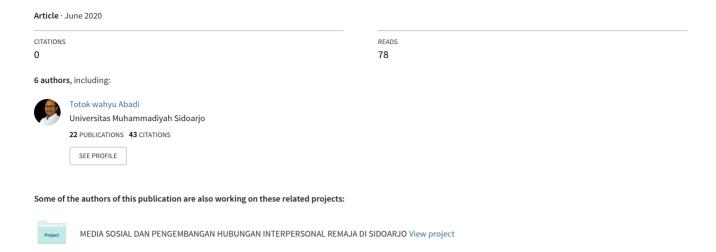
# The Nexus of Local Government Involvement and Marine Sustainable Ecotourism Development: Mediating Role of Supply Chain Management



# The Nexus of Local Government Involvement and Marine Sustainable Ecotourism Development: Mediating Role of Supply Chain Management

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Abstract-Three sub-districts of Minneapolis Sidoarjo regency, which are Sedati, Candi, and Jabon are not only had superior fishery products, but it also has a potential area to be a highly prospective marine ecotourism. This quantitative research aims to analyze the public relations mix of Sidoarjo Regency, empowerment, community participation, supply chain management and sustainable marine ecotourism development. The research data is conducted by distributing questionnaires towards 204 respondents; then, data collection will be coded and analyzed by utilizing multiple linear regression SPSS 20. The findings show that the development of sustainable marine ecotourism affected by several factors; public relations mix, the role of the regional government, empowerment, and community participation, which is 30,1%. The most influential factors are the role of government, empowerment, and community participation. Whereas, the public relations mix that is utilized by the government does not affect the development of sustainable marine ecotourism. The innovation of this research are, first, the role of government that is supported by community participation and empowerment can enhance sustainable marine ecotourism development. Second, the natural, human, budgetary and cultural resources are the capital in developing sustainable primary ecotourism.

**Keywords;** Public relations mix, Empowerment, community participation, Regional government role, Supply chain management and marine ecotourism

## 1. Background

Sidoarjo regency possesses more than a hundred of tourism destination objects that may be classified into eight clusters [1]. These 8 clusters are industry and shopping tourism

(37 objects), marine tourism (3 objects), sport and green open-space tourism (5 objects), history and cultural tourism (23 objects), gourmet tourism (3 objects), religious tourism (5 objects), water tourism (27 objects), and geo-tourism (1 object). Amongst these clusters of tourism, the one that became a priority by following the longterm Development Plan of Sidoarjo Regency Region

2005-2025 [2] is Sidoarjo east coast tourism. There is three capable coastal-tourism that is potential as marine ecotourism; these are Sedati, Candi, and Jabon district. Marine ecotourism is a sustainable tourism development concept, which is integrated with marines with the aim of nature preserving, providing economic benefit, and socially & culturally acceptable for the surrounding society [3, 4].

Tourism potential in Sedati is fishing ground, specifically in Kalanganyar and Gisik Cemandi village. Aside from the milkfish and Windu prawn cultivation field, this area has the natural potential of very beautiful mangrove conservation. Such is the case with the tourism region in DEM (Delta Exotic Marines) island, which integrated with a man-made island, from Sidoarjo, Mud Countermeasure Agency, Sarina in Tlocor-Kalisogo hamlet and Kedung Pandan village, Jabon district. Meanwhile, in Candi district, the developed tourism potential is Kusuma Tirta Minapolitan, which later came rebranded as Jatim Adventure in Kedung Peluk village-Candi. The outcomes of research from [1] shown that the quality service in that tourism region, if viewed through Sapta Pesona (Seven Wonders) dimensions, is still unsatisfying for tourists. Though society's perception, wish, attitude and demeanour against these objects of tourism destination region are positive [5].

Tourism potential in such coastal region, if properly managed and promoted by the government and tourism promotion agency of Sidoarjo regency, will provide a greater contribution not only for domestic tourists visit but also for the growth of locally-generated revenues. The data from Medium Term Development Plan of Sidoarjo Regency Region year 2016-2021 displays that tourists in Sidoarjo regency are increasing annually. Despite the increase of tourism amount from 1.750.153 in 2014 to 1.794.431 in 2015, the contribution of this sector is still relatively small. Thus, the regional government that is supported by the Regional Tourism Promotion Agency of Sidoarjo ought to sustainably develop a marine ecotourism potential in Sidoarjo through all means like empowerment of society around tourism destination, commencing

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integrated marketing communication, as well as upgrading government capacity in developing nature tourism potential. Several types of research about tourism on its connection with the mix of communication marketing shown that a tourism potential that was promoted through a communication marketing mix may increase both domestic or international tourists' visit [6]. The growth of tourism will, in turn, elevate society's life quality. Through an integrated communication marketing [7], an adequate infrastructure provision (roads and electricity) as well as empowerment [6] by the local government might increase sustained tourism.

The importance of supply chain management can't be ignored wither the business is about product or service. Supply chain management is basically the element of ERP. In the current era, the ERP is not only a basic need of private organization but also of Public sector. Supply chain management in the product-oriented business is all about the purchase and delivery of raw material to the production unit and also the deliverance of the final product to the ultimate user [8]. On the other hand, supply chain management in the service business is all about information sharing. Here in the tourism section, the supply chain management is all about the management of information flow. The procedures and policies regarding tourism services are designed and controlled with the help of supply chain management [9, 10].

In the tourism business, information matter a lot. It's the proper management of the land make the user enable to convey it to the concern so that the tourist might be able to understand in a better way as the tourist are the ultimate clients of the tourist firms. Here in this investigation, the supply chain management is intervening as a mediating variable. In a number of studies, the intervention of supply chain management as a mediating variable was reported before [11].

### 2. Hypotheses development

The attempt of sustainable ecotourism development should also be supported by superior, competitive, and tourism products. Thus, the quality of society surrounding tourism destinations should also get concerned through community economic empowerment. This mainstream, according to Pantin and Francis [12], emphasized the existence of participation. The aim is to enhance willingness, ability, opportunity, as well as society's independence in participating in the development of sustainable ecotourism. Aside from society and private parties, the government possesses a great role in the development of marine ecotourism. The role of regional government upon potential tourism destination development can be seen from their capacity. Amongst regional government capacities in marine ecotourism development are the ownership of ecotourism development grand design, regional government policies

along with its existing rules as a legal basis, managing human resources, facilities and infrastructures, institutional, socialization and coordination.

Seeing the massive potential marine ecotourism, it is a shame if the coastal region is not seriously and properly managed or arranged by the regional government of Sidoarjo regency, society, and stakeholders. The tourism condition in Sidoarjo generally is still far left behind from other regions like Lamongan with its excellent Lamongan Marine Tourism that integrated with Maharani Cave. Batu city with the superior destination as Batu Night Spectacular, Jatim Park I-II, and several other natural tourism.

This research became important since first, the yetoptimized implementation of 7 wonderful, which became tourism icon and tourists' interests as safety, comfort, orderliness, sanitation, beauty, hospitality, as well as its memories or uniqueness. Second, the puerile and lack of attention from the Sidoarjo regency government towards marine ecotourism development. Its development is still partial and unsustainable. Third, the lack of coordination between regional government organizations that exist along with stakeholders in optimizing ecotourism potential or the existing tourism in Sidoarjo appropriately. Fourth, the lack of integrated promotion as well as regional object imaging of tourism destination through various printed or electronic media. Fifth, the lack of teamwork with tourism agencies as well as education institutes in the Sidoarjo region to promote educational tourism starting from early until the Middle Ages.

The regional government of the Sidoarjo regency must design a strong supply chain management system in order to promote tourism within the town. A strong department of supply chain management is formulated, which gives awareness and proper training to all the upcoming tour operators in order to promote tourism [13]. At the initial stage, the supply chain management prepares a strong plan, procedure, guidelines and SOPs in order to control the flaws in the tourism industry. A proper feedback system also is introduced for improvement in the system. All the tour operators are fully trained to facilitate the tourists. There are special centres be created for the facilitation of tour operators and also the tourists.

Supply chain management system must have the information about all the available accommodation, transports arrangement and also the entertainment huts [14, 15].

The procedures and policies of the concern like tourism are designed by the supply chain management according to the ground realities. It varies category to category. If the is regular tourism it will be accordingly but the case it is specifically marine tourism it might be different. The supply chain management design the policies according to the people state of mind. If people are from any muslim countries then the policies, procedures and arrangements

will be according to their need. On the other hand if the people are from some European section there will be different policies. The supply chain management deals very carefully in this regards in order to provide maximum facilities to it tourists.

Started from that description, this research aims to analyze and describe the public relations mix, roles of the regional government of Sidoarjo regency, societies' involvement and ability, as well as marine ecotourism development. The following aim is to describe the effect of public relations mix conducted by the regional government of Sidoarjo regency, society involvement and towards marine ecotourism development. ability Theoretically, this study examines the concept of public relation mix, government role, society involvement and ability in developing marine ecotourism. Practically, the outcomes of this research might be used as feedback material towards the Sidoarjo regency government and Regional Tourism Promotion Agency of Sidoarjo in the attempt of marine ecotourism development.

The supply chain management is a very important variable in this investigation as it not having an impact on ecotourism development. The public or private both the organizations use supply chain management to design the procedure and policies for the tourists. Whenever a tourist visits any land there, a number of product and services are attached to its. The supply chain management covers many aspects of tourism like accommodation, transport and other activities. If the tour operating organization and also the tour operators are not familiar with the proper information of the land, then its not possible to facilitate the client in a better way. If the tourist is satisfied with the arrangement done, then he will be able to transfer feedback and all aware that a positive word of mouth is the strongest mean of marketing [16, 17].

The supply chain management is all about the arrangement of tourist plan for any tour. Each arrangement like accommodation, entertainment, transportation, communication etc. done by the supply chain management. If there organization supply chain management is strong only then it will be able to facilitate the tourist in a better way to get positive word of mouth from them which ultimately is a step towards the better business performance. Literature witnessed that supply chain management as a mediating variable is the relationship between tourism development and public institutions [18].

The hypothesis of this research states that the public relations mix, government role, and society ability simultaneously and partially influence the development of sustainable marine ecotourism.

**H1:** These are a positive association among public relations mix and the development of sustainable marine ecotourism.

**H2:** There is a positive association among Government role and the development of sustainable marine ecotourism.

**H3:** There is a positive association among Society ability and the development of sustainable marine ecotourism.

**H4:** Supply Chain Management System has positive mediation among the links of public relations mix and development of sustainable marine ecotourism.

**H5:** Supply Chain Management System has positive mediation among the links of Government role and development of sustainable marine ecotourism.

**H6:** Supply Chain Management System has positive mediation among the links of Society ability and development of sustainable marine ecotourism.

### 3. Methodology

This quantitative research is explanative, that is explaining the influence of public relation mix, government role, and society ability towards the development of sustainable marine ecotourism with the mediation effect of supply chain management system. Primary data collection is done by distributing questionnaires to 204 respondents as a research sample. The instruments are arranged by using questions, which focused on five variables.

The public relations mix consists of 2 sub-variables, namely the advertising and empowerment mix. Marketing mix indicators are advertising, direct marketing, internet marketing, sales promotion, publicity, and personal selling. The empowerment subvariable comprises several indicators, namely social, economic, cultural, political, environmental, and personal. The variable of regional government role covers grand design availability of the existing ecotourism development, regional policies, human resources, facilities and infrastructure, budget, in-charge institutions, and coordination. Society's ability is measured by capability, willingness, opportunity, and independence. Community participation indicators include planning, organizing, implementing, monitoring and evaluating. The variable of sustainable marine ecotourism is measurable through indicators such as seven wonderful, amenities, accessibility, attractions, and attractiveness. The answers to the questions within the instrument are arranged by utilizing a Likert scale, starting from 1-5. These numbers are categorized from good/strongly agree good/agree, (1) (2)moderate/modest, (3) bad/disagree, (4) very bad/strongly, and (5) disagree.

The research location is focused on three marine ecotourism areas, namely Kalanganyar village, Sedati district; Kedung Peluk village, Candi district; and Tlocor village, Jabon district. The decision of these three research sites is based on the local economic potential that has been yet seriously exploited by the

regional government of Sidoarjo regency. In addition, the predictors such public relation (PR) has eight items, government role (GR) has six items, and society ability (SA) has four items. Moreover, the mediator such supply chain management system has five items and dependent variable like development of sustainable marine ecotourism (DSME) also has five items these are shown in Figure 1.

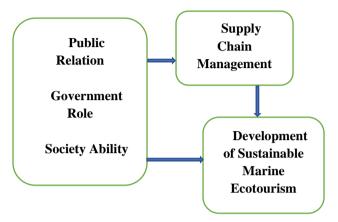


Figure 1. Theoretical framework

### 4. Results

The results include the convergent validity that means correlation among the items and the figures show that convergent validity has proved and high correlation among items because the values of AVE and loadings are greater than 0.50 while the values of CR and Alpha are larger than 0.70. These are shown in Table 1.

**Table 1.** Convergent validity

Items	Loadings	Alpha	CR	AVE
DSME1	0.738	0.798	0.868	0.623
DSME3	0.750			
DSME4	0.839			
DSME5	0.825			
GR1	0.747	0.860	0.894	0.586
GR2	0.743	0,000	0.05 1	0.000
GR3	0.747			
GR4	0.755			
GR5	0.763			
GR6	0.832			
PR1	0.755	0.880	0.905	0.544
PR2	0.706	0.000	0.503	0.344
PR3	0.659			
PR4	0.678			
PR5	0.078			
PR6				
	0.730			
PR7	0.813			
PR8	0.810			
SA1	0.650	0.746	0.811	0.591

SA2	0.848			
SA4	0.794			
SCMS1	0.850	0.849	0.892	0.623
SCMS2	0.828			
SCMS3	0.766			
SCMS4	0.718			
SCMS5	0.779			

The results also include the discriminant validity that means correlation among the variables and the figures show that discriminant validity has proved and no high correlation among constructs because the values of Heterotrait Monotrait ratios are smaller than 0.85. These are shown in Table 2.

Table 2. Heterotrait Monotrait ratio

	DSME	GR	PR	SA	SCMS
DSME					
GR	0.762				
PR	0.733	0.643			
SA	0.344	0.269	0.251		
SCMS	0.780	0.731	0.626	0.419	

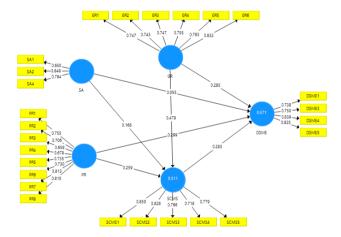


Figure 2. Measurement model assessment

The results also include the path analysis related to the hypotheses testing and the findings show that public relations and government role have positive linked with DSME and accept H1 and H2. However, society ability has insignificant linked with DSME and reject H3. In addition, the supply chain management system has positive mediation among the public relations and DSME and accept H4. Moreover, the supply chain management system also has positive mediation among the government role and DSME and accept H5. Finally, the supply chain management system also has positive mediation among the society ability and DSME and accept H6. These path analysis are shown in Table 3.

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			t-	
	Beta	S.D.	statistics	va
ME	0.285	0.047	6.116	0.
MS	0.478	0.040	11.975	0.
MЕ	0.299	0.039	7.602	0.

**Table 3.** Path analysis

			t-	p-
	Beta	S.D.	statistics	values
GR -> DSME	0.285	0.047	6.116	0.000
GR -> SCMS	0.478	0.040	11.975	0.000
PR -> DSME	0.299	0.039	7.602	0.000
PR -> SCMS	0.259	0.046	5.642	0.000
SA -> DSME	0.055	0.037	1.512	0.134
SA -> SCMS	0.168	0.038	4.381	0.000
SCMS -> DSME	0.283	0.052	5.479	0.000
GR -> SCMS ->				
DSME	0.136	0.029	4.625	0.000
PR -> SCMS ->				
DSME	0.073	0.019	3.818	0.000
SA -> SCMS ->				
DSME	0.048	0.015	3.103	0.002

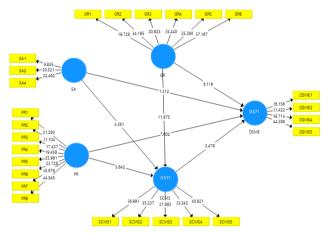


Figure 3. Structural model assessment

### **Discussion and conclusion**

According to that [21] marine ecotourism areas are said to be proper and successful if 1) environmental sustainability may be preserved optimally; 2) there is a growth in social welfare within the area; c) guaranteed tourist satisfaction, and d) an increase in the integration and unity of social development in the surrounding area and its development zone. For this reason, the strategic phases and anticipatory actions that ought to be implemented by the regional government in carrying out their roles are 1) the preparation of a marine ecotourism development master plan and its supporting policies, 2) enhancing the capacity of government human resources, adequate budget allotment, 4) facilities and infrastructure improvement for marine ecotourism access, 5) professionalism of regional government organizations (OPD) in tourism sector management, 6) the existence of coordination between OPDs, stakeholders, society groups, and integration between planning, development, and management. Without these six elements, it is impossible for regional government role to effectively and efficiently be carried out. Table 2 displays how the government of Sidoarjo regency played a role in sustainable marine ecotourism development. Its role is yet unoptimized. The

coordination element that has been pivotal to talk about but is not considered necessary is still a stand-alone obstacle in marine ecotourism development on its own. The public perception still displays a low score, which means it is still weak in terms of coordination among OPDs. The same goes for policies that support the sustainable marine ecotourism master plan, and the conditions are also unclear though the analysis outcomes prove that the government role influences the ecotourism development. The higher the role of the regional government, the more quality of sustainable marine ecotourism is increasing. The successful sustainable ecotourism development might have an extraordinary impact on the blue economy, namely poverty alleviation of the surrounding society (pro-poor), economic growth (pro-growth), employment (pro-job), and environmental preservation (pro-environment).

The development of society-based marine ecotourism demands the participation of local society. The outcomes of hypothesis testing indicate that there is a significant influence of social participation on marine ecotourism development, which is 95.9%. The society, in this case, is involved in the planning, implementation, management, and evaluation, as well as all the economic benefits acquired from ecotourism. Society involvement in ecotourism management means recognizing the rights of local society to traditionally manage tourism activities in the area that they own or as managers. Such management may prevent social wariness, and there is little possibility of socially destructive actions towards tourism objects.

Empowerment is a benchmark for the success of an empowerment program. If the society is empowered, empowerment carried out by the government, universities, and the private sector is successful. Since the lacking empowerment level upon coastal society in Sidoarjo, it seems that the local government ought to increase empowerment programs that synergies with universities and the private sector. Table 3 of this research displays that the empowerment program implemented by the regional government is sub-optimal for marine ecotourism development. Nonetheless, the testing outcomes of this hypothesis show that society empowerment influences sustainable marine ecotourism development. The higher the level of social empowerment, the more sustainable marine ecotourism developed in Sidoarjo. The effect of society's empowerment upon the development of marine ecotourism in Sidoarjo was 1.053%.

Meanwhile, the outcomes of the t-test for public relations mix exhibited no significant effect on the marine ecotourism development. sustainable contribution of public relations mix to the development of marine ecotourism is too small, which is 10.2 %. The small contribution makes the public relations mix variable utilized by the regional government of Sidoarjo regency as a factor that does not have a significant effect.

Additionally, the t-test outcomes also showed that the significance of the t count of the public relations mix, as presented in Table 6 displays a number higher than the significance of  $\alpha$ , which is  $0.363 \ge 0.05$ . This number specifies that public relations mix independently does not affect sustainable marine ecotourism development.

This research findings, which state that public relations mix does not influence the development of marine ecotourism are different to the findings of other researchers who focused upon Integrated Marketing Communication (IMC), which is integrated marketing communication utilized by the regional government [22]; tourist visits [23] tourism imagery. This is surely quite reasonable since the Integrated Marketing Communication (IMC) and its derivative indicators utilized by the researchers are independent variables that are tested for their influence level upon the tourist visits level, visit decision upon tourist destinations, or the image of tourism. While the concept of public relations mix in this study is not an independent/single variable, yet rather one of the four independent variables employed to test its influence either jointly or partially towards the development of sustainable marine ecotourism.

The innovation of this research is. First, the government role, which supported by community participation and empowerment might enhance sustainable marine ecotourism development. Second, natural, human, budgetary, and cultural resources are the primary capital within the sustainable marine ecotourism development. Third, the supply chain management positively mediates on the relationship.

The conclusions of this research, first, three dimensions possess important significance in the sustainable marine ecotourism development, namely 1) the regional government role, 2) participation, and 3) society empowerment. These three dimensions possess a significant influence on the development of marine ecotourism. The supply chain management positively mediates with the regional government role, participation, social empowerment and sustainable marine ecotourism development. In the supply chain management literature, it is witnessed that where the supply chain management department possesses strict rules, regulations and SOPs, there it throws a positive impact on the tourism industry.

The higher the regional government role, participation, and social empowerment, the more sustainable marine ecotourism development increases. Second, the public relations mix alongside with the regional government role, participation, and society empowerment possess an influence upon the marine ecotourism development. Numerous time the mediation of the supply chain management was tested before with tourism, and a positive association was proposed. The results of this study vet the results documented in supply chain literature [24]. Yet independently, the public relations mix does not

affect the development of sustainable marine ecotourism. The public relations mix employed by the regional government has not been running optimally. Third, the existing marine ecotourism conditions in Sidoarjo regency are still in a meagre condition. This condition is because of the regional government role, participation, and social empowerment is still in the low category and sub-optimal. Fourth, the regional government role that is supported by community participation and empowerment might improve sustainable marine ecotourism. Fifth, natural, human, budgetary, and cultural resources are the primary capital in sustainable marine ecotourism development.

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