

The Analysis and SWOT Strategic Development of Tourism Sector in Samosir Regency

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ABSTRACT

Indonesia government has an aggressive strategy in promoting potential tourism area to increase the national revenue and to develop the local economy. North Sumatera is one of the provinces that had been designated as a centre of tourism industry with Lake Toba as the main tourism site attraction. There is an increasing trend of tourists visiting Samosir regency over the year that might be stimulated by domestic economic growth and the advancement in online travel industry. This study found no significant impact of road infrastructure and accommodation infrastructure to growing number of tourists in Samosir. The SWOT analysis shows S-T strategy should centre on marketing, integrating, and exploiting the potential of tourism resources. The W-O strategies are more focused-on building and improving infrastructure that support the tourism service industry. The S-T strategy is centred by enhancing tourism package and the attributes of tourism sites. The W-T strategy is focused more on increase the international traveller perception on Indonesia environmental issue and sustainability.

Keywords: Tourism, SWOT analysis, Local Own-Source Revenue

1. INTRODUCTION

Indonesia government has an ambitious project in promoting potential tourism site to increase the national revenue and to develop the local economy. United Nation World Tourism Organization forecasted tourism sector will be the main national income source for Indonesia in the next few years [1]. North Sumatera is one of the provinces that had been designated to be a centre of tourism industry with Lake Toba as the main tourism site attraction. According to Bank Indonesia report in 2020, Government expenditure in tourism sector had been increasing by 123% in 2018 [1]. Other big events, e.g., Asian Games and IMF-World Bank Group meeting, had been held in Indonesia to intensify the promotion of tourism. However, despite Indonesian government aggressive promotion and expenditure on tourism, the impact of local government program on infrastructure to tourism need to be assessed.

Indonesian tourism competitive index had increased in 2015-2017 which mainly driven by more open investment opportunity and more aggressive strategy on utilizing natural resources for tourism [1]. Indonesia tourism competitiveness is on its highly competitive price/cost and tourism industry development as a main national program. However, there is a low assessment on infrastructure adequacy, which might dampen the growth of tourist visiting to Indonesia. The aggressive Indonesian promotion strategy might not have significant impact to increase the number of foreign traveller

arrival to Indonesia but more on to the increase of domestic tourist. Thus, Indonesian government objective on increasing national revenue through tourism might not be achieved at the most potential capacity.

Samosir Regency is a part of the Lake Toba archipelago which has a great potential in tourism and Agriculture. Lake Toba is designated as one of the main tourism sites in Indonesia. Lake Toba natural resources potential must be utilized at the most extent to boost regional economic growth and increase local own-source revenue. The development of tourism sector is not only going to benefit the people of Samosir regency but also bring a multipliers economic impact to surrounding counties as well as North Sumatera Province. Tourism sector is not only generating revenue but also creating job opportunity, increase value added and encouraging positive net balance of trade [2, 3].

People of Samosir people had farming for many generations. Agricultural sector considered as one of main local own-source revenue. The main crop in Samosir is paddy, corn, ground nut, soyabean and vegetable crops. However, the risk in agricultural production due to climate changing and weather uncertainty may affect farmer decision on agricultural input usage and the use of agricultural resources [4, 5]. One of potential strategy is to develop agrotourism by integrating between tourism and agricultural sector.

The main tourism attraction in Samosir is not only its natural site but also its rich culture, history, spiritual, religion and art of Batak ethnicity. The tourism sites are located in few districts, i.e., Simanindo, Pangururan, Harian, Sianjur Mulamula, Ronggurnihuta, Onan Runggu, Palipi, Stiotio, and Nainggolan. Scattered tourism sites need an integrated adequate infrastructure.

Table 1. Road Condition in Samosir Regency (in km)

Road Condition					
Year	Good	Moderate	Poor	Very Poor	Total
2010	6.52	517.03	70.3	17.58	611.43
2011	8.79	524.64	60.43	22.13	615.99
2012	11.55	519.63	62.69	22.15	616.02
2013	25.35	511.33	59.19	71.65	667.49
2014	309.01	272.84	35.05	109.84	726.73
2015	321.13	281.04	32.87	91.67	726.71
2016	231.61	87.37	165.87	286.35	771.21
2017	275.06	82.29	153.92	259.94	777.21
2018	204.99	198.93	231.76	135.54	771.21
2019	220.3	196.59	165.72	188.6	771.21

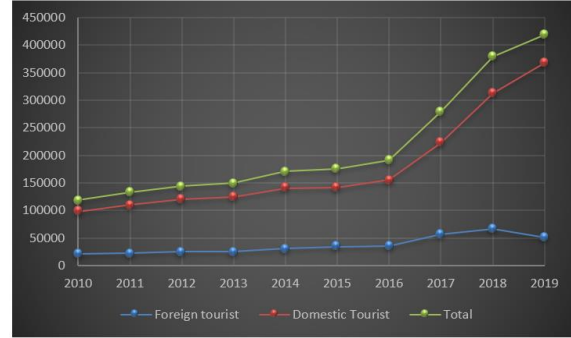
Source: BPS, 2020

Infrastructure, the core of tourism industry, had a role in promoting sustainability in tourism and attracting new potential tourist. Tourism infrastructure may hold as a pull and push market factor for tourism and travel industry. However, the road infrastructure in Samosir seems not having a significant improvement over the years (see Table 1). The road length had been increased substantially from 2010 to 2016, however there was no new road route in 2016-2019. The proportion of road with good condition were increasing in 2010-2015 but started declining from 2016 to 2019. The road with poor and very poor condition having an increasing trend over the year.

The development of Tourism sector should stimulate the investment in Infrastructure [6]. Local government should increase the investment in transportation, hotel and accommodation, craft and art industry, service industry, restaurant and food industry in order to meet the tourist needs and demands [7]. Based on Samosir Statistical Bureau report (2020), the number of hotels had been increasing by 7,4% in 2010-2019. However, the number of hotel room and bedroom had lower growth by only 6% and 3.3% in the same period [8]. Furthermore, the number of starred hotel was decreasing but other type of accommodation was increasing [8,9].

The total tourist had increasing in 2010-2019 as shown in Figure 1. However, the increase in total tourist looks likely driven by the increase in domestic tourist rather than the foreign tourist. The

total tourist had been increasing by 15.8% in 2010-2019 comprises the increase of domestic tourist by 16.7% and foreign tourist by 12%. The foreign tourist is less than 20% of total tourist. This fact raise question whether tourism enhancement program from both national and local government has direct impact to the increase of tourist or rather the increase is caused by other factors.



Source: BPS, 2020

Figure 1. Domestic and Local Tourist in Samosir Regency 2010-2019

More autonomy authority is given to local government with an objective to boost the local own-source revenue. The sustainability and the growth of local own-source revenue is the main success indicator of more autonomous local government. Local government develop economic activity which centred on potential local own natural resource. The advancement in local economic activity is expected to create vast job opportunity and multiplier economic growth impact.

With autonomy authority, local government has more freedom and flexibility in developing and implementing local economic program using their local own-source revenue. However, local economic programs and policy is less likely having substantial impact to economic development in the region which undermine the objective of local autonomy authority itself.

The increase of tourist visiting might not because of local program in enhancing tourism industry but rather than other external factors. This study aims to seek the local infrastructure, road and accommodation, impact to tourism in Samosir. Seasonal analysis is conducted to learn the pattern of tourist visiting schedule. The recommendation to improve the tourism sector competitiveness is developed through Strength-Weakness-Opportunities-Threat (SWOT) strategies. Internal and external analysis are conducted to develop the SWOT strategies.

2. MATERIALS AND METHOD

2.1 Materials

This study uses annual data of tourism and infrastructure sector from Samosir Central Statistical Bureau. The dataset includes time series

data of 10 years from 2010 to 2019 [8,9]. The dataset includes monthly tourist arrival by origin, road length in good condition, and number of bedroom hotel.

2.2 Methods

A. Trend and Seasonal analysis

The trend of tourist arrival in Samosir regency is analyzed using linear regression model as shown in equation below;

$$Tourist_t = \beta_0 + \beta_1t + \beta_2D + \beta_3Road_t + \beta_4Accommodation_t \quad (1)$$

where $Tourist_t$ is the number of local or foreign tourist arrival in Samosir. t is a time trend which indicate the growth trend of tourist over the year. The dummy variable in equation (1) are used to seek the growth difference between foreign and domestic tourist arrival. Variable $Road_t$ is a length of road in good condition which used as a proxy of road infrastructure. $Accommodation_t$ is a number of available bedroom throughout the year that used as a proxy for accommodation infrastructure.

The seasonal analysis is carried on using dummy variable as shown in equation 2 below;

$$Tourist_t = \beta_0 + \beta_1January + \beta_2February + \beta_3March + \beta_4April + \beta_5May + \beta_6June + \beta_7July + \beta_8august + \beta_9September + \beta_{10}October + \beta_{11}November \quad (2)$$

B. SWOT analysis

The SWOT analysis develop the strategy by identifying the internal and external factor of tourism in Samosir regency. The internal factor comprises any factors that can be considered as strength and weakness of tourism sector. Strength factors are things that Samosir tourism sector does particularly better than other tourism site and can also be considered as an advantage compared to its competitor. The weakness factor can be considered as a thing that tourism sector needs to be improved immediately.

The identification of external factors is by assessing the opportunities and threat from outside Samosir tourism sector. Opportunities is something positive that tourism sector should exploit and taking the most benefit to increase the competitiveness of tourism industry. Threat includes any event that can negatively affected tourism sector that need to be quickly anticipated to avoid the greater loss.

SWOT analyses develop four types of strategy with regard to the internal and external factor. The SWOT strategies are Strength-Opportunity (S-O),

Strength-Threat (S-T), Weakness-Opportunity (W-O), and Weakness-Threat (W-T) strategies. The SWOT matrix can be shown in Table 2 below.

Table 2. SWOT Matrix

	Strength	Weakness
Opportunity	S-O strategy	W-O strategy
Threat	S-T strategy	W-T strategy

3. RESULT AND DISCUSSION

3.1 Trend and seasonal analysis

Trend analysis is estimated based on equation (1) which assess the cause of change in number of tourists visiting. The trend analysis result shown in table 2. The results show the trend of tourists visiting is mainly derived by time trend. Positive time trend result indicates a growth and a positive trajectory number of tourists visiting over the year. The positive time trend might be encouraged by the increase of local income per capita which implies the demand for tourism sector in Samosir regency depending on the economic growth of North Sumatera province and other neighbouring provinces. Another possible cause of positive time trend is because the growth in online travel industry in which enable tourist to easily and effectively plan or make a reservation for visiting tourism site. We could expect an increase forecast in tourist visiting in the future.

The trend analysis shows the number of domestic tourist is substantially higher than the foreign tourist. This result indicates the increase number of visiting tourists is dominated and mainly driven by domestic tourist which mainly come from North Sumatera Province. The average number of domestic tourists between 2010-2019 is 179,018 or 83% of total tourist visiting Samosir regency. In addition, the average number of foreign tourists between 2010-2019 is only 36,752 or 17% of total tourist [8].

The road infrastructure has no significant impact to number of tourists visiting. The road

Table 3. Trend Analysis of visiting tourist in Samosir regency

Variable	Coefficient	Standard Error	Significance
Domestic Tourism	142,265.50***	20,905.83	0
Time	16,757.66**	8,088.83	0.038
Road Infrastructure	-103.93	146.52	0.478
Accommodation infrastructure	41.77	61.63	0.498

*** significance at 1%, ** significance at 5%

infrastructure in good condition is decreasing but the road with poor or very poor condition were increasing between 2014-2019 (see table 3). Despite those changes in road infrastructure but the number of tourists visiting is still increasing.

The result in table 3 shows the accommodation infrastructure, constitute to number of bedrooms, has no significant impact to number of tourists visiting Samosir regency. This result is expected because the major accommodation is not starred hotel but other type of accommodation. As a matter of fact, there was only 4 starred hotels in 2019 but reduce to none starred hotel in 2020 [8,9]. The accommodation infrastructure condition is not favourable especially for foreign and family-based type tourist whom expecting more comfortable and luxury vacation [10, 11].

The not significant impact of both road infrastructure and accommodation needs to be addressed cautiously in response to an increasing competition from other domestic and international tourism site. Neighbouring countries, e.g., Thailand and Malaysia, are aggressively developing integrative tourism sector. Furthermore, the infrastructure of both countries is better than Indonesia and the pricing is very competitive.

Table 4. Seasonal analysis of tourist visiting Samosir regency

Variable	Coefficient	Significance
January	7,092.857	0.282
February	-1,949.857	0.768
March	-451.4286	0.945
April	3,089.429	0.64
May	3,912.429	0.553
June	177,42.14***	0.007
July	9142.286	0.166
September	245.5714	0.97
October	-975.1429	0.883
November	2,419.286	0.714
December	28,952***	0

*** significance at 1%

The seasonal analysis shown in table 4 implies December and June is the most preferred month for tourist visiting Samosir regency. The number of tourists visiting is significantly larger in December but only slightly higher in June compared to other months. Most tourist is visiting during public holiday likewise Christmas and New Year event. Most tourist spending their vacation sometimes before Christmas day and ended in the early of January. This result also indicates that Samosir tourism sector should develop marketing strategy by targeting a non-seasonal tourist.

3.2 SWOT Analysis

The SWOT analysis is shown in Figure 2. The S-O Strategy are focused on marketing, integrating,

and exploiting the potential of tourism resources in Samosir. Lake Toba, one of the biggest lakes in the world, is one of the main strengths that need to be exploited further. Samosir regency also could develop agrotourism to get the most benefit from agricultural farming and tourism sector that had been co-existed for a long period.

The main weakness of Samosir tourism is on its infrastructure that not adequate for competitive tourism offer. With the purpose of fixing the weakness and exploiting the opportunities, the W-O strategies are developed with more focused-on building and improving infrastructure that support the tourism service industry. Indonesian government need to increase the investment climate condition with simpler and shorter investment policy implementation.

The S-T strategy is centred on developing competitive tourism package and enhancing the attributes of tourism sites. The S-T strategy also should focus on developing more competitive pricing strategy in response to higher competition from the neighbouring countries and world economic recession due to Covid-19 pandemic. The W-T strategy is focused more on increase the international traveller perception on Indonesia environmental issue and sustainability.

	<p>Strength</p> <ul style="list-style-type: none"> • Lake Toba is one of the biggest lakes in the world • Batak ethnic whom rich with culture, history, art • Long term experience and history is tourism for Samosir community • Agriculture farming in Samosir • Competitive price 	<p>Weakness</p> <ul style="list-style-type: none"> • Not adequate road infrastructure • Not adequate accommodation infrastructure • Not integrated tourism marketing strategy • Weak integration and partnership between government and private sector • Not conducive investment bureaucracy and climate • Low environmental sustainability
<p>Opportunity</p> <ul style="list-style-type: none"> • Increasing trend of seasonal tourist • Potential of non-seasonal tourist • Local economic growth • Indonesian central government aggressive program on promoting Indonesia tourism • The growth of online travel industry • More autonomous authority of local government • North Sumatera as a priority destination site for tourism in Indonesia 	<p>S-O strategy</p> <ul style="list-style-type: none"> • Increasing marketing promotion for Lake Toba as one of Indonesian wonder • Integration between natural tourism and other cultural, art and historical tourism • Tourism strategy of more exploiting the cultural, history and art of Batak ethnic • Developing online marketing pricing strategy that give high value of money-experience • Developing agrotourism • Developing marketing strategy which targeting non-seasonal tourism with more preference on luxury travel experience 	<p>W-O strategy</p> <ul style="list-style-type: none"> • Improvement on road infrastructure with more integrative tourism travel route • Developing accommodation infrastructure by building starred hotels • Develop more strategic integrative partnership between central and local government with private sector • More transparent and accountable bureaucracy of local government • Improving investment regulation and bureaucracy with simpler and shorter investment policy implementation
<p>Threat</p> <ul style="list-style-type: none"> • Increasing competition from other tourism site in other countries • Covid 19 and economic recession • Deforestation and palm oil plantation issue 	<p>S-T strategy</p> <ul style="list-style-type: none"> • Developing tourism package and enhancing the attributes of tourism sites • Developing tourism marketing strategy that focus more on Lake Toba competitiveness • Developing more competitive pricing strategy with integrative tourism package 	<p>W-T strategy</p> <ul style="list-style-type: none"> • Maintaining the sustainability of natural resources and environmental condition • Increase the marketing of environmental sustainability in Samosir regency • Develop other industry that support the tourism sector

Figure 2. SWOT Matrix for Samosir Tourism

4. CONCLUSION

Indonesia government has an ambitious project in promoting potential tourism area to increase the national revenue and to develop the local economy. North Sumatera is one of the provinces that had been designated as a centre of tourism industry with Lake Toba as the main tourism site attraction. More autonomy authority given to local government to

increase the local own-source revenue, however not integrative planning might have backfired impact of autonomy authority policy to economic growth. This study found a positive trajectory number of tourists visiting over the year. This study also found no significant impact of road infrastructure and accommodation infrastructure to growing number of tourists in Samosir. These results suggest that the increase of tourist visiting might be encouraged by the increase of local income per capita and the growth in online travel industry rather than local government program. Not integrative planning between central and local government may dampen the impact of tourism promotion program to economic growth. The number of tourists visiting is significantly larger in December during public holiday which implies seasonal domestic tourist is more dominated. The S-O strategy should centre on marketing, integrating, and exploiting the potential of tourism resources. The W-O strategies are more focused-on building and improving infrastructure that support the tourism service industry. The S-T strategy is centred on competitive tourism package and enhancing the attributes of tourism sites. The W-T strategy is focused more on increase perception of international traveller on Indonesia environmental issue and sustainability.

AUTHORS' CONTRIBUTIONS

RPW and IS conceived and designed the analysis. RPW and IS Contributed data or analysis tools. RPW and IS performed the analysis. RPW, IS, ISY and NE Wrote the paper. ISY and NE collected the data. All authors discussed the results and contributed to the final manuscript.

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