

# Planning Tourism Employment Opportunities

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## ABSTRACT

Purpose of this research is to determine the factor that affects tourism development and evaluate the critical factors of strategic planning to create employment using tourism in Banyuwangi. Policymakers need to understand the relative importance of tourism development factors to create employment. A 4-level of AHP model was proposed and tested to support their decision-making process. Results indicate that improving infrastructure and quality of human resource using high investment flow appears to be the most important factor for creating employment in Banyuwangi.

**Keywords:** AHP method, multiple criteria decision making (MCDM), strategic planning, unemployment, tourism

## 1. INTRODUCTION

Reducing unemployment rate in developing countries has been viewed as an annual task for policymakers, especially in Indonesia. Compared to other developing Southeast Asia countries, Indonesia's unemployment rate is high. In 2017, Indonesia's unemployment rate is 5,5% which is the highest unemployment rate in Asia with Mongolia, Pakistan, and Philippines [1]. This condition leads to make unemployment as a problematic issue to deal with in Indonesia.

In the effort to reduce unemployment rate, Indonesia's government have to understand it is important to create jobs that match with skill and expectation of unemployment [2]. In developing countries, tourism is one of the options for economic development in national and regional levels [3]. Ministry of Tourism [4], Goeldner and Ritchie [5], Asih and Asih [6] and Agraj and Murati [7] shows that tourism has significant impact for economic development, improve community welfare, and create jobs for the community. Also, the tourism sector is a sector that is not affected by global economic conditions and its benefits can be felt by all community at any levels [8][9].

According to the explanation above, Indonesia's government choose tourism as its leading sector since 2014 [10]. Several regions that have been serious in developing their tourism potential have begun experiencing consistent economic growth and increasing community welfare [11]. One of the cities that shows rapid growth due to developing tourism sector is Banyuwangi. Banyuwangi, as part of the popular tourist destination in East Java, has a strong economic impact from domestic and international tourist arrival. Banyuwangi is the widest area on Java Island and the 1st city to receive the UNWTO Award as the best tourism city in 2016 [12]. The development of the tourism sector which has a positive

impact on the problems that exist in Banyuwangi makes the development of the tourism sector as a major policy.

Banyuwangi has offered so much to travellers - a rich and varied culture; it's natural beauty; various activities that must be carried out; and friendly citizens; to reduce unemployment, it is necessary to make good strategic planning to achieve this goal. The policy will serve as a guideline in reduce unemployment. According to Badan Pusat Statistika Banyuwangi [13], the unemployment rate of Banyuwangi tends to increase every year. Besides, the elasticity of the employment rate of the tourism sector is inelastic with a coefficient of 0,51 which indicate that the Banyuwangi government needs to make improvements in their policy so that the tourism sector can absorb more employment and is in line with the goals of the tourism sector development in Banyuwangi.

### 1.1. Related Work

According to Kurniawan [14] and Bassam [15], the tourism sector has a positive impact on employment. Kurniawan stated in his work that employment creates because of high spending of money from travellers in a tourism destination. High spending of money leads citizen to serve everything that travellers need on the tourist destination. Specifically, Bassam stated in his paper that employment created in restaurant industries is higher than in hospitality. Esichaikul and Baum [16] also show that employment can be created from developing tourism sector if the government and educational institution work together to create employment that needed by the tourism sector. Hampton [17] also show improving quality of human resource helped created employment in developing tourism sector. The key factor that can lead to a bigger impact of creating employment is using a bottom-up approach so the community can be involved in decision making and maintain regional economic growth [18].

Based on past research, there are a lot of indicators that can create employment by developing tourism destination. Many indicators make creating good policy decision becoming a complex problem. It is important for policymakers to understand how to analyse their complex problems using multiple criteria for decision making [19]. Using Analytic Hierarchy Process (AHP) as a method to choose the right decision, especially in tourism, is the right choice. In many research conducted in many countries shows that AHP can help to evaluate critical factors to choose the right decision. In India [20], Taiwan [21], Vietnam [22], and many other countries using AHP to determine priorities in decision making.

### 1.2. Our Contribution

This paper presents some improvements based on all previous research. In Indonesia, especially Banyuwangi, we rarely find research using AHP to identifies the factors that influence tourism development and evaluate the critical factors in strategic planning to utilize developing tourism to creating employment.

### 1.3. Paper Structure

The rest of the paper is organized as follows. Section 2 explains the research methodology. In the next section, we discuss a case application, and the final section decides the conclusion of this paper.

## 2. RESEARCH METHODOLOGY

The Analytical Hierarchy Process (AHP) was initially developed by Saaty [23] and has been widely used for solving multiple criteria problems or decision making. AHP aims to prioritize various alternative choices. There are 4 axioms according to Pratiwi [24], including (1) Reciprocal Comparison means decision making must contain a comparison and state its preferences; (2) Homogeneity must be expressed on a limited scale or the elements can be compared with one another; (3) Independence means assuming that criteria are not influenced by alternatives but by the whole object; and (4) the expectation of the hierarchical structure is assumed to be complete.

Technically and basically, the AHP method consists of basic principles in understanding AHP. According to Basuki and Andharini [25], the first basic procedure is to form a hierarchy from breaking down a complicated multiple criteria decision-making problem. Each level has a specific element from the problem. The aim of the research is at the top, and at each descending level of hierarchy filled with the criteria, sub-criteria, and alternatives. Figure 1 shows the hierarchy structure with

the goal of determining the best policy to reduce unemployment.

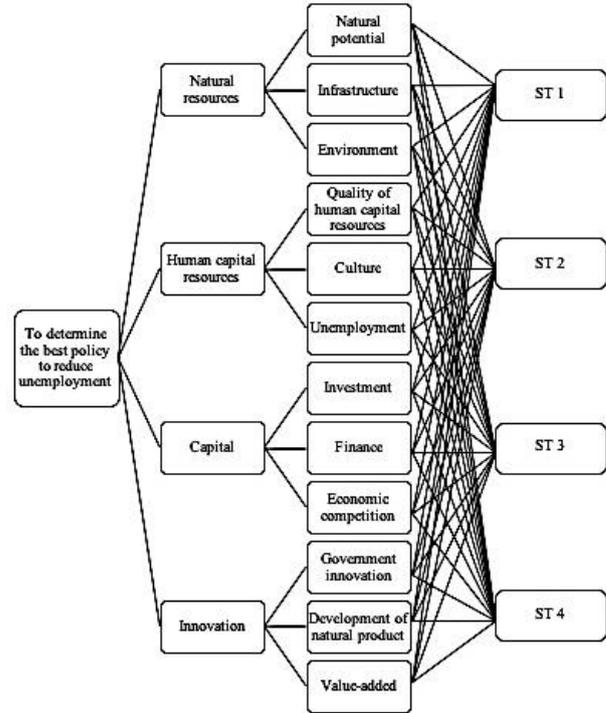


Figure 1 AHP Structure

Based on Figure 1, ST 1 is an alternative to optimize investment in processing natural products, provide tourism support facilities that cannot be met by the government, and form cultural foundations to preserve the culture of the community. ST 2 is an alternative to optimize investment in infrastructure improvement by involving the community and facilitate education and training for the community to meet the needs of the labour market. ST 3 is an alternative to planning sustainable tourism and highlighting cultural events that have special characteristics as Banyuwangi characteristics. ST 4 is an alternative to improving infrastructure by paying attention to the sustainability system and strengthening local culture as the community's identity.

Table 1 Pairwise Comparison Scale

Intensity of Importance	Definition
1	Two activities contribute <b>equally</b> to the objective
3	One activity <b>slightly favour</b> over another
5	One activity <b>strongly favour</b> over another
7	An activity is <b>favoured very strongly</b> over another
9	The evidence <b>favouring one activity</b> over another
2,4,6,8	For compromise between the above values

Source: Saaty (1996)

After the hierarchy has been constructed, criteria and alternatives are assessed through pairwise comparisons. For problems that have a scale of 1 to 9 is the best scale in expressing opinions. Comparisons are made based on policymakers' decisions by assessing the level of importance between one element and the other [26]. Pairwise comparison is essential set when using AHP to determine which of two elements is more important with respect to higher-level criterion used 1-9 scale as shown in Table 1.

For each criteria and alternative, pairwise comparison is needed. The relative comparison values are then processed to rank alternative for all alternatives. Both qualitative and quantitative criteria can be compared in accordance with established assessments to produce weight and priority. We enter the value of each element to forming a matrix that exhibits the priorities from all the paired comparisons. After finishing the matrix, each element of each level have relative weights that calculated as normalized eigenvector components. Then the normalized eigenvector combined with the largest eigen-value of their comparison matrix that the value can be predicted by the geometric mean of each row [27]. According to the result of this calculation, the value should be meet the acceptable consistency index (CI) and consistency ratio (CR) values as suggested by Saaty.

### 3. CASE APPLICATION

In accordance with the AHP design, the study selects key respondent who knows well about economic condition in Banyuwangi and several respondents are from the community who are the subject of tourism Banyuwangi. By following with the AHP design, the study selects key respondent who knows well about economic condition in Banyuwangi and several respondents are from the community who are the subject of tourism Banyuwangi.

An open questionnaire is used to collect the data and the respondents were allow to choose corresponding numerical values based on big or not the impact of each attribute in selecting the best alternative to reduce unemployment. After collecting all data needed, the pairwise comparisons matrix is constructed. As shown in Figure 1, the criteria consist of four main factors (1) natural resource; (2) human capital resource; (3) capital; and (4) innovation. According to Table 2, human capital resource is the most influential criteria followed by capital and innovation in the same rank and finally natural resources. CI and CR from the main factors are 0,025 and 0,027, confirm conform to the acceptable deviation scope suggested by Saaty. Therefore, the result supported by Hampton [28] that stated improving human capital resources quality can reduce unemployment.

Factor natural resources consist of natural potential, infrastructure, and environment results show the most important sub-criteria in respect of main factor is infrastructure, followed by natural potential and

environment with CI 0,048 and CR 0,083. Therefore, the result supported by Hussin and Buchmann [29] that stated improve infrastructure can developing tourism sectors which reduce unemployment in local community.

**Table 2 Pairwise Comparisons of Main Factors**

	Natural Resource	Human Capital Resource	Capital	Innovation	Criteria Weight	Rank
Natural Resource	0,071	0,093	0,045	0,045	0,064	3
Human Capital Resource	0,500	0,648	0,682	0,682	0,628	1
Capital	0,214	0,130	0,136	0,136	0,154	2
Innovation	0,214	0,130	0,136	0,136	0,154	2

Source: Authors' estimation (2020).

In order, human capital resources consist of quality of human resources, culture, and unemployment results show the most important sub-criteria in respect of main factor is quality of human resources, followed by unemployment and culture with CI 0,008 and CR 0,014. The results weren't surprising because improving the quality of human resources has been proving to reduce unemployment.

For the capital factor, the results show the most important sub-criteria in respect of main factors is investment. The second rank is economic competition and the last place is finance. The CI value is 0,059 and CR value is 0,096. Investment is the potential founding to develop tourism sector. With high flow investment, the government can create and maintain jobs for community and widener tax basis [30].

**Table 3 Pairwise Comparisons in Respect of Main Factors**

	Criteria Weight	Global Weight	Rank
Natural Potential	0,283	0,018	2
Infrastructure	0,643	0,041	1
Environment	0,074	0,005	3
Quality of human resources	0,487	0,306	1
Culture	0,078	0,049	3
Unemployment	0,435	0,273	2
Investmen	0,724	0,111	1
Finance	0,083	0,013	3
Economic competition	0,193	0,030	2
Government innovation	0,260	0,040	2
Development of natural products	0,106	0,016	3
Value-added	0,633	0,098	1

Source: Authors' estimation (2020).

**Table 4 Synthesizing to Obtain Final Results**

CRITERIA	ST 1			ST 2			ST 3			ST 4		
	PRIORITY WEIGHT	ALTERNATIVE WEIGHT	PRODUCT									
Natural Potential	0,018	0,3132	0,0056	0,018	0,0819	0,0015	0,018	0,5230	0,0094	0,018	0,0819	0,0015
Infrastructure	0,041	0,1044	0,0043	0,041	0,5736	0,0235	0,041	0,0513	0,0021	0,041	0,2707	0,0111
Environment	0,005	0,0943	0,0005	0,005	0,0490	0,0002	0,005	0,5842	0,0029	0,005	0,2725	0,0014
Quality of human resources	0,306	0,0907	0,0278	0,306	0,6204	0,1898	0,306	0,2074	0,0635	0,306	0,0815	0,0249
Culture	0,049	0,2293	0,0112	0,049	0,0536	0,0026	0,049	0,2966	0,0145	0,049	0,4205	0,0206
Unemployment	0,273	0,2816	0,0769	0,273	0,5152	0,1407	0,273	0,0578	0,0158	0,273	0,1454	0,0397
Investment	0,111	0,4500	0,0500	0,111	0,4500	0,0500	0,111	0,0500	0,0056	0,111	0,0500	0,0056
Finance	0,013	0,0714	0,0009	0,013	0,0799	0,0010	0,013	0,5488	0,0071	0,013	0,3000	0,0039
Economic competition	0,030	0,1591	0,0048	0,030	0,5011	0,0150	0,030	0,0768	0,0023	0,030	0,2630	0,0079
Government innovation	0,040	0,1094	0,0044	0,040	0,0561	0,0022	0,040	0,5836	0,0233	0,040	0,2509	0,0100
Development of natural products	0,016	0,6490	0,0104	0,016	0,0676	0,0011	0,016	0,2155	0,0034	0,016	0,0679	0,0011
Value-added	0,098	0,5658	0,0555	0,098	0,1385	0,0136	0,098	0,2498	0,0245	0,098	0,0459	0,0045
		<b>TOTAL</b>	<b>0,2521</b>		<b>TOTAL</b>	<b>0,4413</b>		<b>TOTAL</b>	<b>0,1745</b>		<b>TOTAL</b>	<b>0,1321</b>

Source: Authors' estimation (2020).

Innovation, as the last factor, shows the most important sub-criteria in respect with main factor is value-added, followed by government innovation and development of natural products. The CI value is 0,028 and CR value is 0,048.

Synthesizing all the result with all four strategies, final results given in Table 4. The overall priorities for the alternatives strategies show ST 2 is the most favourite strategy to reduce unemployment with developing tourism sectors. ST 2, as stated before, is an alternative to optimize investment in infrastructure improvement by involving the community and facilitate education and training for the community to meet the needs of the labour market. High flow investment that gains by the government should be used to improve infrastructure in Banyuwangi such as improving accessibilities to destination tourism for connecting more destination to gain more income and rise community welfare. Not only improving infrastructure, but the investment should also be used to improve human resource quality by providing free education and training for unemployment [31]. Free education and training that provides by the government can be lead to reduce unemployment because there will be minimized mismatch between the job seeker and job availability. Kind of education that can be provided by the government like informal education such as language education to rise communication between the community with international travellers, crafting a handmade souvenir for travellers with local stuff or providing better education environment especially for young populations. Young population in Banyuwangi shows a trend to choose jobs that don't need much effort rather than the older population. This case leads a lot of young population to become unemployment because there is not much job available with low qualification. In the other hand, the older population can be given training about using technologies because the older population in Banyuwangi cannot develop their

business because they can't take advantage of technological advances.

The research study results can be useful for various stakeholders, (1) policymakers, deciding better policy to reduce unemployment so there wouldn't be disparities between area in Banyuwangi, (2) academic institution may use the result to provide skills that community need to have better job, (3) NGO's and other organizations, can have better idea of which areas need the most help while the government focus on others aspect, and (4) academics and others that conducting research in this topic, may benefit from different methodologies, theories, or analysis of empirical data.

#### 4. CONCLUSION

Based on the result, using AHP approach can reveal that quality of human resource, infrastructure, and investment are influence factors that help to reduce unemployment in Banyuwangi. This finding demonstrate the use of AHP as a tool to create decision making in complex problem. AHP will breaks down the complex problem into simple hierarchy element to give policymakers better understanding and prioritizing the result for huge impact to society. Conclusion of this study can't be generated to every area except have the same characteristic with Banyuwangi because the data were collected with the chosen samples and conduct over a short time. Even though a decision model is not a perfect tool to satisfy all decision-makers needs and can't be a generalisation on every situation [32], the result can be a guideline for policymakers to consider choosing the right policy. In the future, researchers can compare this study's finding with a future conclusion from different samples. Another approach can be used to provide a more in-deep analysis, with correlation among the most influence factor.

## REFERENCES

- [1] Trading Economics, Unemployment Rate, USA, 2017.
- [2] Suryadarma, Daniel, Asep Suryahadi, Sudarno Sumarto, Reducing Unemployment in Indonesia: Result from Growth-Employment Elasticity Model, SMERU Working Paper, SMERU Research Institute, Jakarta, January 2007, pp. 4-6.
- [3] Hrubcova, G., Obergruber, P., dan Loster, T., The Economic Effects of Tourism in the Group of the Least Developed Countries, *Procedia Economics and Finance*, 2016, Volume 39, pp 476-481.
- [4] Ministry of Communication Indonesia, NAWACITA Indonesia 2014, 2015.
- [5] Goeldner, C.R., and Ritchie, J.R.B, *Tourism: Principles, Practices, Philosophies*, 9th edition, New York: John Wiley & Sons, Inc., 2003.
- [6] Asih, S. M. & Asih, S. K., Marketing Strategy Implementation in Developing Sharia Tourism in Indonesia, *International Proceedings of Economics Development and Research*. 2015, Volume 84, pp. 133-137.
- [7] Agraj, Xhiliola and Murati, M., *Tourism an Important Sector of Economy Development, Annals of the „Constantin Brâncuși” University of Târgu Jiu, Economy Series, Issue 1/2009*.
- [8] Yasa, Agne and Siswandini, N., Strategic sectors: Reliably Boost Tourism Development Exchange, 2016.
- [9] Wuranti, Hayu, Tourism can Boost Economy, Jakarta Newspaper, 2019.
- [10] Indonesian Information Portal, Indonesia Tourism in the Eyes of World, 2019.
- [11] Hakim, L., New Economy Tourism Quality and Sustainable Economic Growth, 2016.
- [12] Banyuwangi Regency, Government Performance 2019, 2019.
- [13] Badan Pusat Statistik Banyuwangi, Annual Report of Banyuwangi 2018, 2019.
- [14] Kurniawan, Wawan, The Socio-Economic Impact of Tourism Development in Umbul Sidomukti, Bandung District, Semarang Regency, *Economic Development Analysis Journal*, 2015, Volume 4, No. 4, pp. 443-45.
- [15] Bassam, Muhammad Faris, Analysis of Tourism Sector Workers Absorption in East Java 2010-2016, *Scientific Journal of Faculty of Economic and Business, Universitas Brawijaya*, 2018.
- [16] Esichaikul, Rane and Tom Baum, The Case for Government Involvement in Human Resource Development: A Study of The Thai Hotel Industry, *Tourism Management*, 1998, Volume 19, Nomor 4, pp. 359-370.
- [17] Hampton, M. P., Heritage, local communities and economic development, *Annals of tourism Research*, 2005, Volume 32(3), pp. 735-759
- [18] Ateljevic, J., Tourism entrepreneurship and regional development: Example from New Zealand, *International Journal of Entrepreneurial Behavior & Research*, 2009, Volume 15(3), pp. 282-308.
- [19] Saaty, T., How to make a decision: the analytic hierarchy process, *European Journal of Operational Research*, 1990, Volume 48(1), pp. 9-26.
- [20] Ajmera, Puneeta, Mahavir Singh, and H. K. Satia., Prioritization of Strengths, Weaknesses, Opportunities and Threats of Indian Medical Tourism Sector using Integrated SWOT AHP Analysis, *International Journal of Innovation Research in Science, Engineering, and Technology*, 2015, Vol. 4, Issue 5, Mei 2015, pp. 3665-3673.
- [21] Lee, T. H. and Liu R. T., Strategy formulation for the recreational areas of Central Taiwan: An application of SWOT (strengths, weaknesses, opportunities, threats) analysis, *Journal of Hospitality Management and Tourism*, 2011, Vol. 2(3), pp. 38-47.
- [22] L. Feng, M. Kwiatkowska, D. Parker, Compositional verification of probabilistic systems using learning, in: *Proceedings of the Seventh International Conference on the Quantitative Evaluation of Systems*, IEEE Press, Williamsburg, VA, USA, 2010, pp. 133-142. DOI: <https://doi.org/10.1109/QEST.2010.24>
- [23] Lai, W. H. and N. Q. Vinh, An Application of AHP Approach to Investigate Tourism Promotional Effectiveness, *Tourism and Hospitality Management*, 2013, vol. 19, no. 1, pp. 11-25.
- [24] Saaty, T. L., *The analytical hierarchy process: Planning, priority setting, resource allocation*, New York, McGraw-Hill Book Co, 1980.

- [25] Pratiwi, Heny, Decision Support System Textbook, Yogyakarta, Deepublish, 2016.
- [26] Basuki, Ari and Andharini Dwi Cahyani, Decision Support System, Yogyakarta, Deepublish, 2016.
- [27] Saaty T., Decision Making for Leaders, RWS Publications, 4922 Ellsworth Ave. Pittsburgh, PA. U.S.A. 1996, pp. 42 -49.
- [28] Saaty, T. L., The analytical hierarchy process: Planning, priority setting, resource allocation, New York, McGraw-Hill Book Co,1980.
- [29] Hampton, M. P., Heritage, local communities and economic development, Annals of tourism Research, 2005, Volume 32(3), pp. 735-759.
- [30] Hussin, Noor Zatul Iffah and Anne Buchmann, Understanding tourism development policies in Malaysia, Journal of Policy Research in Tourism, Leisure and Events, 2018, Volume 11, No. 2, pp. 333-353.
- [31] United Cities and Local Governments Asia-Pacific, Local Economic Development: Introduction to Local Economic Development, Training Module, 2016.
- [32] Hampton, M. P., Heritage, local communities and economic development, Annals of tourism Research, 2005, Volume 32(3), pp. 735-759.
- [33] Sirakaya, E., and Woodside, A. G., Building and testing theories of decision making by travelers, Tourism Management, 2005, Volume 26, pp. 815–832.