A Study on Determinant of Competitiveness Post-mining City as A Tourist Destination

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Background

Determining urban regeneration policies for former mining cities has become a crucial issue since most of these cities lack economic alternatives for new development. One of the most common preferences in the post-mining era is the repurposing of mining-related materials for touristic attractions. The success factor of mining heritage tourism could be assessed by formulating the destination competitiveness model.

Research Objectives

1. To assess the attractiveness and competitiveness of post-mining cities in tourism
2. To define sustainable transformation for the small-sized post-mining cities
3. To develop competitiveness model of mining heritage tourism in post-mining cities

Study Area

Description	Indonesia	
	Sawahlunto	Belitung
Mineral production	Coal	Tin
Production period	1882 - 2000	1860 - Now
After mining	Tourism	Tourism
Land area (Km^2)	273.45	2,293.69
Population (2019)	62,524	173,717
GRDP 2019 (million USD)	247.21	461.61
UNESCO WHS	Yes	No

Common Characteristic:

- Small-sized post-mining cities
- Less populated
- Located in remote/ rural area
- Cities' infrastructures initially were built by mining companies to support mining activities

Research Activities

I. Defining Sustainable Transformation in Post-mining Cities

a. Background

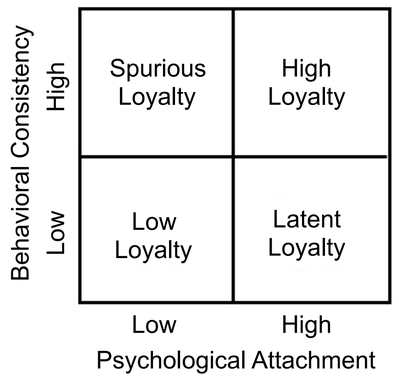
Outmigration is one of the salient social problems when mining leaves a community. Miners and their descendants leave for a better living in new prosperous cities. This study recognizes the loyalty of the community members and identifies the effect of place attachment on the development of a post-mining city, specifically in the case of mining heritage tourism.

b. Methodology

Questionnaire surveys were conducted to 200 of post-mining community members in the old town Sawahlunto.

Variable	Description
Dependent Loyalty (Y)	Four categorical variable 1 = Low loyalty, if respondents select following statements: - I don't care about city's performance or future, so I will not participate in any mining heritage tourism activities or business; - I am planning to move to another city for better living. 2 = Spurious loyalty, if respondents select following statements: - I continue to live in this city because it offers revenue from mining heritage tourism and other related business; - I will move to another city if it offers more income and better living. 3 = Latent loyalty, if respondents select following statements: - I am proud of this city, it has been a part of my identity and I will recommend this city to others for tourism; - If someday I move out from this city, I will still have strong bond with this city and miss it. 4 = High loyalty, if respondents select following statements: - I am rooted here and would not like to move out from here - I want to be involved in the preservation of the mining identity and the development of mining heritage tourism
Independent	
Age (X_1)	Continuous numerical variable
Place of birth (X_2)	Dichotomous variable; 1 = Respondent was born in Sawahlunto old coal mining town 0 = Respondent was born somewhere else
Length of residence X_3)	Continuous numerical variable
Residence status (X_4)	Dichotomous variable; 1 = Native community, if respondents or their descendants are native 0 = Migrant community, if respondents or their descendants are migrant miners
Mining experience (X_5)	Dichotomous variable; 1 = Respondent experienced living in the mining period 0 = Respondent did not experienced living in the mining period

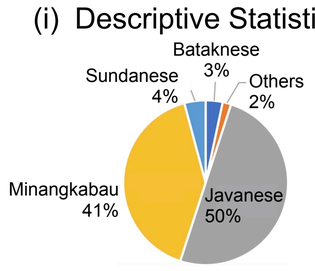
Loyalty, Place Attachment, and Participation (Adapted from Florek, 2011)



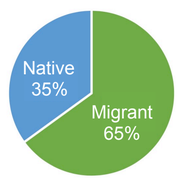
- Psychological attachment is defined as the place attachment, place identity, and sense of place of a post-mining community towards the city
- Behavioral consistency was measured by their willingness to participate in the development of mining heritage tourism

c. Result

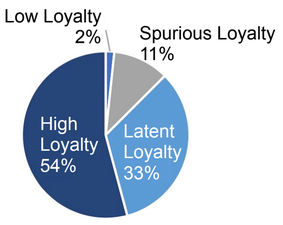
(i) Descriptive Statistic



Ethnic Group
* Minangkabau is native tribe



Resident Status



Loyalty Group

(ii) Ordinal Logistic Regression

Tests of Model Effects

Source	Type III Likelihood Ratio Chi-Square	df	Sig.
X1	.800	1	.371
X2	.292	1	.589
X3	1.150	1	.284
X4	9.481	1	.002
X5	.019	1	.891

Dependent Variable: Loyalty
Model: (Threshold), X1, X2, X3, X4, X5

Parameter Estimates

Parameter		B	Std. Error	95% Wald Confidence Interval Lower	95% Wald Confidence Interval Upper	Hypothesis Test Wald Chi-Square	df	Sig.	Exp(B)	95% Wald Confidence Interval for Exp(B) Lower	95% Wald Confidence Interval for Exp(B) Upper
Threshold	[Y=1]	-4.445	1.1599	-6.719	-2.172	14.690	1	.000	.012	.001	.114
	[Y=2]	-2.267	.9496	-4.128	-.406	5.698	1	.017	.104	.016	.667
	[Y=3]	-.354	.9180	-2.153	1.445	.149	1	.700	.702	.116	4.243
X1		-.025	.0281	-.080	.030	.781	1	.377	.975	.923	1.031
X2		.472	.8648	-1.223	2.167	.298	1	.585	1.603	.294	8.732
X3		.031	.0290	-.026	.087	1.123	1	.289	1.031	.974	1.091
X4		-1.382	.4607	-2.285	-.479	8.997	1	.003	.251	.102	.619
X5		-.070	.5093	-1.068	.928	.019	1	.891	.933	.344	2.531
(Scale)		1[a]									

Dependent Variable: Loyalty
Model: (Threshold), X1, X2, X3, X4, X5
a. Fixed at the displayed value.

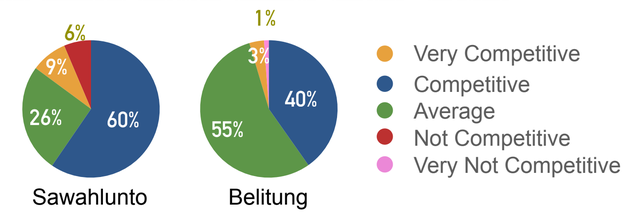
- Age was not a significant predictor in the model (p value= 0.377)
- Place of birth was not a significant predictor of loyalty level (p value= 0.585)
- Length of residence was not a significant predictor (p value= 0.289)
- Residence status was the only significant predictor (p value= 0.003)
- Mining experience was not a significant predictor (p value= 0.891)

II. Developing Competitiveness Model of Mining Heritage Tourism in Post-mining Cities

Variable	Description
Dependent	
Competitiveness (Y)	Scale 1 = Very not competitive 2 = Not competitive 3 = Average 4 = Competitive 5 = Very competitive
Independent	
a) Sustainability Community Resilience (X_1)	Local community recovers from inherited social problem and economic shock
Resources management (X_2)	Mining heritage properties are well preserved and post-mining landscape are remediated
Innovation and job creation (X_3)	Local authority established an innovative diversification activity for creating jobs
b) Destination Policy, Planning & Development Vision (X_4)	The city has a clear vision in tourism; know what to achieve in short/medium/long term future
Development (X_5)	The governing body of tourism execute vision into strategic development program in tourism
Monitoring (X_6)	The governing body of tourism regularly evaluate the performance and achievement
c) Destination Management Organization (X_7)	The city established organization body for conducting daily internal and external managerial task
Marketing (X_8)	Destination Management Organization (DMO) applies a creative city branding and smart marketing strategy

$$\text{Logit}(y) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8$$

Sample (as per March 17, 2020)
(i) Sawahlunto: 188
(ii) Belitung: 87



* Next stage: Logistic regression analysis to test the impact of predictors on the competitiveness *(ongoing)*