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SOFT SYSTEM METHODOLOGY APPROACH: TOURISM CONCEPTUAL MODEL AS THE IDENTITY OF BANDUNG, INDONESIA

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Abstract. The Indonesian tourism sector has become one of government's focus points because of its significant contribution to economic development on all levels, district/city, province, or national. As an Indonesian city, Bandung has a lot of tourism potential with its local cultural diversity. The purpose of this research is to develop a conceptual model design of tourism, especially in Bandung city as one of the cultural identity cities in West Java. A system thinking approach with qualitative analysis, known as the Soft System Methodology (SSM), is used in this research. Qualitative data collection techniques were carried out by a purposive sampling technique which was obtained from the results of in-depth interviews with stakeholders that included academics, representatives of the government, communities, and businesspeople in the tourism sector. The result of this research is a conceptual model design for Bandung city tourism as the identity of a cultural city, called as Sunda Culture Center (*Sunda Centrum*).

Keywords: conceptual model, local culture, soft system methodology, stakeholders, Sunda centrum, tourism.

Introduction

Tourism is one potential sector for a Nation's development, because its contribution to economic development. Tourism potential development is really needed to increase tourist attractiveness. According to Wahab (2003), tourism is one of new types of industries which could result in fast economic development of employment providing living standards and also stimulating other productivity sectors. Tourism is a complex industry because it involves other industries, such as hospitality industry, restaurants, transportation, craft industry, service industry which include guide and travel service, etc. Three main factors for tourism sustainability are environment, economy, and community or human capital (Fotiades, 2009).

According to Hall (2004), both in developed or developing countries, tourism often stimulate regional economic activity. Nunkoo and Gursoy (2012) reported that regional tourism benefits the local community by encouraging economic development, sociocultural development, providing services, and increasing living standards. This could contribute to the development of a positive behaviour related to tourism development among the local community (Jurowski, Uysal, & Williams, 1997).

Indonesia is a country that considers tourism a priority sector. Its tourism has a lot of competitive and comparative advantages, one of which shows that Indonesia was ranked 47th as Country Branding Wonderful in 2015. Based on the presentation done by the Ministry of Tourism for KIDi in 2016, the tourism sector has been increasing every year. In 2015, the Indonesian tourism sector contributed to the national GDP with 10%, the highest presentation in ASEAN (Alamsjah, 2016).

Based on data from the World Travel & Tourism Council (2019), Indonesia is ranked the third largest in the growth of the travel and tourism sector in Southeast Asia after Thailand and the Philippines. By 2018, this sector has doubled compared to the global average of 7.8%, and almost 13 million jobs for the Indonesian economy. In addition, this sector also contributes 6% to national GDP. In addition, based on Global Tourism Rankings data, in 2018, Indonesia was ranked 9th in the world, the assessment consisted of four indicators: total Travel & Tourism GDP, foreign visitor spending (visitor exports), domestic spending and Travel & Tourism capital investment (World Travel & Tourism Council, 2018).

Based on data from the World Economic Forum (2017), the competitiveness of Indonesian tourism has

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increased since 2015 and is ranked 42nd out of 136 countries, an increase of 8 levels from 2015. Meanwhile, in the ASEAN region, Indonesia is ranked 4th after Singapore, Malaysia and Thailand. This condition could be a trigger for Indonesia tourism to be better than those three countries, considering big potential of natural resources in Indonesia region if it could be managed better than those three countries.

West Java is one of region that has big tourism potential. Based on data from Indonesian Central Bureau of Statistics (2017), West Java is ranked 3rd on tourist visits after DKI Jakarta and Bali. Bandung is one of tourism destination in West Java. Bandung has a lot of tourism destination that become tourist attraction; there are Sunda culture performance, unique culinary destination, attractive shopping location, inspiring city atmosphere, and friendly citizens. Bandung has city tagline “Bandung Juara” or Bandung champion as its city branding. City branding show identity of a region, with a purpose to introduce city/district deeper, increase image, attract international and domestic tourist, get more investment, and increase trade (Sugiarsono, 2009). However, Bandung city branding strategy right now seems ignoring cultural identity of Bandung, and replaced by modernization.

This research has a purpose to develop tourism model as identity of Bandung with Soft System Methodology (SSM) approach. Data collected through In-Depth Interview (IDI) with wide range stakeholders as interviewees, among them are cultural tourism businessmen, consumer, and government. Tourism conceptual model development resulted from this research expected to be guidance for tourism sector development and give recommendation that adjusted with problems and needs of tourism in Bandung.

1. Literature review

1.1. Tourism and culture

Tourism is a multi-faceted economic activity involving wide sectors, social, cultural, and environmental (Lickorish & Jenkins, 1997). According to UNWTO (2008), “tourism is a social phenomenon, a culture, and economy that need people to move to the country or to a place outside their usual environment for private purposes or business/professional ones.” These people are called visitors (tourists, residents or non-residents) and tourism is related to their activities. Meanwhile, according to Przeclawski (1993) and Smith (1989), tourism involves temporary and voluntary visits to some place far from home, called recreational activities. In addition to the economic benefits of tourism development, it also has positive impacts on the social environment including improving facilities (such as parks, recreational facilities), investing in arts and culture, and increasing citizens’ sense of pride.

Culture is a factor that contributes to tourism development. Culture and tourism have a mutual relationship

that could strengthen the attractiveness and competitiveness of region and Nation. “Culture refers to a saving of cumulative knowledge, experience, trust, values, attitudes, meaning, hierarchy, religion, idea on time, role, spatial relation, universe concept, and material objects and treasure obtained by a group of people in the journey of generation through individual and group struggle” (Hofstede, 2011). Culture is an important element of tourism products, which makes destinations more attractive and competitive, which creates uniqueness in the global market.

Culture has a mutual relationship with tourism. Ashworth (2000) explained that cultural heritage is a product to be sold in the tourism industry. That shows that culture is a touristic resource. Rotterdam as a city used culture as their city identity, performing the “Cultural Capital of Europe” event in 2010 (Richards & Wilson, 2004). Bandung city is known as a creative city, but on the other side, its cultural identity did not come up as the rise of creativity (Aldianto et al., 2019). Various arts and traditional culture in Bandung are on the verge of extinction and death, said Wawan Supriadi, Chairman of Art and Culture of Tourism Movement Group of Bandung (Heriyanto, 2015). Actually, both creativity and culture can stimulate and promote the city at an international level (Bayliss, 2007). The cultural and creative policy implemented in Baltimore is one example (Ponzini & Rossi, 2010).

1.2. The Soft System Methodology (SSM)

SSM is a systemic approach to see problem in a holistic way. SSM is part of a system of thinking, where this approach could provide a picture of the phenomenon in the whole system, not just of a part of it. According to Senge (1990), “Systems thinking is a discipline for seeing wholes. It is a framework for seeing interrelationships rather than things, for seeing patterns of change rather than static “snapshots.” Some research that has been done related to this research are: an overview of the soft system methodology (Burge, 2015), the application of SSM in universities (Mehregan, Hosseinzadeh, & Kazemi, 2012), SSM in Math evolution module (Warwick, 2008), the application of SSM in the sugar industry (Proches & Bodhanya, 2015), SSM in strategic planning (Díaz-Parra et al., 2014), SSM as a Learning and Management Tool (Khisty, 1995), and learning to support learning together with SSM (Sanchez & Mejía, 2008).

SSM is effective and easy to use, as proved by Flood (2010), who investigated system thinking in his research about “The Relationship of ‘Systems Thinking’ to Action Research”. The Soft Systems Methodology is a precise method to investigate a complex decision-making system and needs theoretical skills, system thinking (Maani & Cavana, 2000). The system thinking approach is divided into two, Hard Systems Thinking and Soft Systems Thinking.

Jenkins firstly introduced SSM in England in 1966. This SSM approach helps complex problem involving a lot of stakeholders. SSM is needed to handle management problems that stem from human activity systems

(Bergvall-Karebor, 2002; Reynolds & Holwell, 2008). SSM gives a framework for problem solving that is hard to define (Sinn, 1998). According to Checkland and Scholes (1990), it “is not a tool or technique to be used occasionally but a way to think and act every day”.

SSM sees the real world from the point of view of each people thinking, where each one is different. In reality, real worlds are complex, problematic, mysterious, and marked by conflict among world views (Hardjosoekarto, 2012). According to Checkland and Poulter (2006), a real world could be created and re-created by minds, discussions and human actions. According to Jeppesen (2009), SSM is “Problem situation analysis and understanding, Analysis of stakeholder roles and relations and analysis of social and political relations and influences”.

As stated by Checkland and Scholes (1990), “SSM helps such managers, of all kinds and at all levels, to cope with their task. It is an organized way of tackling messy situations in the real world”. Checkland (2000) and Wilson (2001) added that SSM helps users do steps such as rich picture, conceptual model, CATWOE, and formal system model.

According to Hardjosoekarto (2012), SSM is an intellectual model whose function is to understand real world situations considered very problematic (epistemology); the analysis is subjective from every mental model (internal model) of human point of view and related to human activity system. Hardjosoekarto adds that SSM emphasises on “perceived real-world problematical situations”, not “problems of the real world”.

According to Checkland and Scholes (1990), SSM consists of 7 steps, which there are:

1. Problem situations considered problematic
2. Problem situations expressed
3. Root definition of the relevance of purposeful activity systems
4. Conceptual models of the systems named in the root definitions
5. Comparison of models and reality
6. Systematically desirable, culturally feasible Changes
7. Actions to improve the situation.

2. Research methodology

A qualitative method with an exploratory approach is used for this research methodology. Purposive sampling is used to choose research key informants by doing semi structure in-depth interviews related to tourism and the culture sector with stakeholders. A quadruple helix framework is used on research informants deciding who to select from academics, government representatives (Tourism and Culture Department and Research and Development Planning Department), businessmen in the tourism and the culture sector, tourism community, and consumers (tourist/traveller).

A qualitative description is used as an analysis technique in this research, which is defined as action research

based on the Soft Systems Methodology, or SSM-based action research that uses the seven steps from Checkland's theory and also a checklist from six basic elements of the third step of SSM, that is CATWOE (Customers, Actors, Transformation Process, Owners, and Environmental constraints). From those seven steps of SSM, this research could only be used in four, because the output of this research is only a proposal or recommendation to policy makers. This research will focus on stages one to four, while the implementation of stages 5–7 by the parties is an indicator of achieving the first objective of the study. Luckett, Ngubane, and Memela (2001) refer to this process as the intervention phase.

3. Research and discussion

3.1. Bandung tourism a glance

Bandung has been the capital of the West Java Province since 1925 and continued to be that when Indonesia got its independence in 1945. Bandung is an Indonesian tourist destination, which has a strategic location and an area of 167.31 km² and a population of 2,497,937 people (West Java Statistic Center, 2018a). Bandung became the host of an important event, the first Asian–African Conference in 1955 as the first commitment of leaders of Asian and African cities to declare their commitment to develop sustainable smart cities models (Tarigan et al., 2016). Bandung has a rich natural setting and comfortable climate (Voskuil, 2007) because it is located at 768 m above the sea level. This is attractive for tourism and also for those seeking residence. Tourism development in Bandung city is supported by the availability and product variation of the city's tourism in the shape of various city features, both primary and secondary elements, including: knowledge, history, culture, heritage, culinary, shops, the beauty of nature, etc. Nowadays, various public infrastructures and businesses such as tourism, manufacturing, textiles and apparel, pharmaceutical, financial, food, entertainment, services (Firman, 2009), industrial, and educational sectors (Tarigan et al., 2016) are already developed.

Bandung city is a National Tourism Development Area or *Kawasan Pengembangan Pariwisata Nasional* (KPPN) and National Tourism Strategic Area or *Kawasan Strategis Pariwisata Nasional* (KSPN) in West Java Province (KPPN of Bandung city and surrounding) since 2011. Based on a survey conducted by fastbooking.com in 2014, Bandung ranked 21st in terms of popular/favorite tourism destination in the world, and this rank was created based on counting “likes” given by Facebook users in one touristic location. In addition, based on the Indonesian Tourism Index launched by the Indonesian Ministry of Tourism in 2016, Bandung ranked 7th out of 505 districts/cities in Indonesia (Berita Satu, 2016). The measurement of the index consists of the business supporting environment, governance, tourism potential, and infrastructure. The newest achievement of Bandung city

is to be chosen as one of best touristic cities, according to Frontier Consulting Group and Tempo Media Group in 2018. Those measurements are based on four dimensions, investments, infrastructure, public services, and tourism.

Bandung's economic growth has been the highest in the West Java Province and also higher than the national growth rate (Tarigan et al., 2016). Bandung's economy has long been driven by several industries such as electronics, furniture and textiles (Tarigan et al., 2016). In advance, clothing factory outlets, business boutiques, and the culinary industry attract domestic and foreign tourists which also contribute to the economic sector. The number of tourists in Bandung is increasing. The total reached 6.450.468 in 2016 and 867.000 were international tourists and 5.583.468 domestic tourists (West Java Statistic Center, 2018b). The table below (Table 1) shows some main tourist destinations in Bandung city.

Table 1. Main Tourist Destinations in Bandung city
(source: PPID Bandung City, 2013)

No.	Main tourism destination
1	Heritage tourism
2	Shopping & culinary tourism
3	Education tourism
4	Natural & entertainment tourism
5	MICE tourism (meeting, incentive, convention, and exhibition)

Cultural heritage tourism in Bandung city is dominated by art and culture from the Dutch war era, such as historical buildings which are still icons of Bandung, and local cultures such as Sundanese language and art. In addition, Bandung city is also known as a fashion and culinary city that serves a variety of shopping and culinary tourism, and has become a trendsetter in Indonesia. Bandung is also one of the centers of education, several public and private universities are located here, such as Bandung Institute Technology, Padjajaran University, Indonesia University of Education, Telkom University, Parahyangan University, etc. Tourism supports education in Bandung through the Asia-Africa Conference Museum for example, which has also become iconic for the city. The natural beauty of Bandung is one of the reasons it is such a sought after tourist destination and several photo spots have become tourist attractions. MICE tourism in Bandung city is rapidly growing as it holds national or international events, thus providing an attraction for tourists to visit.

3.2. Qualitative analysis

To get the necessary information and map the problems, this study uses qualitative methods that allow direct observation and interviews with key people. These key people are expected to offer detailed insight into the situation of tourism in Bandung.

3.2.1. In-depth interviews

The data source of this study is based on the results of interviews with several key informants meant to strengthen the validity of the data. We use the code as initials for the names of the informants in this study, in order to respect the informants' request and maintain their privacy. The table below (Table 2) shows the key informants in this study.

Table 2. Key Informants

No.	Name	Position
1	AS	Division Head of Marketing, Department of Culture and Tourism, Bandung City
2	TA	Division Head of the Creative Economy, Department of Culture and Tourism, Bandung City
2	SS	Section Head of Tourism Destination, Department of Culture and Tourism, Bandung City
3	TD	Division Head of Cultural Studies, Department of Culture and Tourism, Bandung City
4	TT	Division Head of Research and Development, Agency of Development Planning, Research and Development, Bandung City
5	AG	Tourism Communities in Bandung City (Kelompok Penggerak Pariwisata, Kompepar)
6	AE	Sundanese Dance Studio, Bandung
7	AR	Marketing Communication, Saung Angklung Udjo
8	RA	Traveler

By interviewing the informants, this research collected data and then listed keywords from important information, identified problems, and important issues. Discovering important problems comes from the convergence process of finding the problems obtained, so that most of the results of the interviews lead to significant problems. The table below describes the process.

3.2.2. The transcription process

The transcription process converts audio information into text. This makes it easy for researchers to compare each argument from the informant at that time. In this study, the length of the interview was around 30–100 minutes per participant and several interviews were held more than once. In this method, the transcription tends to be handled directly by the interviewer who knows the real conditions and expressions of the informants well (McLellan, MacQueen, & Neidig, 2003), where they commonly listen to audio recordings, by all means, and then convert them to digital text. Different informants provide different perspectives, but this can provide insight (Kumar & Worm, 2003).

This transcription process will summarise all the data obtained from the interview process. In this process, we collected important notes from the informants and then explored to find problems. Then, the researcher identified

a significant problem for the issues examined in this study. These interpret popular issues common to the public. The table below (Table 3) shows a list of important issues based on the synthesis of the interview results.

Overall, the transcription results show the following pictures:

1. The Sundanese culture as a native culture of the Bandung community comes from outside the Band-

Table 3. List of the important issues

Informant	Important Note	Issue Finding	Important Issue
AS	Cultural development requires legal clarity developed by two government elements, which include the legislature and the executive	<ol style="list-style-type: none"> 1. There are not many infrastructure buildings with Sunda culture style in Bandung, in fact this style is getting extinct 2. The growth of pop culture in Bandung city is caused by citizens' creative culture and also by basic necessities to live 3. Creativity can make local culture become interesting for commercial shows 4. The government has tried to revitalise the Sunda culture in Bandung city by mining cultural values 5. On the other side, the government is developing tourism through pop culture 6. The process of government bureaucracy using planning until legislative approval takes a long time, so it tends to hinder cultural development 7. Bandung city is located in the center of regions rich with Sunda culture 8. Sunda culture is not limited to administrative regions 	Sunda culture scarcity is caused by several factors, such as internal, external, system, and time.
TA	Main creative economy in Bandung city: fashion, culinary, craft, music, and film	<ol style="list-style-type: none"> 1. Looking for added value of traditional Sunda, for example for souvenirs, fashion, culinary, etc. to create economy development 2. Data updating and clustering of creative business 3. Cultural education and competition 4. Traditional musical instruments like "Karinding" are still pushed to collaborate with rock, pop, dangdut, etc. 	Still developing smart tourism for tourist guidance in choosing tourism destination in Bandung
SS	Bandung's attractive tourism is due to cultural and historical tourism, shopping and culinary tourism	<ol style="list-style-type: none"> 1. There are specific Sunda activities, but not in routine activities 2. Still developing tourism destinations in various segments, for example tourist parks, creative villages, gastronomy tourism, heritage tourism 3. Sunda culture conservation activity through "Rabu Nyunda", local content in hotels, school curriculum 4. Sunda traditional art consumer is decreasing, while contemporary art is increasing 	Need to develop tourism in South Bandung area, focusing not only on North Bandung
TD	Culture is not well managed, there is no accurate data related to culture administration	<ol style="list-style-type: none"> 1. The government will collect cultural data for each region 2. Saung Udjo became a symbol of art and culture in Bandung city 3. Need internalisation of cultural values in citizens 4. Tourism and culture complement each other: tourism could develop because of culture, culture could be preserved because there are viewers 	Threat of culture extinction because of a poor database
TT	In total, Bandung city's income from tourism in 2017 has not decreased, but because number of hotel has increased, some hotel owners feel a decreasing in their income	<ol style="list-style-type: none"> 1. Bandung is trying to develop several places as cultural centers such as art buildings for tourist attraction 2. The government is trying to create interesting places to attract tourists to visit Bandung, this can increase profits for hotels and the culinary industry 3. Strengthen culture through creative village development 4. Creative village growth needs community figures as motivators 5. Bandung capacity is not enough for tourists, this causes traffic jam 6. Bandung residents need awareness about tourism as the main source of income for Bandung city 7. It is difficult to maintain cultural heritage buildings because of private property 	The focus of Bandung tourism is still on how to attract tourists to stay in Bandung
AG	Bandung city is a place where Sundanese culture and new culture are acculturated. Bandung is also an embodiment of the transformation city from regions with Sundanese culture	<ol style="list-style-type: none"> 1. Bandung was created by the Dutch in 1811 as a relaxing city 2. Cultural villages are mostly located outside of Bandung city area, where in Bandung itself, creative culture is developed 3. Kingdom's glory era has become a pride for Sunda citizens 4. Traditional culture (buhun) is not popular because it is monotonous, conventional, and considered as faith 	Sundanese culture experiences transformation and acculturation in Bandung city through creativity

End of Table 3

Informant	Important Note	Issue Finding	Important Issue
AE	Sunda dance studio was initiated by AE and family; the government supports Sunda art conservation	<ol style="list-style-type: none"> 1. Support for Sundanese dance in the form of information and facilities such as gamelan instruments 2. For Jaipongan traditional dance, there are some rules to be followed, but every studio can develop their own choreography 3. Jaipongan is still performed at wedding parties, in traditional rituals, sport events opening ceremonies, company events 4. Nowadays, only a few young people want to learn Jaipongan dance, motivated by cultural preservation, and understanding Sundanese culture characters. 	The government has provided sufficient services, but the difficulty comes from the response of dancers and the community
AR	Saung Angklung Udjo has already been established for more than 50 years in conserving Sunda culture, specific in angklung	<ol style="list-style-type: none"> 1. Angklung was developed in two concepts, art and modern, to attract the attention of the younger generation and international tourists 2. Saung Angklung Mang Udjo is developing creativity services and providing guest houses and food for tourists, with brand image “angklung pride” 3. In addition to performances in the studio, Saung Angklung Udjo also holds performances outside the studio (local and international ceremonial performances) 4. The government provides support for studio development and sometimes provides funds 	Saung Angklung Mang Udjo keeps developing creativity to survive through angklung performances and other services
RA	Tourist information and cultural activities are important factors for tourists in planning their travel itinerary	<ol style="list-style-type: none"> 1. Bandung has several attractions such as comfortable weather, a shopping place, and culinary attractions 2. Cultural tourism is still not the main destination in Bandung city 3. Bandung city only for tourism transit 4. Information on tourism activities comes from blogs, and there is no information on Bandung's cultural tourism on the web blog 	There is still no information access about Bandung's cultural tourism

- ung city (cultural sites and cultural villages located outside the Bandung city);
2. Bandung city was created by the Dutch as a colony in 1811 meant as a city for relaxation;
 3. Bandung city is located in the middle of the Sunda cultural region
 4. Newcomers to Bandung led to acculturation of culture in Bandung city, this allowed creative culture to emerge, influenced by the Dutch, universities, and railroad access;
 5. Original Sundanese culture that still uses old rules is defeated by contemporary culture;
 6. Some of the main causes that make Sundanese native culture extinct are:
 - There are no heirs that preserve the culture;
 - The younger generation is less interested in the local culture;
 - It is monotonous and conventional;
 - it is considered a belief;
 7. Besides native culture, the Sundanese region also has a culture that originates from several kingdoms that once existed in the Sunda region (Tarumanegara, Galuh, Siliwangi, Padjadjaran), which today can be found in symbols like *Kujang* and *Maung*;
 8. The glory of Prabu Siliwangi and Kian Santang is a pride for the Sundanese people, but literature about Prabu Siliwangi is limited;
 9. Culture with sustainable creativity and contemporary culture can survive in Bandung city;

10. Bandung city has several names/calls, such as:

- Tatar Parahyangan;
- Created when God is smiling;
- Pasundan;
- Kota Kembang;
- Paris Van Java;

11. Based on regional characteristics Bandung is called:

- City of service;
- City of Music;
- City of Creative Industry;
- City of Creativity.

One of the Bandung cultures found and strengthened through several literature studies is its fanaticism towards Persib football club, with a fan club called *Bobotoh* (Sunaryadi, 2010). Fanaticism is a condition when people or groups of people obey something excessively (Silwan, 2012). Persib fan behaviour is influenced by their bond with their group identity, referred to as social identity theory (Sunaryadi, 2010). This condition is related to the results of interviews which found that Sundanese people take pride in the glory of Prabu Siliwangi and Kian Santang. However, the lack of information about the victory meant their cultural identity could not be conveyed by the pride of the Sundanese people.

3.3. SSM modelling steps

The figure below (Figure 1) shows the steps in SSM modeling.

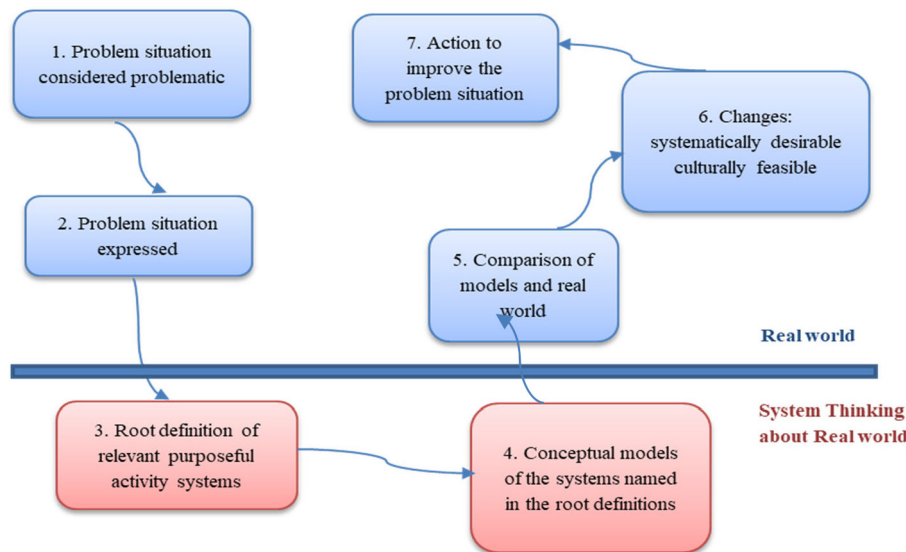


Figure 1. Rich picture based on Checkland Theory

First Step – problem situations considered problematic, by determining and understanding problem situations and reviewing unstructured problems. Problems related to the identity, culture, and tourism of Bandung city are identified by looking at the general picture in the city and also by extracting information and literature reviews. The description of the problem includes aspects such as:

- West Java ranks third highest place visited by tourists in Indonesia, with Bandung city as center or the gate;
- Bandung city ranked 7th based on Indonesian tourism index and also with the highest economic growth in West Java;
- Cultural tourism is not referred to as the main tourism in RIPPDA of Bandung City;
- In fact, other cities like Yogyakarta, Solo, Rotterdam can manage culture as city identity and tourist resources.

Second Step – problem situation expressed, declaring or expressing the situation in Bandung city, collecting data and information about Bandung Culture by conducting observations, interviews, and discussions. Furthermore, it is described in the rich picture as shown in Figure 2.

This condition clarifies that the problematic situations as presented in first step are explored and expressed in the rich picture. The results of the study show that cultural tourism did not appear as a major tourist attraction in Bandung city.

Third Step – root definition of relevant activity systems, by choosing a point of view looking at the situation of Bandung city and producing a root definition of the problem or building a definition of problems related to the problem situation in Bandung. The root definition test uses the CATWOE analysis.

The CATWOE analysis consists of: C = Customers (who benefit from the activity objectives) are all tourists who come to Bandung city; A = Actors (who carry out the

activities) are all users including tourists, art performers, and culturists. T = Transformation (what must change for input to be output) is Bandung city as the center of Sundanese culture. W = Worldview (understanding of various parties about the deep meaning of the problem situation) is for Bandung to become a city which has an identity as a City of Culture. O = Owner (who can stop the activities) is the Bandung Tourism Office. E = Environment Constraint (barriers in an unavoidable system environment, parameter) are limited funds to carry out the development and maintenance of Bandung city culture (the core concept in CATWOE is matching the Transformation and World View processes).

The following is a CATWOE analysis in this study:

C: Tourists who come to Bandung city.

A: Artists and cultural actors.

T: Bandung city as Sunda Culture Center.

The transformation of Bandung city is based on: the center of Sundanese culture, the history of formation and acculturation, cultural transformation, the city of tourist transit, economic growth, etc.

W: Bandung city has an identity as a cultural city.

The rich picture in the Second Step illustrates that all the stakeholders thought that the indigenous Sundanese culture did not appear as city identity, whereas it should be a potential resource for Bandung city tourism development.

O: Department of Culture and Tourism of Bandung city.

E: Limited budget.

The CATWOE analysis strengthens the purposeful activity system to establish the cultural identity of Bandung city through the development of the Sundanese Cultural Center there.

Fourth Step – conceptual models of systems named in the root definitions, construct conceptual models from Bandung city to achieve the ideal goal by choosing a point

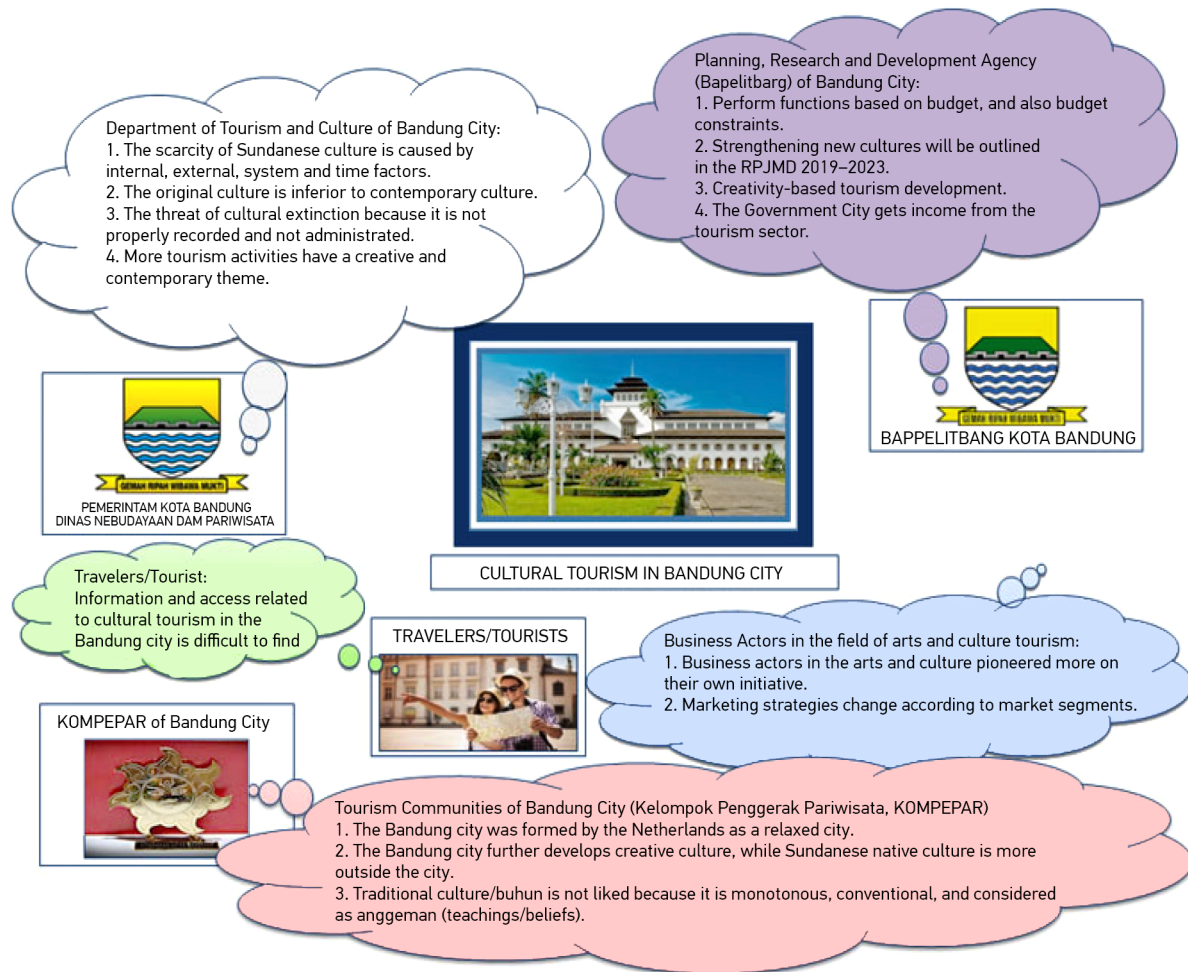


Figure 2. Rich picture with real world implementation

of view to look at the situation and produce a root definition of the problem based on a root definition for each defined element. Creating a Bandung city conceptual system model for each system is done by describing the activity model, followed by determining and measuring the model's performance effectively (is the method chosen to make Bandung city as the center of Sundanese culture will produce output?).

Government programs related to culture that were explored through this research turned out not to have an effect on the development and formation of the Bandung's identity as a cultural city. The problem is these programs are carried out in a scattered manner, for example, the construction of the Ujung Berung cultural zone which is not supported by packaging and promotion of cultural attractions. Cultural programs need to be integrated in one macro policy which can be derived from micro policies. The development of policies by making Bandung city as the Center for Sundanese Culture or the Sunda Centrum can be a basic framework in the development of culture-based programs within the framework.

In the fourth step, the Bandung city needs to become the center of Sundanese culture, with several steps along the way, which are:

1. Yogyakarta and Solo are known as cities of Javanese cultural identity, so based on the results of this study, Bandung city can be played as the Sundanese Cultural Center (*Sunda Centrum*);
2. The role of *Sunda Centrum* can be implemented through:
 - a) The construction of a cultural performance center in Bandung city for Sundanese cultures originating from several regions which can be represented by districts/cities based on the Sundanese culture, both in West Java and Banten;
 - b) Building pride of cultural identity in the community through:
 - Visualisation of culture: buildings/ornaments, arts and traditions as an icon of the city, creating a Sundanese atmosphere by using for instance Sundanese clothing in government, schools, etc.
 - Cultural behaviour: the introduction of cultural behaviour for newcomers (students, workers, etc.) which includes Sundanese, local wisdom, manners, etc.
 - Building monumental icons for cultural iden-

tity that can be reborn and express the pride of Sundanese people in their culture.

- c) Provision of spaces for for the people of Bandung City to express the Sundanese culture.
- d) The development of Bandung city branding, so it can be known as Centrum of Sunda.

Conclusions and recommendation

Tourism is an economic sector involving several various sectors such as social and culture. Tourism has proven to make a significant contribution to regional development, especially in terms of identity and media branding. However, differentiation is also needed in the tourism sector. One important factor in the tourism sector is culture, and this can be used as a tourist attraction. This research focuses on tourism in Bandung city. Based on the results of the study, cultural tourism is not a main priority for tourism in Bandung city. This condition can be a concern for stakeholders in prioritising the main tourism programs in Bandung. Based on its potential resources, the city has a unique culture, but it is not utilised and explored to its fullest potential. The culture of Bandung city can be collected from several cultural roots, such as native Sundanese culture; Kingdom in Sundanese culture; creative/contemporary culture. Various main programs related to culture can be implemented as tourist attractions, but must be synergised among stakeholders (quadruple helix) to bring culture as the main tourism program in Bandung.

Some recommendations based on this study are: developing the cultural identity of the city through the Sunda Centrum policy as a macro policy delivered in the Bandung RPJMD; and formulating Sunda Centrum policies to prepare government action plans/programs on a micro scale. Further research can be conducted by implementing this research to the 7th stage of SSM so that more comprehensive results can be obtained. In addition, it is necessary to expand the study area, which can be used to map tourism based on the main tourism in each region.

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Author contributions

LA and SN conceived the study and were responsible for the design and development of the data analysis. GA, AAB and CW were responsible for data collection and analysis.

GA and AAB were responsible for data interpretation. SN, GA and AAB wrote the first draft of the article.

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APPENDIX

Notations

Abbreviations

ASEAN – Association of Southeast Asian Nations

CATWOE – Customers, Actors, Transformation Process, Owners, and Environmental constraints

GDP – Gross Domestic Product

KPPN – Kawasan Pengembangan Pariwisata Nasional

KSPN – Kawasan Strategis Pariwisata Nasional

MICE – Meetings, Incentives, Conferencing, Exhibitions

SSM – Soft System Methodology

UNWTO – United Nations World Tourism Organization