

# **Sustainable Competitive Advantage in the Tourism Industry with IT Managerial Resources, IT Implementation Success and Social Responsibility**

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## **Abstract**

This research to analyze the influence of Information Technology managerial resources and Information Technology implementation success on sustainable competitive advantage. Moreover, the research aims to analyze the influence of Information Technology managerial resources and Information Technology implementation success on sustainable competitive advantage moderated by social responsibility. The sample of this research is the owner or manager at Micro and Small Medium Entreprises in tourism industry around the area Samosir Island. Before Pandemic Covid-19, about 215 MSME tourism were existing, which were established more than 1-year period. During the Pandemic, only 73 managers or owners were willing to answer the questionnaires. The data analysis using SmartPLS software. The findings of this research is IT Managerial Resources has impact on Sustainable Competitive Advantage and IT Implementation Success have impact on Sustainable Competitive Advantage. It is also found that Social Responsibility is significant as a moderator in the relationship between IT Managerial Resources and Sustainable Competitive Advantage. Lastly, Social Responsibility is significant as a moderator. This research limitation/implication was designed before the Pandemic Covid-19 condition. Therefore, there is a significant decreasing number of samples in data collection. Because the tourism industry is one of the industries that has suffered the biggest losses due to Covid 19, many tourism companies cannot survive, especially the Micro and Small Medium Entreprises. This research enrich the study about tourism industry which focuses on the social challenge and technological challenge to improve the sustainable competitive advantage in the area of Samosir Island.

## **Keywords**

Information Technology, Social Responsibility, Sustainable Competitive Advantage, Tourism Industry.

## **Introduction**

Tourism currently is a developing sector that has quite varied innovations in its fields. Tourism is also a sector that has an essential role in the world economy. This can be seen from the number of countries that have good economies supported by their tourism sector. Not only from an economic perspective but also a social perspective, tourism has also become a lifestyle or a need for the world community today. Each region in Indonesia has its unique characteristics and destinations. This uniqueness and character make an area a potential tourist destination. The development which is carried out on a large scale with a lot of funds is certainly expected to improve the welfare of the people in the Samosir Island area. The villages on Samosir Island also have potential that can be utilized by the community to welcome the government's plan to make Lake Toba a comfortable and internationally classed tourist destination. Since *Undang-Undang Desa* was enacted in 2014, villages have become the new autonomous regions that receive Village Fund allocations. The villages on Samosir Island are expected to be able to see this opportunity to increase the income and welfare of the community so that they will not become spectators when millions of tourists come to visit Samosir Island.

Collis and Montgomery (1997) state that the resource-based view identifies two distinct types of competencies: resources and capabilities. Intangible resources do not exist physically, yet they provide significant value, such as brand name, patents, reputation, and technological or marketing knowledge (Collis and Montgomery 1995). A company may have unique and valuable resources, but unless it can use these resources effectively, it may not be able to create or maintain a competitive advantage.

Today companies must compete in a challenging context that is being transformed by globalization, technological developments, the accelerating spread of new technologies, and the development and use of knowledge (Hitt, Keats, and DeMarie 1998).

The infrastructure a way that adequate technological equipment, intranet, knowledge bank, library, ongoing training, and meetings stimulate efficient teamwork, creativity, positive attitude, and self-confidence; and favorable work environments must be set up to gain a competitive advantage (Rampersad 2007). The pioneering studies, which highlight social responsibility, values, and beliefs, IT managerial resources, and successful IT

implementation as important technology challenges in SMEs. Because technological challenges have an important role in achieving competitive advantage, it is also important to achieve higher performance (Haseeb et al, 2019).

## Literature Review

### Potential Tourism Objects

The potential of a tourist attraction is an ability and attractiveness of a tourist attraction that drives the presence of tourists. Potential is all cultural sources found in a region concerned, both in physical form and in social form, which need to be developed (Made, 2011 and perbawasari et al., 2019). The first step in selecting and determining a tourist object worthy of development or getting priority to be developed, before that, several things need to be considered as reference and consideration. This step is carried out with the hope that later it will result in the development of an optimal tourist attraction.

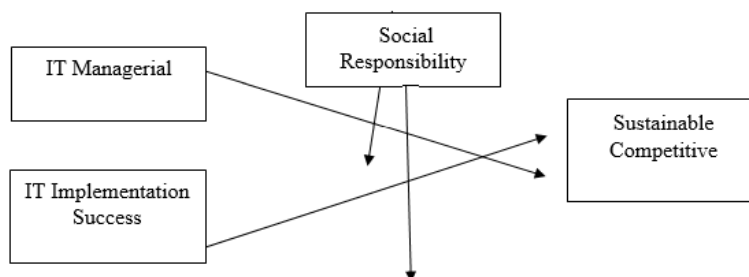
### Technological Challenges

Applying the planned model for technological manifestations seen as a continuous process. Technological challenges are created during the ongoing process and cannot be anticipated in advance. (Yeo & Ajam, 2010). Essentially, the use of IT involves a series of planned and emerging changes that are associated in great complexity in direct response to uncertain conditions (Haseeb et., 2019). Because technological challenges have an important role in achieving competitive advantage to achieve better performance.

### Sustainable Competitive Advantage

Achieving multiple advantages will be critical to building this solid and detached center (Matten, 2008). These endeavors have exploded in securing a sustainable competitive advantage even though they have won concerning achieving improved operational, effectiveness, and competitive advantage (Onkvisit, 2008).

### Conceptual Framework



**Figure 1 Conceptual Framework**

## Methods

The sample is the owner or manager at Micro and Small Medium Enterprises in tourism industry around the area Samosir Island. Before Pandemic Covid-19, about 215 MSME tourism were existing, which were established more than 1-year period. During the Pandemic, only 73 managers or owners were willing to answer the questionnaires.

Sustainable Competitive Advantage can be obtained from internal sources of the organization, from external sources to the organization, or, obviously, from both sources simultaneously. Social Responsibility (Z) is a business commitment and the environment. In short, CSR combines the concept of global citizenship with concern for the environment and sustainable development (Siboro et al., 2018). In this study, the researcher use 2 methods, namely: (1) Distributing Questionnaires; (2) Documentation study. Documentation study is a method of collecting data through books, journals, magazines, and the internet which are used as supporting reference materials for the researcher. The data analysis method using SmartPLS application.

## Result and Explanation

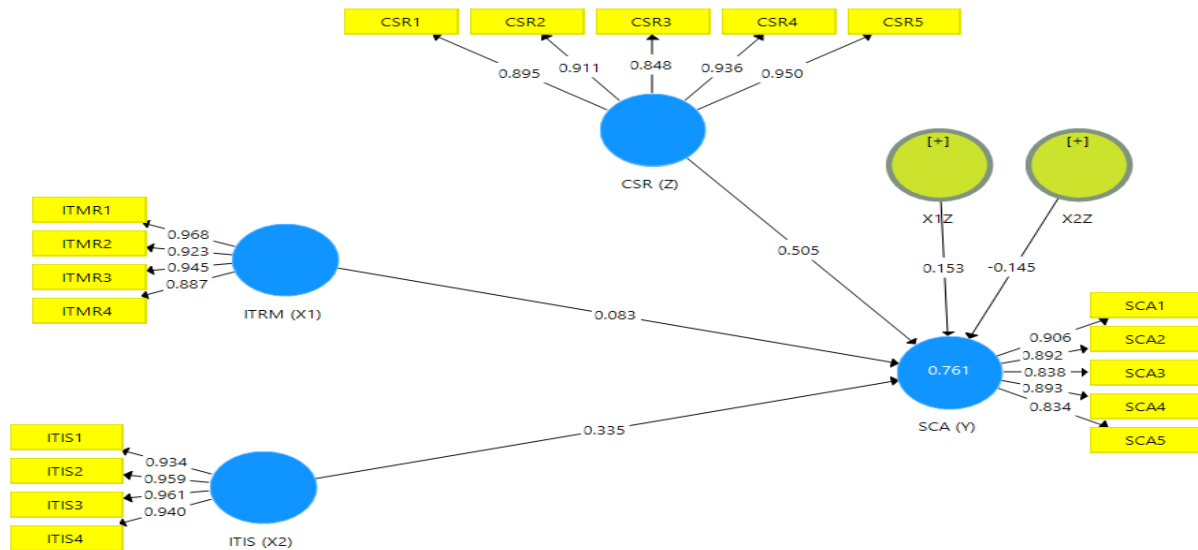
### 1. Result

#### i. Validity and Reliability Test

Following are the results of validity testing based on loading factors:

**Table 1 The Loading Factors Indicators**

	CSR (Z)	ITIS (X2)	ITRM (X1)	SCA (Y)	X1Z	X2Z
csr1	0.895					
csr2	0.911					
csr3	0.848					
csr4	0.936					
csr5	0.950					
ITIS (X2) * CSR (Z)						1.486
ITIS1		0.934				
ITIS2		0.959				
ITIS3		0.961				
ITIS4		0.940				
itmr1			0.968			
itmr2			0.923			
itmr3			0.945			
itmr4			0.887			
ITRM (X1) * CSR (Z)					1.423	
SCA1				0.906		
SCA2				0.892		
SCA3				0.838		
SCA4				0.893		
SCA5				0.834		

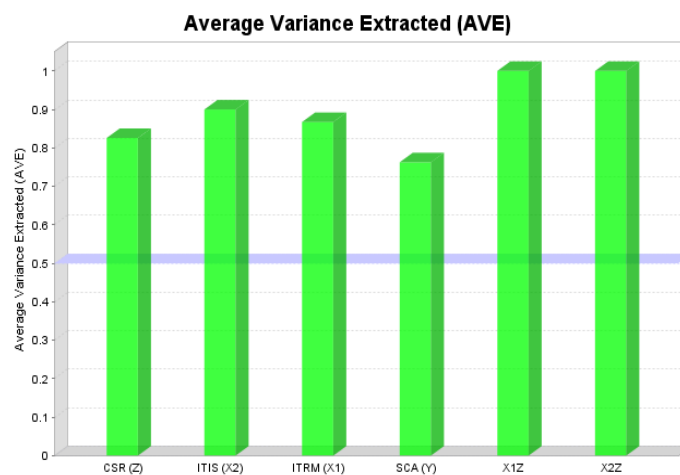


**Figure 2 Validity Testing Factors**

Based on the Table 1 and Figure 2 the loading values more than  $> 0.7$ , its means have validity requirements. The validity test show in Average Variance Extracted (AVE) value.

**Table 2 The AVE Value**

	Average Variance Extracted (AVE)
CSR (Z)	0.826
ITIS (X2)	0.900
ITRM (X1)	0.867
SCA (Y)	0.762
X1Z	1.000
X2Z	1.000

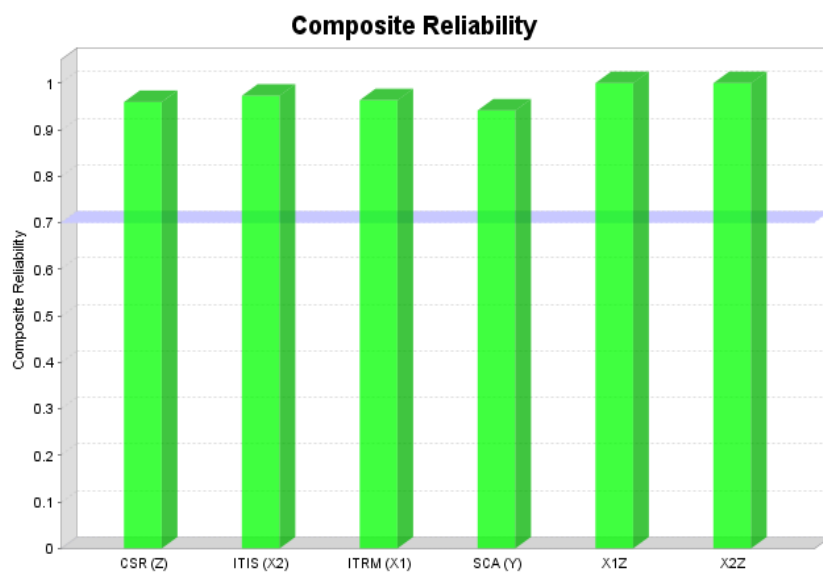


**Figure 3 Validity Testing Based AVE value**

The AVE value is above 0.5 (Mahfud and Ratmono, 2013) all indicators have met the validity. The composite reliability value.

**Table 3 The Composite Reliability (CR)**

	The CR
CSR (Z)	0.959
ITIS (X2)	0.973
ITRM (X1)	0.963
SCA (Y)	0.941
X1Z	1.000
X2Z	1.000

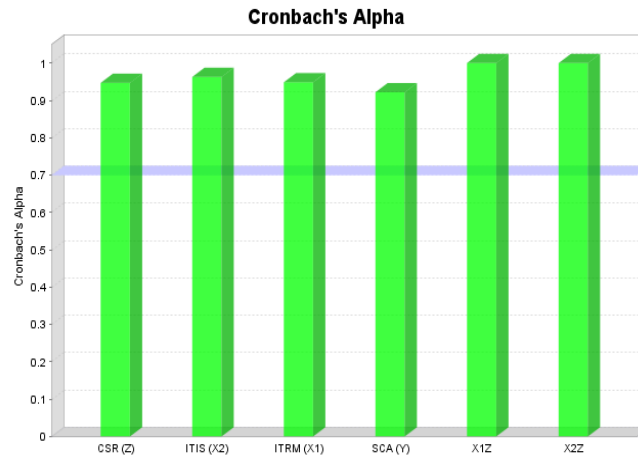


**Figure 4 Reliability Testing**

The CR value more than 0.7 (Mahfud and Ratmono, 2013) have met the reliability requirements. The reliability testing show in Cronbach's alpha (CA) value.

**Table 4 The Cronbach Alpha**

	Cronbach's Alpha
CSR (Z)	0.947
ITIS (X2)	0.963
ITRM (X1)	0.949
SCA (Y)	0.922
X1Z	1.000
X2Z	1.000



**Figure 5 Reliability Testing**

The discriminant validity test using the Fornell-Larcker. Table 5 presents the results of the discriminant validity test.

**Table 5 Discriminant Test**

	CSR (Z)	ITIS (X2)	ITRM (X1)	SCA (Y)	X1Z	X2Z
CSR (Z)	0.909					
ITIS (X2)	0.716	0.949				
ITRM (X1)	0.567	0.729	0.931			
SCA (Y)	0.823	0.773	0.619	0.873		
X1Z	-0.465	-0.473	-0.424	-0.395	1.000	
X2Z	-0.613	-0.548	-0.453	-0.561	0.851	1.000

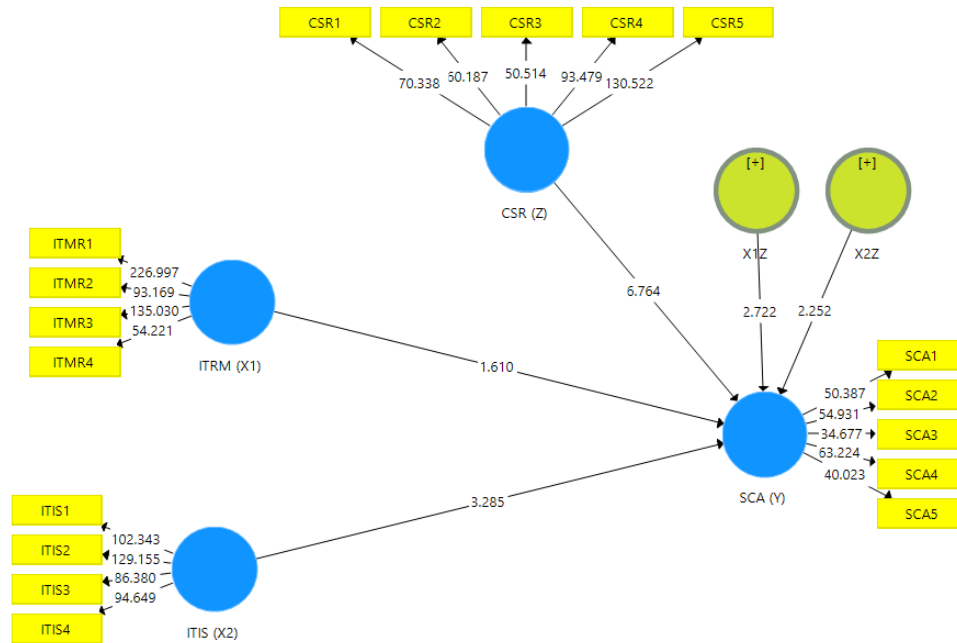
Its means met the requirements of discriminant validity. Hypothesis test results are as follows:

**ii. Significance Test of Influence (Inner Model)**

Table 6 presents the results of the significance test.

**Table 6 Significance Test of Influence**

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
CSR (Z) -> SCA (Y)	0.505	0.515	0.075	6.764	0.000
ITIS (X2) -> SCA (Y)	0.335	0.337	0.102	3.285	0.001
ITRM (X1) -> SCA (Y)	0.083	0.064	0.051	1.610	0.108
X1Z -> SCA (Y)	0.153	0.152	0.056	2.722	0.007
X2Z -> SCA (Y)	-0.145	-0.148	0.064	2.252	0.025



**Figure 6 Significance Test of Influence**

Based on the results in Table 6 the results are:

1. ITMR (X1) has a influence on SCA (Y), with a path coefficient of 0.153, but insignificant, with a P-Values of  $0.108 > 0.05$ .
2. ITIS (X2) has a influence on SCA (Y), with a path coefficient of 0.335 and significant with a P-Values of  $0.001 < 0.05$ .
3. CSR (Z) is significant as a moderator of the relationship between ITRM (X1) and SCA (Y) with a P-Values of  $0.007 < 0.05$ .
4. CSR (Z) is significant as a moderator of the relationship between IT IS (X2) and SCA (Y) with a P-Values of  $0.025 < 0.05$ .

The  $R^2$  show in Table 7:

**Table 7 Coefficient of R Square**

	R Square
SCA (Y)	0.761

It is known that the coefficient of determination (R-Square) for the SCA (Y) is 0.761, which means ITMR (X1), ITIS (X2), CSR (Z), X1Z, X2Z can influence SCA (Y) by 76.1%.



## **2. Discussion**

### **i. The IT Managerial Resource on Sustainable Competitive Advantage**

The IT Managerial Resources used are to assist the tourism industry to gain a competitive advantage, such as providing product and service information to tourists visiting Samosir Island. With the existence of IT Managerial Resources, it is expected to gain more benefits in the tourism industry to promote, improve business processes, and build information resources for the tourism industry, especially Samosir Island. Resources can be tangible or intangible. Competitive advantage is the advantage that Samosir Island owns, where its advantages are used to compete with other regional tourism industries to increase the value of Samosir Island both in terms of increasing tourist visits and the image of Samosir Island itself. Samosir Island tourism managers master the duties and roles of information technology both in the work environment and in tourism business activities so that they can add value to the tourist area of Samosir Island to gain a competitive advantage.

### **ii. The IT Implementation on Sustainable Competitive**

A success information technology cannot be separated from the innovation and application of technology and information itself. Information technology facilitates access to information and makes functions within the organization more related so that organizational capabilities increase which in turn will increase competitive advantage (Holland, Lockett, and Blackman, 1992). Currently, all organizations from various industries are very dependent on their information systems and technology (Peppard & Ward, 2004). The tourism industry is willing to take the risk of spending quite a lot of investment costs to implement information technology in tourist areas, especially Samosir Island. The services that the company sells against the total costs it incurs to get these products or services (Barney, 2007).

The implementation of information technology in the tourist area of Samosir Island must be continuously updated to provide new products and services by introducing tourist areas based on advances in information technology.

The implementation of Information Technology will save operational expenditures which will have an impact on efficiency or effectiveness in making decisions about Samosir Island tourism managers so that it has an impact on the competitive advantage of the Samosir Island tourist area.

### **iii. IT Managerial Resources on Sustainable Competitive Advantage Moderated by Social Responsibility**

Tourism in an area should not only provide benefits for the management or the government, but tourism must also be able to provide benefits for the local community and involve the community in its management. Empowerment of local communities in a tourist destination area is something that should be considered in future tourism development. For this reason, the community needs to be provided with facilities in achieving the success of tourism.

The efficient governance tool for achieving organizational strategic goals (Du et al, 2011, Flammer et al, 2017, Elisabeth et al., 2018 and Purba et al., 2018) such as gaining competitive advantage (CA) (Porter and Kramer, 2006). Sustainable CA builds the foundation of sustainable development for companies, and that is why several world-renowned companies spend billions each year on CSR practices (Smith, 2014). The results of scholars' research are becoming more complex and diverse (Jamali and Karam, 2018), such as positive correlation (Kotler and Lee, 2008); (Michelon et al, 2013) negative correlation (Frooman, 1997); (McWilliams, 2000) and irrelevant (Simpson and Kohers, 2002); (Shi et al, 2009). Scholars on the resource-based view generally disagree that information technology (Oh and Pinsonneault, 2007); (Soh and Markus, 1995).

### **iv. IT Implementation Success on Sustainable Competitive Advantage moderated by Social Responsibility**

The ability to utilize technology consists of the ability to create patents protected by law, (Lee et al. 2001). The success of information technology is designed based on a business strategy that involves information technology experts owned by the management of the tourist area to participate in strategic business planning. Local governments, in this case, tourism managers, must consider the conditions of the surrounding environment in the use of technology. One form of social responsibility for the Samosir Island tourism area is an educational program regarding the environment educational programs, providing support for community activities, and supporting public health, sports and recreation projects.

## **Conclusion**

Social Responsibility is significant as a moderator in the relationship between IT Managerial Resources and Sustainable Competitive Advantage. IT Implementation Success has a positive effect on Sustainable Competitive Advantage. Information Technology Managerial Resources has a positive effect on Sustainable Competitive

Advantage. Social Responsibility is significant as a moderator in the relationship between IT Implementation Success and Sustainable Competitive Advantage.

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