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Analysis of the Influence of Human Resources, Natural Resources and Infrastructure Resources on Sectoral Development Policies in Soziona Tourism Economic Area (Somi Bozihona-Onolimbu Nalawo) Nias Regency, North Sumatra Province, Indonesia

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ABSTRACT : The purpose of this study is to analyze the influence of human resources, natural resources and infrastructure resources on sectoral development policies in the Soziona tourism economic area, Nias Regency, North Sumatra Province. The research was conducted in the Soziona tourism economic area, Nias Regency, North Sumatra Province, namely Gido District, Idanogawo District, and Bawolato District. The analytical method used in this study uses the Partial Least Square Structural Equation Modeling (PLS-SEM) approach with SmartPLS v.3.0 software. The results show that (1) human resources (SDM) have a positive and significant effect on sectoral development policies (KPS), (2) natural resources (SDA) have a positive and significant effect on sectoral development policies (KPS), (3) resources Infrastructure resources (SDSP) have a positive and significant effect on sectoral development policies (KPS, (4) human resources (SDM) have a positive and significant effect on natural resources (SDA) and (5) human resources (SDM) have a positive and significant impact on significant to infrastructure resources (SDSP).
Keywords: human resources, natural resources, infrastructure resources.

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INTRODUCTION

Regional development is an effort to develop and improve interdependence and interaction between the economic system (economic system), society (social system), and the environment and its natural resources (ecosystem). Each of these systems has its own purpose. In general, the objectives of the development of this area can be formulated, namely (1) developing rural communities, along with the supporting facilities and infrastructure, (2) achieving sustainable economic growth, (3) reducing poverty levels through increasing community income, (4) encouraging equity. growth by reducing disparities between regions, (5) improving the quality of human resources and conserving natural resources for sustainable regional development, (5) encouraging efficient and sustainable use of village space [1].

In addition to the above objectives, in terms of regional interests, regional development can be directed to achieve various things, namely: (1) improving the welfare, quality of life, economic and social capabilities and capacities of rural communities, (2) increasing community ties or people around the area who have the responsibility to maintain its sustainability and security, (3) improve the quality, productivity and security of the region, (4) create jobs, increase business opportunities and increase state income and income of the community or people, (5) encourage and accelerate development regions in order to achieve regional progress and independence [2].

One of the regional development efforts carried out by the Nias Regency government is to determine strategic areas through regional development according to the functions of each region in supporting the regional economic development function and the environment. The development strategy referred to is carried out through developing fast-growing economic zones, including Gido, Idanogawo, Bawolato and Sogae'adu sub-districts which are merged into the Minapolitan area and the SOZIONA (Somi-Bozihona-Onolimbu-Nalawo) tourism economic area. The determination of the SOZIONA area was based on the decision of the Nias Regent Number 556/134/K/2011 dated 30 May 2011 concerning the Designation of Tourism Destinations in the Nias Regency Region in 2011 [3].

Until now, research on the influence of human resources, natural resources and resources of facilities and infrastructure on sectoral development policies in the Soziona tourism economic area has not been carried out so it is necessary to do research on "Analysis of the Effect of Human Resources, Natural Resources and Resources of Facilities and Infrastructure on Sectoral Development Policies in the Soziona Tourism Economic Zone in Nias Regency, North Sumatra Province".

THEORETICAL REVIEW

The development of tourism in a tourist destination, either locally, regionally or nationally in a country, is closely related to the economic development of the region or country. It is realized that in a tourist destination, a well-developed tourism industry will naturally have a positive impact on the area, because it can create ample employment opportunities for the local population. Directly with the construction of tourism facilities and infrastructure in the area, a lot of labor will be sucked in by projects: construction of roads to tourism objects, bridges, power plants, clean water supply, construction of recreational areas, tourist attractions, tourist transportation, terminals and airports, hotels, restaurants, travel agencies, boutiques, shopping centers, souvenir shops, art studios and other entertainment venues. In fact, there will be a new demand for agricultural products, livestock, plantations, home furnishings industry, small handicrafts and weaving as well as education to serve tourists who come. The money that tourists spend in a tourist destination has a very big influence on tourist destinations or countries that develop tourism as an industry. Not only will it be able to increase state foreign exchange receipts, national income, tax revenues, but at the same time it will strengthen the position of the country's balance of payments [4].

Economic zones can be divided based on their shape and status. The form of economic activity is motivated by activities in the area. While the status is more in the form of economic activities that get incentives and facilities provided by the government. The objectives of developing economic zones include (1) providing certainty of location allocation in accordance with land ownership spatial planning, (2) increasing efforts to develop environmentally sound economic activities, (3) providing efficiency through the provision and operation of integrated infrastructure and facilities, (4) accelerating the development of economic zones. distribution and economic development in the regions, (5) increasing investment competitiveness and national economic growth [5].

Tourism area is an area that has the main function of tourism or has the potential for tourism development that has an important influence in one or more aspects such as economic, social and cultural growth, empowerment of natural resources, environmental carrying capacity, and defense and security. The development of tourism areas is very dependent on the resources and carrying capacity of the area by looking at the factors of attraction, access, and other supporting facilities (attraction, accessibility, and amenities) [6].

The development of the Soziona tourism economic area (Somi-Bozihona-Onolimbu-Nalawo) is influenced by several factors, namely human resources, natural resources and resources of facilities and infrastructure available in the area. The conceptual framework of the research as shown in Figure 1 below.

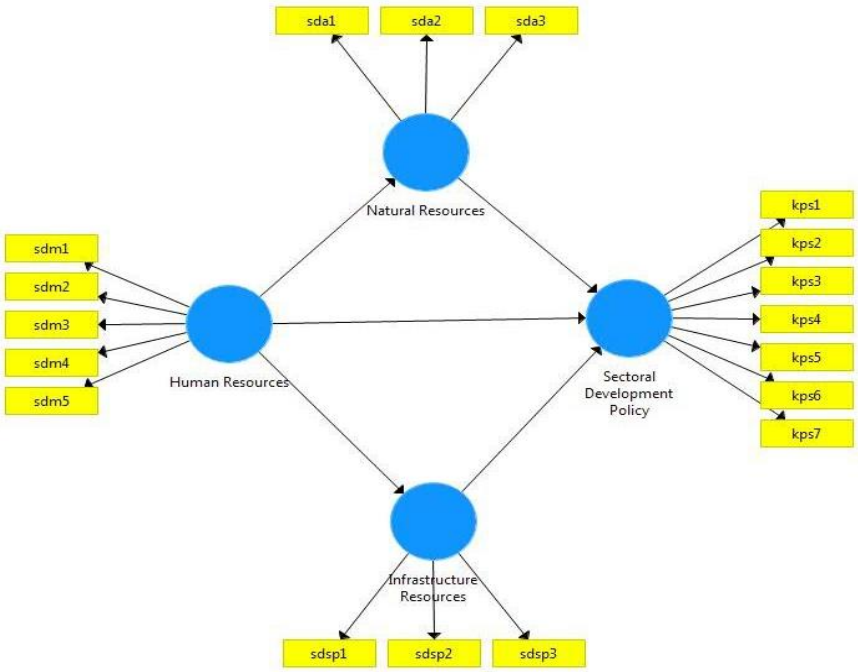

Figure 1. Research Conceptual Framework

Based on the conceptual framework in Figure 1 above, research hypotheses can be formulated, namely (1) human resources (SDM) affect sectoral development policies (KPS), (2) natural resources (SDA) affect sectoral development policies (KPS), (3) infrastructure resources (SDSP) affect sectoral development policies (KPS, (4) human resources (SDM) affect natural resources (SDA) and (5) human resources (SDM) affect infrastructure resources (SDSP).

RESEARCH METHODOLOGY

The research was conducted in the Soziona tourism economic area, Nias Regency, North Sumatra Province. The Soziona tourism economic area is located in 3 (three) sub-districts, namely Gido District, Idanogawo District, Bawolato District. The research was conducted from January 2020 to June 2020. The location selection was based on the Soziona tourism economic area, which is one of the strategic areas of Nias Regency for the sake of economic growth with the criteria of having fast-growing economic potential and having a leading sector that can drive economic growth, namely the tourism sector.

The sample is a subset (subset) of the population unit [7]. The sample size was determined using the Slovin formula [8] as follows:

$$n = \frac{N}{1 + Nd^2}$$

$$= \frac{2775}{1 + (2775 \text{ x } 0{,}0025)}$$

$$= 349{,}68 = 350 \text{ households} \ldots\ldots\ldots\ldots\ldots\ldots \quad (1)$$

Sampling of respondents was taken proportionally in each sub-district and village, as shown in Table 1.

Table 1. Population and Sample of Research Respondents

No	District	Village	Population (household)	Sample (household)
1.	Gido	Somi	472	472/2775 x 350 = 60
		Somi Botogo'o	428	428/2775 x 350 = 54
		Lasela	149	149/2775 x 350 = 19
2.	Idanogawo	Laira	248	248/2775 x 350 = 31
		Maliwaa	344	344/2775 x 350 = 43
		Bozihona	287	287/2775 x 350 = 36
3.	Bawolato	Tagaule	192	192/2775 x 350 = 24
		Siofa Ewali		312/2775 x 350 = 40
		Selatan	312	
		Gazamanu	344	344/2775 x 350 = 43
		Jumlah	2775	350

The data analysis method used in this study is the Partial Least Square (PLS) approach. PLS is a component or variant-based Structural Equation Modeling (SEM) equation model. PLS is an alternative approach that shifts from a covariance-based SEM approach to a variance-based approach. PLS is a powerful analytical method and is often called soft modeling because it eliminates OLS (Ordinary Least Square) regression assumptions, such as the data must be normally distributed multivariately and there are no multicollinearity problems between exogenous variables [9],[10].

PLS-SEM analysis usually consists of two sub-models, namely the measurement model or often called the outer model and the structural model or

often called the inner model [11]. The data analysis used in this study was carried out using the SmartPLS V.3.0 software.

RESULTS

Analysis Description

Descriptive analysis is a statistic used to analyze data by describing or describing the data that has been collected as it is without the intention of making conclusions that apply to the public [12]. The variables used in calculating descriptive statistics are human resources (SDM), natural resources (SDA), infrastructure resources (SDSP) and sectoral development policies (KPS). The descriptive statistics obtained from the answers to the returned questionnaire regarding the research variables are presented in Table 2 below.

Table 2. Descriptive statistics

Variable	Indicator	N	*Min*	*Max*	*Mean*	*Standard Deviation*
SDM	sdm1	350	1.000	5.000	4.051	1.010
	sdm2	350	1.000	5.000	4.089	1.034
	sdm3	350	1.000	5.000	4.074	1.023
	sdm4	350	1.000	5.000	4.083	0.969
	sdm5	350	1.000	5.000	4.026	0.987
SDA	sda1	350	1.000	5.000	4.060	0.988
	sda2	350	1.000	5.000	3.960	1.084
	sda3	350	1.000	5.000	4.006	1.023
SDSP	sdsp1	350	1.000	5.000	4.143	0.957
	sdsp2	350	1.000	5.000	4.123	0.985
	sdsp3	350	1.000	5.000	4.043	1.012
KSP	kps1	350	1.000	5.000	4.020	0.998
	kps2	350	1.000	5.000	4.109	0.875
	kps3	350	1.000	5.000	3.986	0.998
	kps4	350	1.000	5.000	4.034	0.999
	kps5	350	1.000	5.000	4.100	1.005
	kps6	350	1.000	5.000	4.266	0.914
	kps7	350	1.000	5.000	4.131	0.997

Based on the results of tabulation of data on 350 questionnaires that have been collected, it can be explained that respondents' answers to the statements contained in the research questionnaire can be categorized that the average respondent agrees with the statements given to them.

Measurement Model Test Results (Outer Model)

The outer model test begins by estimating or estimating parameters, namely by calculating the PLS algorithm.

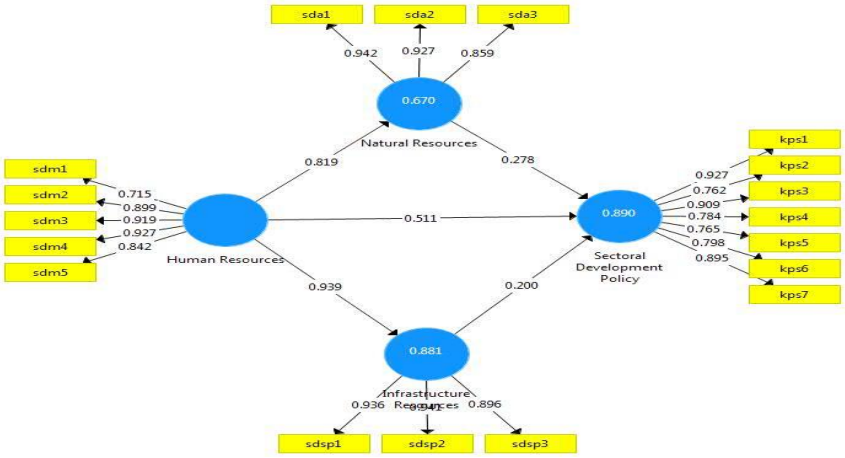

Figure 2. PLS Algorithm Calculation Output Display

DISCUSSION

Based on the output of the analysis, the measurement model (outer model) can be evaluated, namely by testing convergent validity, discriminant validity and reliability, as follows:

Convergent Validity Test Results

Convergent validity test is done by looking at the value of the loading factor on each construct. A loading factor value above 0.7 is stated as an ideal or valid measure as an indicator in measuring the construct, values from 0.5 to 0.6 are still acceptable, while values below 0.5 must be excluded from the model [13]. Based on data calculations using the PLS algorithm method, the loading factor value of each indicator can be seen in Table 3 below.

Table 3. Load Factor Value

Variable	Symbol	*Loading Factor*	Conclusion
Human Resources (SDM)	sdm1	0,715	Valid
	sdm2	0,899	Valid
	sdm3	0,919	Valid
	sdm4	0,927	Valid
	sdm5	0,842	Valid
Natural Resources (SDA)	sda1	0,942	Valid
	sda2	0,927	Valid
	sda3	0,859	Valid
Infrastructure Resources (SDSP)	sdsp1	0,936	Valid
	sdsp2	0,941	Valid
	sdsp3	0,896	Valid
Sectoral Development Policy (KPS)	kps1	0,927	Valid
	kps2	0,762	Valid
	kps3	0,909	Valid
	kps4	0,784	Valid
	kps5	0,765	Valid
	kps6	0,798	Valid
	kps7	0,895	Valid

Based on Table 3, it can be seen that the entire loading factor value in the variable has been greater than 0.5, which means the indicator is declared valid so that it is feasible to be used in this study. In addition to the loading factor value, to meet convergent validity, it is necessary to know the Avarage Variance Extracted (AVE) value whose value must be greater than 0.5 The AVE value is presented in Table 4 below.

Table 4. Avarage Variance Exctracted (AVE) Value

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Human Resources (SDM)	0,912	0,914	0,936	0,746
Natural Resources (SDA)	0,897	0,900	0,936	0,829
Infrastructure Resources (SDSP)	0,915	0,916	0,946	0,855
Sectoral Development Policy (KPS)	0,927	0,935	0,942	0,700

Provisions regarding the measurement parameters (rule of thumb) of the measurement model (outer model) that the AVE is considered to have met convergent validity if the AVE value is greater than 0.50 [14]. Thus, based on the table of AVE values above, it can be seen that the AVE value of each construct is valid, so that the construct has met convergent validity.

Discriminant Validity Test Results

To prove whether the indicator in a construct will have the largest loading factor in the construct it forms than the loading factor with other constructs, a discriminant validity test is carried out.

Discriminant validity of reflexive indicators can be seen in the value of cross loadings between indicators and their constructs. The value of cross loadings from the results of the PLS Algorithm SmartPLS program can be seen in Table 5 below.

Table 5. Cross Loadings Value

	Sectoral Development Policy (KPS)	Natural Resources (SDA)	Human Resources (SDM)	Infrastructure Resources (SDSP)
kps1	**0,927**	0,764	0,866	0,885
kps2	**0,762**	0,608	0,625	0,638
kps3	**0,909**	0,762	0,858	0,867
kps4	**0,784**	0,835	0,706	0,604
kps5	**0,765**	0,710	0,726	0,608
kps6	**0,798**	0,652	0,738	0,713
kps7	**0,895**	0,670	0,868	0,897
sda1	0,738	**0,942**	0,698	0,643
sda2	0,729	**0,927**	0,680	0,615
sda3	0,845	**0,859**	0,834	0,864
sdm1	0,743	0,905	**0,715**	0,647
sdm2	0,828	0,654	**0,899**	0,846
sdm3	0,856	0,671	**0,919**	0,856
sdm4	0,826	0,668	**0,927**	0,865
sdm5	0,731	0,634	**0,842**	0,826
sdsp1	0,779	0,694	0,854	**0,936**
sdsp2	0,798	0,754	0,881	**0,941**
sdsp3	0,909	0,739	0,866	**0,896**

Based on the value of cross loadings in Table 5 above, it can be concluded that the correlation of each indicator with its construct is higher than the other constructs as a condition for meeting discriminant validity. This shows that the latent construct can predict indicators in its own block better than indicators in other blocks and based on discriminant validity all indicators are valid.

Reliability Test Results

Reliability test is needed to prove the accuracy, consistency and accuracy of the instrument in measuring the construct. Composite reliability measures the real value of the reliability of a construct. A construct is said to be reliable if the composite reliability value is greater than 0.7 [15].

The results of the reliability test on each variable can be seen in Table 6 as follows:

Table 6. Composite Reliability Value

	Composite Reliability	Conclusion
Sectoral Development Policy (KSP)	0,942	Reliabel
Natural Resources (SDA)	0,936	Reliabel
Human Resources (SDM)	0,936	Reliabel
Infrasutructure Sources (SDSP)	0,946	Reliabel

Based on Table 6 above, it can be seen that the composite reliability value of each construct is above 0.70, so it can be stated that the indicators used in this study have met good reliability (reliable).

Based on the results of the outer model test, which includes the convergent validity test, discriminant validity test, and reliability test, it can be concluded that all indicators used in measuring each variable are valid and reliable, in accordance with the research conceptual framework.

Structural Model Testing Results (Inner Model)

To see the relationship between latent constructs, namely by looking at the results of the estimated path parameters and their level of significance, a structural model test (inner model) is carried out..

Path Coefficient Analysis Results (Path Coeficient)

The structural model in PLS is evaluated using R-square for the dependent variable and the path coefficient value for the independent variable which is then assessed nificance based on the t-statistics value of each path. The results of the

algorithm-PLS SamrtPLS program in assessing the path coefficient and R-square can be seen in Figure 2 and in Table 7 below.

Table 7. Path Coefficient Value

	Sectoral Development Policy	Human Resources	Natural Resources	Infrastructure Resources
Sectoral Development Policy (KSP)				
Human Resources (SDM)	0,511		0,819	0,939
Natural Resources (SDA)	0,278			
Infrastructure Resources (SDSP)	0,200			

Based on Table 7 above, the structural equation formed is as follows:

Sectoral Development Policy = 0,511 SDM + 0,278 SDA + 0,200 SDSP
Natural Resources = 0,819 SDM
Infrastructure Resources = 0,939 SDM

The variables of human resources (SDM), natural resources (SDA) and infrastructure resources (SDSP) have positive coefficients on sectoral development policies. Sectoral development policies in the Soziona area are more influenced by human resources (SDM), followed by natural resources (SDA) and infrastructure resources (SDSP).

R-Square (R^2) Determination Value Test Results

Based on the results of the PLS Algorithm output in Figure 2, it can be seen that the adjusted R-square value of 0.889 which means that the sectoral development policy (KPS) variable can be explained by the variables of human resources (HR), natural resources (SDA) and infrastructure resources (SDSP) of 88.9 percent while the remaining 11.1 percent is influenced by other variables not included in the research model.

Hypothesis Test Results

Hypothesis testing is done by looking at the t-statistics value generated from the bootstrapping process. The results of processing with the bootstrapping process can be seen in Figure 3 below.

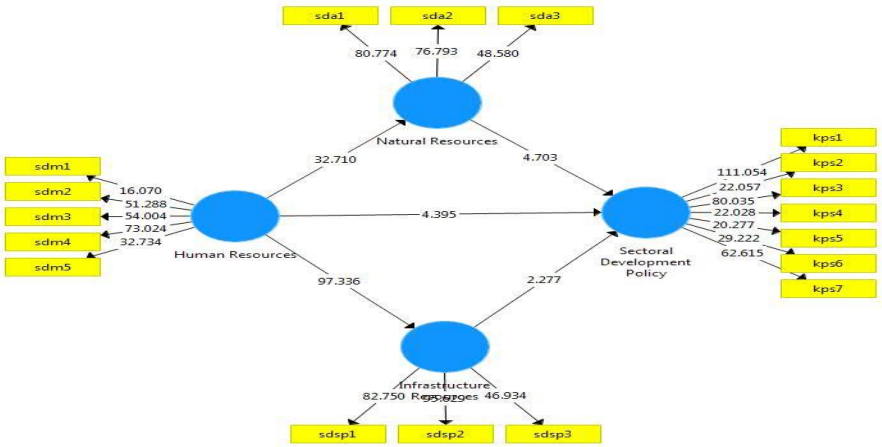

Figure 3. PLS bootsrapping calculation output display

The hypothesis is accepted if the t-statistics value is greater than 1.96 with a significance level of 5 percent (two tailed) [16]. The results of the SmartPLS program bootstrapping process can be seen in Table 8 below.

Table 8. T-statistics Value

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Human Resources -> Infrastructure Resources	0,939	0,938	0,010	97,336	0,000
Human Resources -> Natural Resources	0,819	0,819	0,025	32,710	0,000
Human Resources -> Sectoral Development Policy	0,511	0,501	0,116	4,395	0,000
Infrastructure Resources -> Sectoral Development Policy	0,200	0,207	0,088	2,277	0,023
Natural Resources -> Sectoral Development Policy	0,278	0,282	0,059	4,703	0,000

Based on the test results in Table 8 above, it is known that the t-statistics value of the influence of human resources (SDM) variables, natural resources (SDA) variables, and infrastructure resources (SDSP) variables on sectoral development policies (KPS) is greater than 1.96 and p-value <0.05, which means that human resources (SDM) variables, natural resources (SDA) variables, and infrastructure resources (SDSP) variables have a significant influence on sectoral development policies (KPS). Likewise, the influence of the variable human resources (SDM) on natural resources (SDA) and infrastructure resources (SDSP) has a t-count value greater than 1.96, meaning that the human resource variable

has a positive and significant influence on natural resources (SDA) and infrastructure resources (SDSP) in the Soziona tourism economy area.

CONCLUSION

Based on the results of the research and the results of hypothesis testing, the conclusions of this study are (1) human resources (SDM) have a positive and significant effect on sectoral development policies (KPS), (2) natural resources (SDA) have a positive and significant effect on development policies sectoral (KPS), (3) infrastructure resources (SDSP) have a positive and significant effect on sectoral development policies (KPS), (4) human resources (SDM) have a positive and significant effect on natural resources (SDA) and (5) human resources (SDM) have a positive and significant effect on infrastructure resources (SDSP).

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