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Linkages between Solo-Selo-Borobudur as the Jawa Tengah Provincial tourism strategic area

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Abstract. Provincial Strategic Areas (PSA) are areas prioritized in spatial planning because of their significantly influence on economy, socio-culture, or environment perspectives. Solo-Selo-Borobudur is designed as one of Central Java PSAs. This PSA is expected to become a tourism corridor area and the sub areas with the PSA are expected to be equally developed and integrated as a single entity. In fact, there is a significant difference in the number of tourists visiting the three areas, which indicates an imbalance in the level of development. This study aims to examine the level of development of each sub-area and to identify the level of linkages between them in terms of their activities. The scoring method was used to identify the level of development in terms of attraction, accessibility, amenities and ancillary services (4A) aspects. A questionnaire survey was also conducted to explore tourism behaviour in order to identify linkages between the three tourism areas. The data obtained is analyzed by using spatial descriptive method. The result of this study shows the level of development of Solo and Borobudur tourism sub-areas can be classified high level, while Selo is still low (undeveloped). The study also found that the linkage between Solo - Borobudur tourism activities was stronger than between Solo - Selo and Selo - Borobudur. As the PSA, the linkage between the three tourism areas is still low. The findings are expected to be related to differences in the level of development between the three areas.

1. Introduction

Regional linkages are highly related to regional interactions, which is a reciprocal relationship between two or more regions that influence each other and can cause new symptoms or problems both directly and indirectly [1,2]. The linkages between two or more region can establish if there are complementary relationship, transferability and intervening opportunity between them [3]. The concept of regional linkages can be applied to promote such potential tourist area by using the advantages of other tourist areas around it that have been more developed.

The Central Java Provincial Government uses the linkages concept in developing Solo-Selo-Borobudur tourism area. The tourism area as a single entity considered to have a very important influence on the economic development of the province. Then, the government of Central Java set the area as a Provincial Strategic Area, especially for the development of the tourism-based economic sector. PSA Solo-Selo-Borobudur tourism area consists of three tourism sub areas 1) Solo Tourism Sub-Area covering tourism destinations in Surakarta City; 2) Selo tourism Sub -Area covering tourism destinations in Selo sub-district, Boyolali Regency and 3) Borobudur Tourism Sub Area covering tourism destinations in Borobudur temple and surroundings which is located in Magelang Regency [4].



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Based on data from the Central Java Tourism Office, in the year of 2017, the number of tourist visiting Solo Sub-Area and Borobudur Sub-Area were respectively around 4.4 million and 3.3 million, while the tourist visiting Selo was only 10 thousand [5-7]. This disparity phenomenon shows that the linkages between the three tourism areas in PSA Solo - Selo - Borobudur have not been established as expected. This study was conducted to examine the level of linkages between 3 tourist areas in PSA Solo-Selo-Borobudur. The aims of this study are to identify the level of development of each tourism sub-areas as a part of the Provincial Tourism Strategic Area and to analyze the linkage between Solo, Selo and Borobudur tourism sub-areas as an integrated Provincial Tourism Strategic Area.

4.1 Methods

The approach used in this research is a quantitative descriptive approach that usually is applied to test the theory [8,9]. The data used in this study are both primary and secondary data. Primary data were obtained from observations and Secondary data were obtained from local government agencies as well as regional Central Bureau of Statistics.

The analysis method used is a scoring technique on secondary data for determining the level of development of each sub-area based on four variables of tourism development, namely 4 A (attractions, accessibility, amenities, and ancillary services) [10,11]. Each variable have some indicators (see Table 1). Scoring is given on each indicator based on the valuation on the existing condition of each tourism object in each tourism sub-area. Each indicator on each variable is given a value of 1, 2 or 3, which respectively represents poor, moderate or good conditions. Then, the level of development for each variable as well as for the whole variables (4A) are classified into High, Medium or Low level of development by using the Sturges formulation as follow [12].

$$K = \frac{a - b}{u} \tag{1}$$

Where:

K = Interval

a = highest scoring value within each variable (score 3 x number of indicator)

b = lowest scoring value within each variable (score 1 x number of indicator)

u = number of class

Table 1. Variables, indicators and classification.

Variable	Indicator	Score indicate Level of Development		
		Low	Medium	High
Attraction	A. Attraction Strength	6 - 9	10-13	14-18
	B. Tourism Activity on Location			
	C. Supporting Attraction Diversity			
	D. Condition of Tourism Object			
	E. Environmental Cleanliness			
	F. Public Facility on Tourism Object			
Accessibility	A: Distance to other tourism objects in a sub-area	7-11	12-16	17-21
	B: Travel time to the nearest bus station			
	C: Travel time to the nearest railway station			
	D: Travel time to the nearest airport			
	E: Availability of public transportation			
	F: Availability of various modes of transportation			
	G: Roads conditions to the location			
Amenity	A: Hotels and Lodgings	4 - 6	7 - 9	10-12
	B: Restaurants			
	C: Souvenir Shops			
	D: Travel Agents			
Ancillary Services	A: Police Station	6- 9	10 - 13	14 -18
	B: Fire Station			
	C: Waste Management			
	D: Telecommunication Network			
	E: Bank			
	F: Water supply services			
The whole Variable (4 A)		23- 38	39 - 53	54-59

Sources: compiled from [12-17]

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According to Sugiyono [8] Descriptive analysis is a statistic used to analyze data by describing or describing data that has been collected as it is without intending to make conclusions that apply to the public or generalizations spatial descriptive. Based on the geographical perspective, spatial is all things related to the place or location. The definition of the place is very measurable, clear and can be measured quantitatively because the location is above the surface of the earth [2,18].

3. Results and discussion

3.1. The development level of tourism sub areas

Based on the results of scoring of each tourism development aspects for three Tourism Sub- Area, we can compare the development level of sub-area and identify the level of development of the whole Solo-Selo-Borobudur Strategic Tourism Area (see table 2). Table 2 shows that the level development of Solo Sub Area and Borobudur Sub Area are in high level while Selo Sub Area is still low that means relatively underdeveloped.

Table 2. Score and level of development based on scoring of 4 variables.

Variabel	Sub Area	Total Score	Classification
Attraction	Solo	13,6	High
	Selo	11,5	Medium
	Borobudur	14	High
Accability	Solo	20	High
	Selo	9,5	Low
	Borobudur	17	High
Amenities	Solo	9,4	High
	Selo	5,5	Low
	Borobudur	9,3	High
Ancillary Services	Solo	14	High
	Selo	9	Medium
	Borobudur	14	High
Sub Area Total Score			
	Sub Area Solo	57	High
	Sub Area Selo	35,5	Low
	Sub Area Borobudur	54,3	High

Based on the average tourist visits on tourism objects 2012-2019, 93% of the tourist is dominated by domestic tourists. However, based on the interviews with travel agents and local governments, actually 70% of the tourists targeted are international tourists. This has causes imbalance in the target of tourist visits to PSA Solo-Selo-Borobudur tourism destinations.

3.2. The linkages of PSA Solo-Selo-Borobudur

Linkage analysis was done in order to identify the strenght of PSA Solo-Selo-Borobudur as an integrated system. The analysis was done by interviewing stakeholders (government, tourist agents) based on 4A.

3.2.1. Attractiveness linkage analysis. The linkage analysis based of the potential attraction will discuss the results of interviews with travel agents and the local government agencies. Based on the information from 10 travel agents appointed as informants, we acknowledge that they offer tour packages for Solo-Selo-Borobudur corridor area.

From the interview's results, Jogja-Borobudur tour packages and surrounding areas are the packages offered. More details can be seen in Table 3. We can see the strongest linkages are found in the Solo Tourism Sub Area with Borobudur Tourism Sub Area as much as 19% and the lowest linkage is found in the Solo Tourism Sub Area and the Selo Tourism Sub Area as much as 11%.

Table 3. Number of tourism destination package availability offered by travel agents.

Tourism Destination	Package Provider Travel Agent	Percentage
Borobudur-Jogja	10	27%
Solo-Jogja	6	16%
Solo-Borobudur and Surrounding Area	7	19%
Borobudur-Selo and Surrounding Area	6	16%
Solo-Selo and Surrounding Area	4	11%
Solo-Selo-Borobudur	4	11%

3.2.2. Accessibility linkage analysis. The common route for travel agents to move between tourist locations on these three sub areas of Solo-Selo-Borobudur are divided by 2 starting points: Solo sub-area and Borobudur sub-area. Selo sub-area is not used as starting point due to lack of tourist accommodations. The starting point determine on how the travelling route would be laid out. There are 4 common routes that used by travel agents to move between tourism areas, namely solo route (through Selo), Kopeng route via toll road, kopeng route via non-toll road, and jogja route (through D.I. Yogyakarta Province). The highest option route from Solo by passing Kopeng (toll 18% and non-toll 27%) as much as 45%. On the other hand, if tourists are in Borobudur they usually interested to go to tourist destinations in Solo, by Jogja's route as much as 46%. The least route from both starts is by Selo.

3.2.3. Amenities linkage analysis. According to travel agents, the most preferable area for tourist to stay is Solo and Jogja respectively 44%, while Borobudur sub-areas only contribute 12% of respondents. Selo is not preferable due to less facilities and segmented attractions; people who interested to stay there mostly for hiking and/or camping so they don't need as plenty facilities as the general tourists.

As in food facilities, most preferable area to dine with numerous choices of culinary options, is in Solo tourism sub-area by 38%. Meanwhile, Borobudur Tourism Sub-area and Selo tourism sub-area are lagging behind, with 19% and 14% respectively. It is due to similar culinary variety with Solo and Jogja. Without distinctive variety of foods, the tourists would opt to the ones that easier to access and closer to their accommodation.

3.2.4. Ancillary services linkage analysis. From the results of interview with travel agents, 60% travel agents are aware that there is socialization from the local government regarding PSA Solo-Selo-Borobudur policy. While the other four travel agents mentioned that they were unaware of this policy and claimed that there was no socialization.

Regarding the travel package, 90% Selo travel agents mentioned that the tour packages in Solo can be combined with the tour packages in Selo and its surrounding areas. According to local Government Agencies, tour packages in Selo can also be combined with tour packages in Solo. Meanwhile, regarding tour packages for Borobudur and surrounding areas with Ketep Pass, that the tour can be combined in tour packages. According to local Government Agencies, tourism in Ketep Pass can also be combined and a number of travel agents have already included the package in Borobudur tour packages and surrounding areas. So, it can be concluded that actually, the development of Solo-Selo-Borobudur PSA as an integrated tourism area is already well known, but in reality, it is only half linked.

3.3. Discussion

On the discussion of PSA Solo-Selo-Borobudur linkage, we can see from the perspective of area developments that the highest scoring is produced by Solo tourism sub-area. However, Borobudur and its surroundings becomes the most visited area by tourists both by foreign and domestic tourists. The linkage and tourism clusters can be seen in the Figure 1.

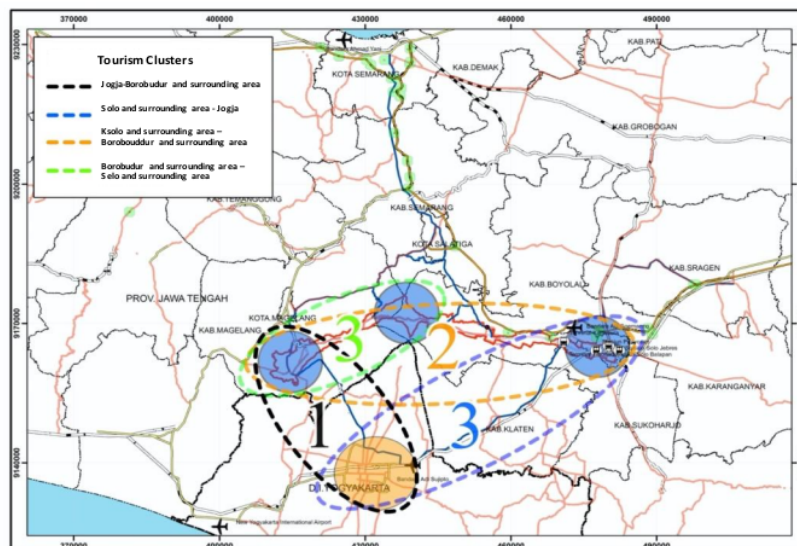


Figure 1. Tourism Cluster based on the highest linkage.

Based on the linkage between the sub areas itself, the leading tourism package is Solo-Borobudur. This tour package is still inferior to Jogja-Borobudur tour packages as stated by every travel agents acted as samples in this research. However, the travel agents mentioned that cultural attractions in Solo are still less attractive if compared to cultural attractions in Borobudur tourism sub area and Yogyakarta City.

Borobudur and Selo areas are located on the mountainous area, make them share some characteristic similarities on their attractions. Hence, a cluster could be formed between the two. On the other hand, Solo and Selo don't share similar trait. Not to mention, the road to Selo is still rough make it more difficult to be linked together. The result is partially clustered in the PSA.

Interestingly, DI. Yogyakarta (Jogja) apparently has fairly strong linkage to the PSA. It was proven by the formation of cluster Jogja-Borobudur and Solo-Jogja. Jogja also has similar characteristic of attractions with Borobudur and Solo tourism sub-area. Cross-provincial cooperation could be considered to build a wholesome linkage of the tourism areas (see Figure 1).

1 Conclusion

Based on the development analysis on 4A aspects, we can see that Solo Sub-Area and Borobudur Sub-Area have developed as tourism areas with high development level, meanwhile Selo Sub Area categorized as area with low development level. Even so, the number of foreign tourists visiting the PSA tourism areas is not as much as expected.

In line with their level of developments, the strongest tourism linkage has established between Solo Sub Area and Borobudur Sub. This strong linkage is very likely due to the similarity in the types of tourist attractions offered and the level of development that the two sub-areas have. Based on this, the linkages that occurs between the two sub-areas (Solo and Borobudur) on the PSA Solo-Selo-Borobudur and Jogjakarta City (outside the PSA) can be understood since Jogjakarta area also offers cultural tourism. Meanwhile, Selo Sub-Area which is naturally a mountainous area offers different tourist attractions and still has limitations relating to aspects of accessibility, amenity and ancillary services.

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