Cultural heritage as city identity case study of Ngawi, East Java, Indonesia

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Abstract. Cultural globalization has an impact on the loss of the distinctiveness of places, so place identity becomes an important issue in urban design. Ngawi is located in the western part of East Java Province and is often passed by tourists heading to cities in East Java. However, tourists are unfamiliar with Ngawi and only pass it on their journey. This underlines the need to form a city identity to lift the image of the city of Ngawi. Several cultural heritage sites can be appointed as city identity, namely Van Den Bosch Fort, Trinil Museum, Pesanggrahan Srigati, Kediaman Radjiman Widyadinigrat, Sien Hien Kiong Temple and Soedhono Sugar Factory. This study aims to identify factors of cultural heritage that can be used as a city identity as well as the way to manage these identity factors. It uses mixed methods through physical assessment, butterfly diagrams to assess cultural significance, and expert interviews to achieve robust results. The results of the study show that Van Den Bosch Fort is a cultural heritage site that can play an important role to represent the identity of Ngawi City. Consequently, appropriate management of the site is needed to maintain its role as a city identity.

1. Introduction

The history of civilization can be traced from public records and through several historical relics that can explain the city’s past, especially its glory days [1]. Cultural globalization affects personality changes and the uniqueness of a place, thus, the identity of the place is an important issue in urban design [2]. Globally, there have been movements to protect the cultural heritage that has high historical value. Architectural history is part of national cultural identity because it contains the life values and national character [3]. This leads to the problem of who determines meanings and identity. This is relevant because cultural heritage is associated with identity [4], yet, not everyone shares the same view and has the same perceptions relating to it.

Large cities in Indonesia such as Jakarta, Bandung, Solo, Yogyakarta have clear identities. Ngawi is located in the western part of East Java. The city is often visited by passing by tourists unfamiliar with Ngawi who are heading to cities in East Java [5], consequently city identity is needed to lift the image of the city of Ngawi. Ngawi itself has considerable potential for its city identity since it contains many cultural heritages. According to Regional Regulation of Ngawi Regency No. 10/2011 Concerning Regional Spatial Plan of Ngawi Regency 2010-2030 [6], there are cultural heritages such as Ngawi lama (Ngawi Purba), Van Den Bosch Fortress, Trinil Museum, Pesanggrahan Srigati, Jamus Tea Plantation, Soerjo Monument, Perempatan Kartonyono, Kepatihan Pringgokusumo, Kediman Krt. Radjiman Wedyadinigrat, and Arca Banteng. Whereas Government Regulation No.11/2010 [7] on
Cultural Heritage Buildings stipulates that buildings eligible for cultural heritage are those older than 50 years, that represent styles of at least 50 years old, have special significance, and contain cultural values that help strengthen the national character. Based on these criteria, Ngawi Regency has two buildings suitable for inclusion as cultural heritage buildings, namely Sien Hien Kiong Temple and Soedhono Sugar Factory.

The purpose of this paper is to uncover the influential factors of cultural heritage that could be used as city identities and the strategies for managing and maintaining their role. The research measures the suitability of cultural heritage buildings consisting of Fort Van Den Bosch, Trinil Museum, Pesanggrahan Srigati, Kediaman Krt. Radjiman Wedyadiningrat, Sien Hien Kiong Temple, and Soedhono Sugar Factory. Based on indicators such as authenticity, shape and visual quality, vitality, and imageability.

2. Literature review

2.1. Cultural heritage and place identity: definition and forming factors

Cultural heritage is defined as something that must be saved [8], which can be tangible such as building architecture, crafts, and equipment or intangible cultural heritage such as norms, ways of life, and values [9]. Referring to the Indonesia Charter for Heritage Conservation [10], cultural heritage is agreed as a Pusaka (Relic/Heritage). Pusaka in Indonesia include (a) natural pusaka - special natural heritage; (b) cultural pusaka - heritage created by feeling, initiative, and work created by ethnic groups; and (c) pusaka saujana, which is a combination of natural cultural pusaka. According to Snyder and Catanese in Budiharjo [11], cultural heritage has six characteristics, including scarcity, history, superlative, greed, and influence on the surrounding environment. Moreover, Kerr in [12] added three characteristics of cultural heritage, namely: social value, commercial value, and scientific value. From there, it can be drawn that cultural heritage has an important role in shaping the identity of a city. Therefore, the utilization and maintenance of cultural heritage can explain the historical development of the city based on the character of cultural, economic, social, and cultural values of society and become one of the characteristics of the city.

From 1976 to 2006, numerous studies have been carried out on place identity. Lynch [13] interpreted place identity in city design and interpreted identity as an image formed from a biological rhythm of a particular place or space that reflects a certain time. This includes individual personal identities relating to the physical environment, patterns, awareness of ideas, beliefs, feelings, values, goals, behavior, and abilities that are relevant to the environment [14]. Relph [15] explained that identity has three components: the physical arrangement of places; activities; and individual or group meanings of place value. According to Norberg-Schulz [16] in his book Genius Loci, a place has more meaning than a location because each place has a spirit or soul (sense of place). A place is formed because of several things such as material, shape, and texture which then forms character. There are several ways to discover place identity, one of which through place attachment [17] which explains how people perceive places and interact. Place attachment includes several aspects such as emotions, feelings, thoughts, knowledge, beliefs, observations, and behavior; different places in scale, type and size; activities involving individuals, groups or culture; and social relations. As Fisher (2006) in [18] stated, the concept of place identity itself is largely dependent on the local environment which includes geography, cultural traditions, and cultural heritage that influences the journey of people’s lives.

Cultural and regional characteristics are some of the characteristics that must be considered so that citizens feel at home in their environment. The culture of the local community is the soul or sense of the character of the city itself whereas the environmental (physical) aspects are the city’s body. A strong city character will defend the city against influences from outside cultures. This study applied several indicators from the elaboration of definitions and factors forming cultural heritage and place identity, as listed in Table 1.
Table 1. Indicators of cultural heritage and place identity.

| No | Dimension          | Indicator                                      | Reference                                                                 |
|----|--------------------|-----------------------------------------------|--------------------------------------------------------------------------|
| 1  | Morphological      | Form of cultural heritage                     | Tangible and intangible [7, 10, 11]                                       |
| 2  | Morphological;     | Authenticity                                  | Historical value, privilege value (local architecture), scarcity value    |
|    | Perceptual         |                                               | (archeology), social culture (religiousness), aesthetics, harmony         |
| 3  | Visual;            | Form and Visual Quality                       | Physical quality, environment,                                          |
|    | Morphological      |                                               | facade element [8, 9, 11]                                                |
| 4  | Functional;        | Vitality                                      | Social, economic, natural potential, attractions [8, 11]                 |
|    | Sociocultural      |                                               |                                                                           |
| 5  | Perceptual         | Imageability                                  | Sense of place [17]                                                      |
|    |                    |                                               | Place identity [13-17] Fish in [18]                                      |
|    |                    |                                               | Image of the city [13]                                                   |
|    |                    |                                               | Place attachment [17]                                                    |
|    |                    |                                               | Place and Placelessness [15]                                             |

3. Method

This research uses mixed methods, which is a combination of qualitative and quantitative methods [19]. Qualitative methods are used for interviewing three experts to achieve robust research. These interviewees are experts in the fields of architecture, archeology, and history. While the quantitative method is used to measure the physical building of cultural heritage based on indicators of authenticity (historical value, privileged value or architecture, value of scarcity or archeology, socio-cultural, aesthetic and harmony); form and visual quality (physical quality, environment, facade elements); and vitality (social activities, economy, natural potential, attraction, and development environment). Another assessment uses the distribution of a butterfly diagram containing research indicators in the form of imageability. The butterfly diagram comprises several local communities in the city with information on the birth, growth, work, life, and knowledge on the state of cultural heritage. Butterfly diagrams aim to assess the cultural significance and cultural heritage that can be used as a city identity as chosen by the community.
**Figure 1.** The butterfly diagram is a data collection technique that is based on someone’s experience, taste and attachment to an object. This butterfly diagram comprises the values of memory, history, love, condition, happiness, and universality. The better the potential of the object will form a more perfect butterfly wing.

4. **Result and discussion**

4.1. **Selection of cultural heritage**

There are many cultural heritages found in the city of Ngawi. In this study, the chosen cultural heritage is based on its tangible form and historical value for the city of Ngawi, which includes:

Fort Van den Bosch. This building is a Dutch heritage building that was used as a fortress to control river trade and manage forced plantations while the Dutch occupied the city of Ngawi. The construction of this fort started in 1839 and was completed in 1845. It was built nine years after the end of the Java War in 1830 led by Pangeran Diponegoro.

![Fort Van den Bosch](image)

**Figure 2.** Fort Van den Bosch.

Trinil Museum. This building functioned as a museum used to store replicas of ancient human bones found around Bengawan Solo, from the time of ancient human bones excavation by Eugene Dubois. This museum was founded in 1981.
Figure 3. Trinil Museum.

Pesanggrahan Srigati. This site is better known as a safe haven for Brawijaya V when he retreated at Mount Lawu after his defeat in the war against the Demak Kingdom led by Raden Patah. At this site, Brawijaya left all his royal attributes.

Figure 4. Pesanggrahan Srigati.

Krt. Radjiman Wedyadiningrat Residence. This house is a heritage house from Krt. Radjiman Wedyadiningrat, the chairman of BPUPKI. In 1935 Krt. Radjiman Wedyadiningrat procured the house along with a yard and rice fields from a Dutch landlord named Nicholas Leonard Van Deuning.

Figure 5. Krt. Radjiman Wedyadiningrat Residence

Sien Hien Kiong Temple. This temple was a place of worship for ethnic Chinese when the Dutch occupied the city of Ngawi. At the time, they opened many trade stalls near the large markets of Ngawi and Van den Bosch Fort. This temple was built in 1892.

Figure 6. Sien Hien Kiong Temple.
Soedhono Sugar Factory. This factory was built by the Dutch in 1888. It was established due to the forced plantations in Ngawi; at that time, the main commodity was sugar cane.

![Figure 7. Soedhono sugar factory.](image)

4.2. Physical assessment and butterfly diagram assessment for cultural heritage

The assessment is based on several indicators obtained from a literature study on cultural heritage and place identity that forms the identity of the city. These indicators as mentioned in various sources of literature on urban identity i.e., Lynch, Proshansky, Norberg-Schulz, Altman and Low, Hall and McArthur, Budihardjo, Howard, Fisher, Indonesia Charter for Heritage Conservation, and Law No. 10/2011 Concerning Cultural Heritage Sites [7-9, 11, 13, 14, 16-18]. The physical assessments on cultural heritage use the indicators of authenticity, form and visual quality, and vitality as can be seen in table 2.
Table 2. Physical assessment of cultural heritage.

| No | Indicators | Variable | Parameter | Measure | Points | Buildings |
|----|------------|----------|-----------|---------|--------|-----------|
| 1  | Authenticity in form, visual quality and vitality | Historical | Does not play a role | Cultural heritage has nothing to do with certain historical events | 1 | | | | |
|    |           |          |           |         |        | 1 2 3 4 5 6 |
|    |           |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 1  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 1  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 1  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 2  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 2  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 3  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 3  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 1  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 1  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 1  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 2  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 2  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 3  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |
| 3  |            |          |           |         |        |            |
|    |           |          |           |         |        |            |

Note: (1) Fort Van Den Bosch, (2) Trinil Museum, (3) Pesanggrahan Srigati, (4) KRT. Radjiman Wedyadiningrat Residence, (5) Sien Hien Kiong Temple, (6) Soedhono Sugar Factory.
Figure 8. The physical assessment of cultural heritage shows that Fort Van den Bosch has the potential to become the identity of the city of Ngawi with a total of 15 points.

The butterfly diagram was used to determine the significance value for culture and cultural heritage with the potential to become a city identity based on the opinions of the people of Ngawi City on imageability indicators.

Figure 9. The people of the city of Ngawi filled out the butterfly diagram form.

Ten people filled out the butterfly diagram form, with educational backgrounds ranging from a high school graduate, bachelor graduate, and postgraduate with occupations as students, private employees, and civil servants. For the results of the spread of the butterfly diagram, see figure 10-19 below.

Figure 10. The result from the first respondent  Figure 11. The result from the second respondent
Figure 12. The result from the third respondent

Figure 13. The result from the fourth respondent

Figure 14. The result from the fifth respondent

Figure 15. The result from the sixth respondent

Figure 16. The result from the seventh respondent

Figure 17. The result from the eighth respondent

Figure 18. The result from the ninth respondent

Figure 19. The result from the tenth respondent
The results of expert interviews are as follows:

a. City identity can be interpreted as a city icon and each city certainly has a different icon. This icon can be from the city or from outside the city. This icon or identity is usually related to the past. In this case, it can be tangible and intangible aspects found in the city, and it is directly related to its history and the local community with its role in influencing the present. City identity is not always a cultural heritage. Several aspects connect the two so that cultural heritage is often associated with the identity of a city, i.e., (1) the perception that historical heritage has an important form or figure in the city; (2) important figures have certain values. This value is dynamic, while the object itself does not change, however, its value is dynamic to the feelings, impressions, and history it contains; (3) for communities, cultural heritage usually gives a sense of pride and attachment.

b. There are several conditions for these heritages to be used as a city identity, such as having a clear role in the historic development of the city and its important role in the past. Based on Kevin Lynch (image of the city) there are five components that make up the image of the region, namely: Paths, Edges, Districts, Nodes, and Landmarks. Identity is very closely related to landmarks, so the most important requirement to become an identity is that the said cultural heritage acts as a landmark for the city. There are several criteria that cause cultural heritage to be a landmark, namely the unique form, its large scale so that it can be easily seen, its location, and it must be on a reachable distance.

c. The meanings given to cultural heritage buildings are closely related to community groups that are directly affected by it. These meanings are dynamic and are associated with certain events felt by the community, these events can include: the people's struggle, the system of government, folklore, developments, arts, and culture.

d. Management refers to Law No. 5/1992 concerning Cultural Heritage Objects, which was enhanced through Law No. 11/2010 concerning Cultural Heritage Sites. The utilization of heritage is important to ensure its preservation. Moreover, the regulations on heritage stipulate measurement such as conservation, revitalization, adaptive reuse, reconstruction, rehabilitation, and restoration to support regional tourism. Furthermore, some management that aims at the maintenance of historical heritage includes physical management, visual management, activity management, and image management (related to branding strategies).

In addition to determining factors that form cultural heritage as an identity, experts also agree that the Van den Bosch fortress is the chosen object for Ngawi City’s identity. However, there are certain things that must be observed such as that activities should not damage the physical building; one of the aims of reconstruction is image-making of Fort van den Bosch; visual design to strengthen the image of the area of Van den Bosch Fort; development of community activities; development of the natural environment and the physical management of the fort (repair, development and restoration).

**Figure 20.** The results based on the spread of the butterfly diagram show that Fort Van den Bosch has the potential to become Ngawi City’s identity with a total of 274 points.

4.3. **Expert interviews**

From interviews with experts comprising an architect, a historian, and an archeologist, several factors can make cultural heritage as identity and its management. The results of expert interviews are as follows:

| Rank | Building Name                        | Points |
|------|--------------------------------------|--------|
| 1    | FORT VAN DEN BOSCH                   | 274    |
| 2    | KEDIAMAN KRT. RADJIMAN WEDYODINGRAT  | 254    |
| 3    | TRINIHL MUSEUM                        | 250    |
| 4    | SOEDHONO SUGAR FACTORY               | 221    |
| 5    | SIEN HIEH KIONG TEMPLE               | 218    |
| 6    | PESANGGRAHAAN SRIKATI                | 217    |

**Potential building based on the spread of the butterfly diagram:**
5. Conclusion
Based on the identification of six historical sites in Ngawi Regency through definitions and factors forming cultural heritage and place identity, observations, physical assessments, butterfly diagrams and expert interviews show that the Van den Bosch Fortress is an object that has the potential to be developed as the identity of the city of Ngawi. This fort has historical value, meaning and close attachment to the Ngawi people. In addition, there are other heritage sites in Ngawi such as the Trinil museum which is a monument for the discovery of ancient human fossils on Java. Soedhono Sugar Factory is a Dutch sugar factory which at the time of Dutch colonialism had economic benefits for the people of Ngawi. Pasanggrahan Srigati offers more of a spiritual identity because the formation of the srigati has a connection with the stopover of Brawijaya V on his way to Mount Lawu and releasing all worldly attributes of the kingdom at the site. The legacy of Krt.Radjiman Wedyadiningrat is better known by the Ngawi community as the residence of Mr. Radjiman Wedyadinigrat (Chair of BPUPKI) until the end of his life. Whereas Sien Hien Kiong Temple is a legacy of the Chinese ethnic who, at the time of the Dutch, settled in the city of Ngawi and established trade stalls and set up a temple as a place of worship. The heritage management in Ngawi can be summarized as in Figure 21 below.

Figure 21. Selected cultural heritage, management types, and ways of development

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