concept of ecotourism marketing which lies on 4 points: target market, the needs of visitor, integrated marketing, and profits; in essence clarifies:

1. All planning and management of ecotourism activities should be adapted to the target market of ecotourism.

2. Understanding the needs and wants of visitors should become the primary concern for the management of ecotourism in order to maintain their loyalties.
3. The entire management of marketing ecotourism activities should be coordinated and integrated in a neat and integrated way.
4. Profits through customer/tourist satisfaction towards the attractions object should become an objective for the sustainable management of ecotourism management.

CONCLUSION

Pertaining to Importance-Performance Analysis of marine tourism objects of Bawean Islands, it can be concluded that the main strategy of Noko Island development is by facilitating the access for visitors to the tourism object location such as harbor (from Bawean to Noko island), transportation, road condition, and providing hotel facility for accommodation. The main strategy developed for white-sand beach is by providing some facilities such as: road access to the location, toilet facility, and cleaning facility. The main strategy developed for Mayangkara beach is by providing some facilities of electricity network, clean water, cleaning equipment and communication. While the strategy used for Sangkapura harbor is by facilitating (restaurant) selling indigenous food and drink of Bawean or Indonesia and providing indigenous souvenir Stan of Bawean. In general, ecologically, the four marine tourism objects have high ecological excellence becoming the main appeal in managing tourism objects of Bawean Island.

ACKNOWLEDGEMENT

The writers would like to say million thanks to director general of higher education of the ministry of education and culture of Indonesia, Rector of Brawijaya University Malang, and Director of Brawijaya University Post-Graduated Program for the supports and suggestions.

References

- Adalberto. (2007). The role of culture in island sustainable development. *Ocean and Coastal Management*, (50), 279–300.
- Bagliani, M., Galli, A., Niccolucci, V., & Marchettini, N. (2006). Ecological footprint analysis applied to a sub-national area: the case of the province of Siena (Italy). *Journal of Environmental Management*, 4(15), 21–31.
- Baorong. (2008). Strategic conservation of orchard germ plasm based on indigenous knowledge and genetic diversity a case study of sour orange populations in China. *Journal of Integrative Plant Biology*, 51(1), 100–106.
- Baum, J., & Calabresse. (2000). Don't go it alone: alliance network composition and startups' performance in canadian biotechnology. *Strategic Management Journal*, (21), 267–294.
- Burns, G.L., & Howard, P. (2003). When wildlife tourism goes wrong: a case study of stakeholder and management issues regarding dingoes on fraser island, Australia. *Tourism Management Journal*, 24(6), 699–712.
- Cejas, R.M.M., & Sa'nchez, P.P.R. (2010). Ecological footprint analysis of road transport related to tourism activity: the case for lanzarote island. *Tourism Management*, (31), 98–103.
- Chen, M.C., Ruijs, A., & Wesseler, J. (2005). Solid waste management on small islands: the case of green island, Taiwan. *Journal Resource Conservation Recy*, 45(1), 31–47.
- Easterly, W., & Kraay, A. (2000). Growth is good for the poor. *Journal of Economic Growth*, (7), 195–225.

- Esteban, B., & Pauline, J.S. (2008). Tourism in archipelagos Hawai'i and the balearics. *Annals of Tourism Research*, 35(4), 900–923.
- Evanthie, M., Jeremy, H., & Paul, A.J. (2009). Developing sustainable tourism, using a multicriteria analysis on renewable energy in Mediterranean Islands. *Energy for Sustainable Development*, (13), 129–136.
- Fabinyi, M. (2008). Dive tourism, fishing and marine protected areas in the Calamianes Islands, Philippines. *Marine Policy*, (32), 898–904.
- Fortuny, M., Soler, R., Catalina, C., & Sa´nchez, A. (2008). Technical approach for a sustainable tourism development, case study in the Balearic Islands. *Journal of Cleaner Production*, (16), 860-869.
- Garin-Munoz, T. (2006). Inbound international tourism to Canary Islands: a dynamic panel data model. *Tourism Management Journal*, 27(2), 281–91.
- Gossling, S. (2001). The consequences of tourism for sustainable water use on a tropical island: Zanzibar, Tanzania. *Journal of Environment Management*, 61(2), 179–91.
- Hampton, M.P., & Christensen, J. (2007). Competing industries in islands : a new tourism approach. *Annals of Tourism Research*, 34(4), 998–1020.
- Ioannis, S., Thanasis, K., Maria, K., Kondyli, J., Hristos, V., & Ioannis, G. (2008). Monitoring sustainability in insular areas. *Ecological Indicators*, 3(3), 110-121.
- Jayawardena, C., & Ramajeessingh, D. (2003). Performance of tourism analysis: a Caribbean perspective. *International Journal of Contemporary Hospitality Management*, (15), 176–179.
- Jun-song, J., Zhao, J., Deng, H., & Duan, J. (2009). Ecological footprint simulation and prediction by ARIMA model-a case study in Henan Province of China. *Ecological Indicators*, 6(7), 145-153.
- Latimer, H. (1985). Developing-island economies-tourism v agriculture. *Tourism Management Journal*, (5), 32–42.
- Martilla, J., James, J. (1977). Importance-performance analysis. *Journal of Marketing*, 41(1), 77-79.
- Modeste, N.C. (1995). The impact of growth in the tourism sector on economic development: the experience of selected Caribbean countries. *Economia Internazionale*, (48), 375-385.
- Mullen, M. R. (1993). The effects of exporting and importing on two dimensions of economic development: an empirical analysis. *Journal of Macromarketing*, 13(1), 3–20.
- Oyewole, P. (2001). Prospects for developing country exports of services to the year 2010: projections and public policy implications. *Journal of Macromarketing*, 21(1), 32–46.
- Read, R. (2004). The implications of increasing globalization and regionalism for the economic growth of small island states. *World Development*, 32(2), 365–78.
- Robertico, R.C. (2004). A paradigm shift to a new strategy for small island economies: embracing demand side economics for value enhancement and long term economic stability. *Tourism Management*, 12(3), 213-225.
- Rodríguez, J.R.O., Lopez, E.P., & Estevez, V.Y. (2007). The sustainability of island destinations :tourism area life cycle and teleological perspectives, the case of tenerife. *Tourism Management*, (29), 53–65.
- Sheng, Z., Li, Z., & Li, W. (2004). A modified method of ecological footprint calculation and its application. *Ecology Modelling*, 13(6), 111-125.
- Sheng-Hshiang, T., Linb, Y.C., & Lin, J.H. (2006). Evaluating ecotourism sustainability from the integrated perspective of resource, community and tourism. *Tourims Management Journal*, 12(3), 226-238.
- Vanegas, M.S., & Croes, R. (2003). Growth, development and tourism in a small economy: evidence from Aruba. *International Journal of Tourism Research*, (5), 315–330.

- Velde, M.V.D., Green, S.R., Vanclooster, M., & Clothier, B.E. (2007). Sustainable development in small island developing states: agricultural intensification, economic development, and freshwater resources management on the coral atoll of Tongatapu. *Journal of Ecology Economy*, 61(2-3), 456-68.
- Wong, P.P. (1998). Coastal tourism development in southeast asia: relevance and lessons for coastal zone management. *Ocean and Coastal Management*, (38), 89-109.

Corresponding authors email address: farid_unijoyo@yahoo.com