

# The Relationship between the Development of Industrial Heritage Tourism and Communities; The upcoming 10th Anniversary of the Gold Museum, New Taipei City Government

Tsung-Hsiung Tsai

## Abstract

The Gold Museum, which is Taiwan's first case of ecomuseum and is situated in the mining heritage site "Jinguashi gold mining community", is embracing its forthcoming 10th anniversary in 2014. Understanding that the Jinguashi gold mining community has experienced serious out-migration and population loss since the declining and discontinued mining operations, this case (museum) employed the government's assistance to establish the Gold Museum, which serves as a platform for the museum's interactions and social activities with the local community. Through the establishment of this

museum, it is anticipated that the museum and the locals can jointly preserve a collective memory of development, interaction, process, and transformation which took place in the mining heritage, as well as cultivate a trend of a symbiotic relationship between the museum and the community.

Keywords: industrial heritage tourism, ecomuseum, Jinguashi gold mining community, Gold Museum, community development

## 1. Introduction

Along with the expansion and revolution of industries around the world, the global industrial center gradually shifted to Asia in the late 18th century. After the Meiji Restoration in 1868, Japan began to experience significant progress and development in mining, iron production, shipbuilding, railways, textiles, and various other industrial technologies. After the Sino-Japanese War in 1895, Taiwan became a Japanese colony. During the 50-year Japanese rule, industrial production in Taiwan was greatly boosted, resulting in the majority of remaining industrial heritages in Taiwan being sugar refineries, wineries, and mining industry under a monopoly business system in the Japanese occupation period. After these multitude of factory infrastructure and relics of ancient buildings went through the Industrial Revolution and industrial transformation, settlements and space of residents in the peripheral areas became idle or withered away.

As the first industrialized nation, the United Kingdom took the lead to start studies of industrial heritages in 1950, and established the "Industrial Heritage Preservation Committee". In Addition, in the early 1970s, two French museum study scholars Georges Henri Riviere and Hugues de Vairne proposed the theory of ecomuseum, and attempted to operate a museum that incorporated industrial heritages, resources of landscape tourism and travel, to sustain regional economy and cultural development. This theory was subsequently adopted by all nations and resulted in the establishment of over 300 ecomuseums in the previous 40 something years. Some of these ecomuseums, however, were shut down for the reasons following by such as inappropriate development, unstable sources of funding, and insufficient cooperation of the community. Nowadays, there are only less than 100

ecomuseums around the world (Qu, 2005), indicating that there is a large room for improvement and breakthrough in terms of the practical operation of an ecomuseum.

Taiwan began to perceive the notion of ecomuseum in the 1980s (Y.T.Chang, 2003). The Jinguashi gold mining community used to be the most important gold production site in Taiwan. Along with the declining number of gold ores and insufficient economic benefits in terms of the required depth of excavation, this community, which was stricken by out-migration and population loss, became slack and obsolete after mining operations discontinued in 1987. Luckily, heritages of life facilities associated to the old mining operations still remain intact owing to the inconvenient transport between the area and the outside world. Thus, heritage in the community was listed as a potential world heritage site by the Taiwanese authority in 2002.

The "Gold Museum", which is chosen as the case of study, is Taiwan's first ecomuseum which features industrial heritage and is open to the public. Since its opening in 2005, the number of visitors to the museum has been increasing every year, and there were 1.25 million visitors to the museum in 2012 alone. Moreover, aiming to understand the relationship between "industrial heritage tourism" and the operation of "ecomuseum", this study proposes to adopt the perspectives of "the government and experts' role" and "community and community residents' participation" to observe the museum's 25-year journey of evolution which started from the termination of the mining operations in 1987, through the initial planning for the establishment of the museum in 1994, the museum's grand opening in 2005, until the present. Through this exploration, this study aspires to understand the commitment and efforts of the "government and experts" in the course and the role

that “the community and community residents” have played, and recommend possible improvement for the development of industrial heritage tourism in the future.

## 2. Research Method

With the “Gold Museum” and where the museum is - the Jinquashi gold mining community, as the research subjects, this study aims to understand the sluggish mining heritage community and the museum’s impact on the Jinquashi gold mining community environment’s evolution before and after the museum was open to the public, as well as the government’s role in the relationship between community residents and tourists. This study will mainly employ the following research methods:

### 1) Literature Review:

(1) Collecting relevant studies of “industrial heritage” as well as research and examples of “ecomuseums” around the world in an attempt to understand the French, British, and American examples and conditions, and compare the relationship between each example and direction of arguments.

(2) Analyzing historical data and literature, relevant government laws, museum publications, official website information, and news clippings which center on this study’s research subject, to understand the rise and fall of the mining industry in the Jinquashi gold mining community in the past, the formation of the community, the historical development of residents’ life, and to explicate the development of tourism in the Jinquashi mining heritage from the perspectives of evolutionary history and policy planning.

### 2) Field Study:

In-depth interviews will be conducted to explore local residents’ life, residents’ thought about the museum, and the development of the tourism. Interviewees will include the neighbourhood magistrate and opinion leaders, the local community development association, cultural and historical work teams, officials of central and local governments, people’s representatives, designers and architects involved in the preparation of the Gold Museum, staff at the Gold Museum, bed and breakfast (B&B) operators, food and beverage industry workers and local artists, in order to understand the interaction between local residents’ life and the Gold Museum.

### 3) Questionnaire Survey:

Adopting close-ended questionnaires (1,050 valid questionnaires per annum on average in 2004~2012) to investigate tourists’ visiting experience, this survey will be primarily analyzing the “visiting behaviours” of tourists to the museum since the grand opening.

### 2.1 Literature Review of Industrial Heritage

The United Kingdom embarked on studies of industrial heritage in the 1950s, established The International Committee for the Conservation of Industrial Heritage (TICCIH) in 1973, and held the first international industrial heritage symposium in France in 1981, which instigated a series of industrial heritage preservation movements. The definition of industrial heritage was largely drew from the notion in the Nizhny Tagil Charter which was published by TICCIH in Nizhny Tagil city of Russia in 2003. By definition, industrial heritage refers to the constitution of industrial culture

legacy which has historical value, technical value, social significance, architectural value, or scientific value. Such cultural legacy includes buildings and machinery, workshops, mills, factories, mining sites, relevant processing or refining sites, stowage or warehouses, premises that generated, delivered, and supplied energy, transport, and basic infrastructure. In addition, other sites for social activities in relation to industrial production such as dwellings, sites for religious practices, or education provision are also classified as industrial heritage. Therefore, all architectures and constructed objects that were established for the purpose of industrial activities, the processes, methods, techniques, and tools in the course of industrial development, the background of a city or a town where the industrial activities took place and the resulting landscapes, as well as other various material (McKercher, Ho et al., 2005) and non-material carriers are all elements of equal importance in the buildup of industrial heritage (Yaw-Hsiang, 2008).

Reviewing previous studies on industrial heritage revealed that most industrial heritage was revived through the integration with tourism industry. Taking mining sites in Wales in the United Kingdom and Spain for instance, there were a dire need for the creation of new employment opportunity in response to the falling mining industry. Therefore, the four aspects for developing industrial heritage, namely social culture, transportation system, manufacturing process, and industrial products were proposed and industrial heritage tourism was developed in line with the four directions. In an attempt to analyze the idea of a systematic connection of tourism attraction sites in a big region to revive industrial heritage’s tourism development opportunity and possible conflicts, this study proposes a conceptual framework to provide a direction

for the transition and the development of industrial heritage tourism, and to compare the differences, strength, and weaknesses of two regions. The main approach is to integrate the same sub-industries in both regions, plan and concatenate natural resources, and elaborate on an overall image of the communal industries, which is a more ideal theoretical analysis. However, there are relatively few discourses and discussions on the government and experts’ roles for local community residents in the course of developing industrial heritage tourism or the revival and evolutionary processes of industrial heritage infrastructure due to a lack of practical examples for illustration and comparison.

In addition, a growing number of American industrial cities have experienced depression as a result of industrial transformation. It was revealed in the study of Xie (2006) that despite a place’s various advantages to develop industrial heritage tourism, factors such as different opinions of various (stakeholders), insufficient recognition and participation of local residents, and lack of powerful and creditable management organizations, all could lead to a fruitless plan similar to reviving the historical vehicle industrial city Toledo through a jeep museum, which is a plan that is still in the planning and preparation stage and has never been implemented.

### 2.2 Ecomuseum Literature Review

The phrase “ecomuseum” was coined by the museum study scholar Hugues deVarine-Bohan in 1971, and the first self-acclaimed “ecomuseum” - the Museum of Man and Industry (Le Creusot-Montceau-les-Mines), was established in 1975. This type of museum emphasizes on a collective representation of environmental fields and local

residents' life (Kimeev, 2008), and presents an opportunity to revive the mechanism of industrial heritage through operation and management of museum institutions. An exemplary case includes the two towns Le Creusot and Montceau-les-Mines. Each of these towns had a land size of approximately 500 square kilometers. The half side of both towns was industrial area while the other half side was a country village. There was a population of 150,000 residents in each town, most residents are low-income labors or peasants. During the time between the end of the 18th century and the end of World War II, Le Creusot was an industrial city that manufactured munitions and trains where Montceau-les-Mines was a coal-producing town. The two villages were approximately 20 kilometers away from each other and interdependent due to the munitions and transport industries. Owing to the decline of the old industries and therefore a dire need for new job opportunities, a "living museum" which incorporated the 18th century munitions family Schneider's castle as the headquarter museum, the five satellite pavilions including Canal Museum (The Maison du Canal du Centre at Ecuisses), Mime Museum (The Coalmine at Blancy), Mining School Museum (Maison d' Ecole at Montceau-les-Mines), the Monastery (The Medieval prior at Perrecy-les-Forges), Miners' Dwellings (The Combe des Mineurs at Le Creusot), and various regional network routes which integrated liner routes of visiting concatenated by the peripheral natural landscapes of each pavilion and local residents' plans of actions. The 10 years from 1975 to 1985 were the golden years of this exemplary case as it was the embodiment of a new concept of museum and a new mode of operation. Its spirit also made an impact on the entire world and resulted in the establishment of museums with similar ideas in each country. Adhering to the aforesaid philosophy, many

museums have experienced significant changes in terms of modes and philosophy of operation. Such changes were reflected on the transformation from a traditional pyramid organizational structure to a horizontal organizational structure, and use of a large number of community and external professional human resources. These museums chiefly consist of the three following committees, which jointly constitute its core operation:

(1) Users' Committee:

a committee which is formed by various professional disciplines in the society, culturally disadvantaged groups, and community culture and history groups, to be responsible for activities planning and performance appraisal.

(2) Scientific and Technical Committee:

a committee which is formed by permanent museum staff, lecturers, volunteers, scholars, and experts to be responsible for tasks such as research, maintenance, and exhibitions.

(3) Management Committee:

a committee which is formed by local government authorities that provided funds, companies, enterprises, or representatives of other sponsoring groups, to be in charge of financial affairs and overseeing administration.

With a considerable degree of innovative and experimental value, the French museum can be an example for professionals in relevant fields around the world to observe, discuss, and offer a new trend of ideas (Y.T. Chang, 2003). However, as the aforementioned horizontal structure committees are formed by members of

heterogeneous backgrounds and groups, the characteristics of committee members are not homogeneous enough, the turnover of committee members is high, and members are unable to work as a whole due to constant conflicting opinions. Besides, the juxtaposition of exhibiting experts' designs and vigorously encouraging participation from local residents, which makes museum's exhibitions fail to meet stringent academic requirements. In terms of collaboration of experts and the community, the recurring issue of co-competition is also awaiting to be solved.

The Ironbridge Gorge Museum in the United Kingdom also has a similar spirit, yet the terms "open air museum" and "neighborhood museum" are more frequently used than "ecomuseum". Taking the Ironbridge Gorge Museum as an example, it is a "museum of fragmented nature that sought to tell a holistic story". Peter David, an English scholar and the author of "Ecomuseums: A Sense of Place" suggested that in addition to serving the community, a more important function of a museum is to attract foreign visitors to generate sufficient revenues and guarantee perpetual existence. On the other hand, Conybeare proposed that why terms such as "neighborhood museum" and "landscape museum" were created in the United Kingdom to avoid using the term "ecomuseum", which was created by French people, is because museums in the United Kingdom embrace the idea of lifting museum's visitors from a regional level to an international level, and strive to attract a large number of tourists and private investment for perpetual operation. Therefore, the entity of a museum is a "national trust", which is on a nationwide level. In addition to maintaining and preserving cultural assets and cultural landscape, a museum should endeavor to be open to the external world, at nationwide and international

level. However, when the term ecomuseum was coined in France, it primarily centered on the regional area and was relatively more focused on providing services to communities and encouraging residents to perceive a region as a cultural unit. Although the name, recognized scale, structure, interpretation, and perception of the term "ecomuseum" differ from nation to nation, ecomuseums around the world share the same spirit of decentralization and being against a "top-down" approach of planning an exhibition. The idea of ecomuseum is to place core values on the original contexts of a village and provide concrete evidences for cultural characteristics and residents' ways of life in a region (Y.T.Chang, 2003).

### 2.3 Literature Review Summary

Based on the above literature review, it is commonly believed that mining heritage, despite being an important tourism resource, would be eventually depleted due to improper management and consumption (Peil, 2005). Besides, a plan without the recognition of local residents could only stay at a conceptual level and can never be implemented. Therefore, revitalization of industrial heritage should be underpinned by cultural objectives in addition to economic purposes for the perpetual operation of the heritage (Lowenthal, 1998). In addition to relying on the rapid transformation and development of tourism for survival, there should be a vision to upgrade a heritage site to a world heritage site (WHS). More attention should be given to local residents' attitude toward life and residents' core values of preserving the holistic environment and collective values. A comprehensive management mechanism and plan is also essential on top of a plan of preservation (Jimura, 2011). Moreover, despite an attempt to provide a new development and

management mechanism through the ecomuseum theory in the 1970s, different nations encountered different problems when the theory was put into practice.

Choosing a museum that utilizes the notion of “ecomuseum” to develop tourism in Taiwan’s most important industrial heritage, this study would especially focus on the influence of “participation from the community and residents” on the project in addition to probing into the establishment and development process of this case from the perspective of “the role of the government and experts”.

### 3. The History and Current Status of the Jinquashi Mining Heritage; The Historical and Geographic Background of the Establishment of the Gold Museum

The Jinquashi community came into existence in 1890 when alluvial gold was discovered in Keelung River. Changes that the community had experienced in the nearly 100 years from 1890 to the discontinued gold mining operations in 1987 presents a specific miniature of Taiwan’s century-long gold mining history. The evolution of the community mainly consists of the five phases:

#### 3.1 The Qing Dynasty Period (1890-1895)

In early years, the Qing government had the idea that mining operations would result in a bad feng shui and brings unfavorable consequences to the authorities. Therefore, mining exploration and technology development were restricted. In 1890, the Taiwan inspector-general of province Liu Mingchuan accidently discovered gold sand while measuring and planning the

construction of an iron bridge, which triggered a gold rush along the banks of Keelung River (Pei-chun, 2011). While civilians gradually became frenzied about gold panning, the congregated population caused poor agricultural harvests, and therefore the establishment of the Bureau of Gold Sand in 1892. After the Qing Empire’s defeat in the first Sino-Japanese War in 1895, the Qing government signed the Treaty of Shimonoseki, gave away the Taiwan Island to Japan, and stopped its involvement in gold mining operations in Taiwan.

#### 3.2 The Japanese Colonial Period (1895~1945)

After Taiwan became a Japanese colony in 1895, mining operations started to go through the process of industrialization, and mining production has reached the peak during this period. Ropeways were used to transport ore stones to a field near the coastal Shuinandong (水滿洞) for processing. Therefore, the complete settlement of mining industry should include the Jinquashi gold mining community, which was in the peripheral area of tunnel exits of ore veins, and the surrounding area of Shuinandong, where ore stones were smelted. As the surrounding area of the Shuinandong smelter was declared as a “contaminated soil control site” in accordance with environmental protection regulations in Taiwan, and it is therefore not open to the public, the area has not been included in the Gold Museum’s plan. In the Japanese Colonial Period, local Taiwanese were either employed as mineworkers or labors and were controlled by Japanese in terms of technology and operation. For example, in 1939 when gold production reached the climax, there were a total of 9,448 workers in a Japanese mining company, which included 747 workers of Japanese nationality, 6,929 workers of Taiwanese nationality, and 2,443 workers of Chinese nationality (including workers recruited from Wenzhou, Fuzhou, and other areas). It is not hard to imagine a

prosperous scene in the settlement back then (W.F. Chen, 1972). Therefore, a large number of mining infrastructure, dwellings of Japanese cadres, hospitals, police stations, and small schools were built at this time, and there was also a gradual expansion of Taiwanese labors dwellings which were built in line with the mountain topography. The current core zone in the Gold Museum consists of factories near exits of the Tunnel No.5 and the hinterland of the dwelling complex of main Japanese cadres in the Japanese Colonial Period. In terms of the layers of planning, the area primarily consists of the three zones:

##### (1) Core Zone:

consisting of tunnel exits in the mining sites, factories, dwellings of Japanese cadres.

##### (2) Settlement Development Zone:

largely consisting of the scattered living, dwelling, and shopping areas of Taiwanese mineworkers and civilians in the Japanese Colonial Period, as well as the area of the current community.

##### (3) Resources Integration Zone:

integrating views, natural landscapes, ridges, topography, and areas of routes of relevant mining transportation.

#### 3.3 The Post-War National Government of the Republic of China Period (1945~1987)

After Japan’s defeat in World War II in 1945, the National Government of the Republic of China (the Taiwan Nationalist Government) took over the management of plant facilities near Jinquashi, and the “Preparatory Office of the Taiwan Gold and Copper Bureau” was established in 1946, which then was renamed as “Taiwan Metal Mining Corporation”(abbreviated as the

Taijin Company) in 1955. To enhance metal processing capacity, the Taiwan Metal Mining Corporation borrowed money from banks to build the Li-Le Copper Smelter near Shuinandong. Taiwan Metal Mining Corporation, however, announced to close down in 1987 and sold relevant plants and land to the Taiwan Power Company due to its failure of making loan repayments as a result of the continuously dropping international copper price. Thereafter, the Taiwan Sugar Corporation took over the bank loans and subsequent management, ending the century-long gold mining history in the Jinquashi gold mining community.

#### 3.4 The Period between Ceased Mining Operations and the Establishment of the Gold Museum (1987~2002)

After the terminated mining operations in 1987, Australian and German mining experts assessed that the surrounding area of Jinquashi still contained considerable ore reserves, and did not rule out the possibility of resume mining operations when new mining methods and technologies come to existence in the future. Therefore, the land nearby has always remained an industrial land designated for mining purpose. Although the Taiwan Sugar Corporation and the Taiwan Power Company used to have other ideas of land development and utilization during the period of their management, they have eventually given up those ideas due to the land control restriction and difficulty in removing community residents’ belongings on the land. As residents, who were only entitled to the surface rights of the land and couldn’t foresee any regional development in the future, were unwilling to invest in renovating their premises. The community largely remained its original architectural style, which was slowly decaying and withering away.

In 1989, the Taiwanese director Hou Hsiao-Hsien used the areas near the Jinguashi Mine as the primary film scene of the film "A City of Sadness" that reflected the controversial "228 Incident" in Taiwan. The film won the Golden Lion Award for the Best Film at the Venice Film Festival in Italy, and became the first Taiwanese film to win a top award at an international film festival. Thereafter, a craze of a series of movie, TV drama, and commercial shots took place in the natural landscape of the Jinguashi gold mining community. In particular, the 1992 film "Hill of the Return" depicted Taiwanese people's life in the Japanese occupation period, triggered film watchers' emotional resonance by using local mineworkers' life stories as the theme of the movie, and created a vogue of mining tourism by followers of film locations.

Therefore, mining authorities and small and medium-sized enterprises started providing guidance of industrial transformation to residents, promoting community-style counseling programs of mining tourism, sharing local stories in class, and concatenating resources through regular meetings. During this period, the primary appeal of community residents was to acquire land ownership in order to operate small-scale B&B, to rescue the downhill community's economy after mining operations discontinued. Community residents understood that Taiwan had no relevant mining technologies at that point, and the community would eventually wither away if there were neither mining activities nor integrating tourism industry into the local economy. Therefore, residents actively went around advocating preservation of the decaying mining industry's facilities, machinery, and plants, in order to seek for small-scale community tourism economy for livelihood. After many years of preparation for small-scale tourism economy and B&B

that may transform the community, in 1995 the local government commissioned "scholars and experts" to embark on planning the alternation of architecture next to exits of tunnels in the mining sites, and preparing the establishment of the Museum of Metallic Minerals after regional cultural workers and the neighborhood magistrate went around progressively advocating the setup of dedicated agencies to preserve facilities in the mining heritage. The preparation of the Museum of Metallic Minerals in turn became an important foundation for the planning of the Gold Museum.

### 3.5 The Planning and Renovation Period of the Gold Museum (2002-2005)

Based on the above plan, in 2002 the Taipei County Government (which subsequently upgraded to the municipality New Taipei City Government in 2011) decided to employ the concept of "ecomuseum" to establish a mining heritage museum after conducting several onsite investigations, discussions, and evaluations with local residents and professional teams. The museum would assume the name "Gold Museum, New Taipei City Government", and a "Letter of Intent of Tripartite Cooperation and Development in the Gold Museum" was signed with the two land owners - the Taiwan Sugar Corporation and the Taiwan Power Company, in an attempt to transform the local economy to the mining culture tourism and break the long-term restriction on the use of land for mining purposes.

In consideration of sources of funding and perpetual operation, the local government set up a "museum setup planning and preparatory group" in the preparatory phase and decided to adopt a concept proposed by the English scholar Conybeare in 1996: after the government's initial

investment in constructing the pavilions in the core zone, the concept of perpetual operation can only be fulfilled when the museum can attract a huge number of tourists and external investment in the medium and long term. In light of this, the development of architectures in the Gold Museum's core zone would be divided into the two phases:

Phase 1: Funds for construction primarily came from government investment, and the construction mainly focused on basic administration, education, and exhibition facilities. The area was completed and opened to the public in 2005. It mainly consists of one principal pavilion and six satellite pavilions:

The principal pavilion "Gold Building and Benshan Tunnel No.5" exhibits the most important treasure in this museum, which is a 220.33KG gold brick consisting of 99.99% pure gold. The gold brick was made through a special vacuum casting technique and was the largest gold brick in the world when the museum was established (currently, it is the second largest gold brick in the world). In addition to the gold brick exhibition, the principal pavilion consists of real tunnels that link pits of gold ore and an area for tourists to experience gold panning. Besides, the six satellite pavilions "Visitor Center", "Four Connected Buildings", "Environment Pavilion", "Jinguashi Crown Prince Chalet", "Gold Refinery Building", and "Jinguashi and Shuinandong Special Exhibition Room" respectively provide consultancy services, geological, historical, ecological, and educational functions, local residents' life styles

and scenes, metal crafts, and relevant derivative art, cultural and creative products.

Phase 2: In the surrounding hinterland of abovementioned pavilions, the Build- Operate-Transfer (BOT) method under the Private Participation in Infrastructure Projects (PIIP) scheme was adopted to construct ancillary facilities such as restaurants, hotels, art workshops, transport, and recreational facilities. The original plan was to commence to invite private investment in 2007, the construction was scheduled to last for two years and the museum was scheduled to operate for 20 years.

#### 3.5.1 The Initial Idea of the Holistic Architectural Configuration

The configuration of this museum is a continuation of the results of a previous plan for the "Metallic Minerals Museum". The Phase I architectural configuration and design ideas for the core zone are as follows:

- (1) Using the gold mining tunnel (the Tunnel No.5) as the center to create a center that resembles a city piazza.
- (2) Using transparent glass curtain walls to define the exterior public space, the museum complex, and an area for museum visitors to experience tunnels. With regard to the tunnels experience area, attempts would be made to restore the original mining scenes.
- (3) The concept of "repair" would be emphasized with regard to restoring the appearance of other architecture complexes. The goal was to represent the exterior appearance of architectures in the Japanese colonial period, as well as to meet the standard of interior facilities in a modern museum.

### 3.5.2 The Initial Construction and Interaction with Community Residents

After the museum was open to the public, it was revealed that construction of physical facilities and training and cultivation of museum staff received particular emphasis in the initial phase of preparation owing to factors such as the annual plan of government funds and efficiency of implementation, which made the preparatory process of the museum, which was born out of the concept of “ecomuseum”, were not much different from the preparatory process of a general or traditional museum. Besides, the interaction between the museum and community residents was very limited, and there was a tense and conflicting relationship between the museum and residents in the early stage of the museum. The main reasons are as follows:

- (1) Heavy traffic and loud noise resulting from intensive construction in the initial stage of museum construction, and insufficient communication between the museum and residents.
- (2) The core zone in the Phase I of the construction: the museum started to collect admission fees and control traffic in some regions in 2005, which changed residents' routes of movements of daily life.
- (3) The core zone in the Phase II of the construction: Community residents believed that establishments such as B&B, food and beverage providers, and retailers developed under the PPIP scheme would compete with local B&B, food, and beverage businesses and affect residents' livelihood.
- (4) When the museum was first open to the public, the

influx of tourists on holidays caused congested traffic even outside the region. A large number of tourists also brought along heavy traffic and garbage pollution and created troubles for the community.

### 3.6 The Gold Museum's Several Important Changes in Operation Modes and the Resulting Impact in 2005-2012

#### 3.6.1 The Failure of the BOT Plan under the PPIP Scheme for the Core Zone in the Phase II and the Resulting Transformation

After main facilities such as education and exhibition facilities in the Phase I were completed and open to the public in 2005, the museum actively commenced the Phase II construction - “the Plan of Private Participation through BOT in the Phase II Construction and Operation”, which aimed to provide ancillary facilities required for the holistic tourism. The project further expanded the range of enterprise recruitment to include 132 Japanese-dwelling-style hotels, three specialty restaurants, and one specialty shop (with an operating period of 20 years). However, there were a total of three unsuccessful openings of tenders in 2008, and the following reasons were revealed after review: (1) an unpromising overall market and skyrocketing costs for construction; (2) the land was an industrial land for the use of mining industry, which increased the uncertainty of investment; (3) the inconvenient transportation increased the risk of investment; (4) the scattered distribution of travellers' lodges increased operating costs; and (5) insufficient recognition of local residents, which increased risk of investment.

Therefore, the initial plan was that land for the Phase II development would be included in the museum's area of self-management. With regard to the stagnant

developing area in the Phase I, the museum would self-operate and manage art workshops, DIY shops, and allow local residents with small capital to run small-scale shops such as food and beverage-related businesses, cultural and innovative shops through the Operate-Transfer (OT) method. In this way, these shops could fill the gap of ancillary facilities which were essential for tourism. In addition, the previous Japanese dwellings or hotels would be transformed to be the 7th satellite pavilion: the duplexes would be on-site artists' space for creation, and international artists could be invited to live in the duplexes to create artworks and to have interaction with tourists. In this way, running B&B in the duplexes and competing existing B&B in the community could be avoided.

#### 3.6.2 Policy of No Admission Charges and Changes in the Attitude of Residents

In 2008, admission fees of all museums in the New Taipei City were waived in response to the local governments' upgrade to a quasi-municipality (the Taipei County was scheduled to become the New Taipei City in 2011). Due to such change in the operating direction, the museum, which no longer needed to control the routes of movement in the core zone, restored community residents' routes of movement in their life and allowed adjacent residential premises to become retail shops, resulting in a gradually blurring line between the museum and the community, as well as the community architectures' gradual integration into the museum complex.

Due to the changes hereof, the museum began to focus on handling the interface with the community, tidying up pavements, signs, information boards in the

community, and improving furniture on the streets. Along with the completion of the Phase I construction in the core zone and the terminated PPIP scheme in the Phase II, museum staff could concentrate and devote themselves to community management, theme-based exhibitions, integrated marketing communications which incorporate events, theme-based exhibitions that incorporate existing spiritual cultural festivals and events such as Matsu Pilgrimage, Guan-Gong's Birthday Celebration (Guan-Gong's Festival), and Green Grass Celebration, having books of B&B and tourist destinations published, and collaboration with community residents to produce microfilms. Therefore, a holistic marketing program can be implemented on the museum and the mining community where it is situated, and the community has gradually come to provide the necessary commercial facilities for the museum to operate properly.

The relationship between the museum and the community is steadily improving. Consequently, the museum's core zone gradually expanded to the community and village's developed area, and tourists began to wander in the village alleys, which, in spite of its interference with residents' privacy, evoked community residents and non-local entrepreneurs' imagination about possible methods to revitalize the community, and increased their willingness to invest through the small-scale tourism economy.

#### 3.6.3 How the Architectural Patterns in the Museum's Core Zone Changed the Environment of the Community

With regard to improvement in physical facilities in the initial stage of museum preparation, relevant physical facilities in the core zone were restructured with

reference to the prosperous age in the community when gold production was at its peak in the Japanese Colonial Period. As the opening of the museum was followed by a great influx of tourists, the unused space in the community hence played the role of providing relevant ancillary facilities that the museum needed. From 2005 onwards, community residents started to run eateries, snack stands, tea houses, unique B&B, and retail shops. After the failed PPIP scheme in the museum's Phase II construction in 2008 and the waiver of museum admission charges, the number of tourists experienced a steep increase. Accordingly residents began to invest in constructing unused space in the settlement and embarked on relevant interior renovation and decoration. Vocabulary used on the exterior of architectures also emulated vocabulary of the museum complex, in the hope to be included in the museum architecture complex.

In response to an increased number of tourists in the period 2008- 2012, residents became more involved in renovation and beautification. The originally idle and decaying premises in the community began to receive intention to lease from entrepreneurs from outside the community. After purchasing the surface rights, these entrepreneurs went on to have these premises renovated. However, as land in this area was categorized as construction-restricted land for the use of "mining purpose" and was subject to rules of land control in this area, community residents mostly took the "silkworm nibbling" approach in renovation and imitated the pitched roofs of historical Japanese architecture (in consideration of costs, light steel frame and black tile pitched roof or roofs coated with asphalt felts were mostly used). During construction, large-scale developments and materials such as RC, glasses, modern construction materials were

avoided in order not to construct mismatched buildings that would receive complaints from residents or tourists, or be ordered by the local government to demolish due the abrupt building's disturbance to the harmony of the overall landscape. Hence, the museum complex and the community have always kept black tiled roofs, small-scale transformation, and RC wood replicas. Tourists' perception of the boundary of the museum gradually became blurred. As the museum has gradually incorporated the community's areas of development into its domain, vocabulary and styles of architectures in the community gradually imitated architectures in the museum's core zone in terms of renovation and beautification, in order to attract tourists to shuttle in and out the community inadvertently and benefit the community economy.

#### 3.6.4 The Museum's Change of Direction in Promoting the Metal Craft Industry

In 2005 when the museum was newly open to the public, the museum wished to provide guidance and assistance to local residents for industrial transformation other than running B&B through a community development movement and the introduction of metal craft techniques, which is a form of cultural and creative industries, to the local residents as an attempt to buffer the impact of the PPIP scheme in the Phase II construction on local B&B and retailers. Therefore, the museum organized metal craft classes from 2005 to 2010 for a consecutive period of five years, arranged classrooms for the exclusive use of metal crafts, cultivated community talents of metal craftsmanship, and organized a biennial national-wide metal craftsmanship contest from 2007 onwards, hoping to progressively lead the community to a distinctive metal craft settlement.

Observing the social context of the development, one can notice that as the Jinguashi community was the origin place of ores, community residents, who are largely mining technicians or in the working class, have neither experience in gold jewelry ornamentation nor in metal crafts, which are necessary for cultural and innovation industries or aesthetics. In the community's century-long history, there was neither trace of any metal craft development nor any goldsmith shops. Along with a continuous price increase of precious metals in the world, the lack of relevant industries in the museum's surrounding community, and a rudimentary academic environment, talents that were nurtured in the initially phase have moved to urban areas for further study or development. The soaring material costs also forced many people to stop halfway. As a result, the metal craft industry has not materialized in the Jinguashi community, and the museum's relevant metal craft promotion courses were temporarily put on hold since 2011 due to a shrinking annual operating budget.

Nevertheless, with respect to the museum's promotion of metal crafts, the original idea was to foster the policy direction of implanting new industries into the local area, and gradually transform the community into a competition platform that facilitates the promotion and integration of metal crafts in the regions of Taiwan. Being the most important metal craft contest in the regions of Taiwan and giving the highest amount of prize money, the metal craft contest has entered its 4th anniversary in 2013. Following the established brand name of the contest, the museum has gradually become the most important platform for exhibition, promotion, and information exchange of metal crafts.

#### 3.6.5 The Museum's Change of Direction in Mode of Museum Exhibition and Collections

In the preparatory phase and the initial four years after the museum was open to the public, the emphasis was put on reorganizing the museum's core building complex and recruiting enterprises for relevant ancillary facilities, and the direction of exhibition plans focused on an expert-oriented approach to present the history of a mining community. In recent years, along with the museum's improving relationship with the community, the plans and concepts of exhibitions have shifted to be focusing on connection with the locals. There are tourists' "mine hiking" activities led by community experts and volunteers, which stressed on local natural ecosystems, mining scenes, and stories of residents' life. There are theme-based folk festival events (such as Matsu Pilgrimage, Guan-Gong's Birthday Celebration and Green Grass Celebration) that involve local religious belief. There are also interaction with tourists through presenting alleys where local residents live in, scenes of residents' life, B&B, documentaries, and microfilms. All of these facilitate to implement a holistic marketing program to concatenate local legends, stories, and idiosyncratic tourist attractions in the periphery of the museum.

In line with the aforesaid changes, the museum's collections have transformed from mining machinery, tools, and precious metal jewelry in the initial phase to studies of community seniors' oral history, documentaries, videos, books, household appliances, cultural and historical data, and other life-related items of the century-long mining community.

### 3.6.6 Museum Visitor Changes and Trends

Collecting and comparing the annual number of visitors to the museum in the past eight years (as shown in Table 1) revealed that in the first four years after the establishment, the number of museum visitors was dropping year after year. The underlying reasons could be insufficient museum ancillary facilities and negative impacts due to a repeatedly deteriorating relationship with the community. After the unsuccessful BOT project under the PPIP scheme when the museum was in the Phase II construction in 2008, the museum waived admission fees and restored residents' old routes of movement in life, resulting in an increased visitor in number since 2009. From 2009 onwards, the annual increase rate of visitors was 31%, 17%, 13%, 7% respectively until the visitor number reached 12.5 million in 2012, which was the peak since the opening. Observing the serious traffic congestion on holidays, it can be inferred that the slow annual visitor increase could be attributed to uneasy transportation in mountains. Therefore, unless the transportation to the outside world can be improved, increase in visitor number in the future is still restricted by the total traffic load on holidays.

### 3.6.7 The Trend of Museum Development and Local B&B

The study of museum visitors in the past eight years revealed that on average of about 22.5% of visitors expressed their need for accommodation (as shown in Table 2) in their comprehensive museum visit plan. When the local government increased a lot more public buses for shuttle services, and prolonged the service hours of buses in the morning and in the evening in 2011,

such change instead considerably reduced tourists' need for staying overnight. However, tourists who needed accommodation and opted for staying in B&B near the museum showed a trend of stable annual growth. After unsuccessful openings of tenders for the museum's ancillary commercial facilities in 2008, community residents were particularly willing to invest in improving the environment of B& B, resulting in the improved B&B in terms of quality and quantity. Therefore, tourists who chose to stay in B&B near Jinguashi increased from 6.6% to 15% in 2009, and showed a stable annual growth in subsequent years.

### 3.6.8 The Trend of the Museum's Operating Expenses and Operating incomes

The collection of the museum's operating expenses in the first eight years plus the official general estimate of the museum's operating expenses in 2013 and 2014 indicated that a stable operating expense of approximately 73.15 million per annum was required for the initial four years, and a stable operating expense of approximately 110.77 million per annum was required for 2009-2012. However, there was an obvious trend of decline in operating expenses from 2012 onwards (as shown in Figure 1).

After the failed PPIP scheme in 2008 and the implementation of the waived admission charges policy, the operating incomes in 2009 and 2010 showed a significant drop. However, along with the increased annual number of tourists, money collected from museum activities such as gold panning, tunnel experience, and DIY gold craft making started to show a trend of increase over years from

2011 onwards with an average income-to-expense ratio of 44.6% in the initial four years. After the income-to-expense ratio hit the bottom at 7.6% in 2010, the operating

expenditure has been declining steadily in recent years while the operating income and the tourist number showed a trend of increase over the years (as shown in Figure 2).

**【 Table 1 】 2005-2012 annual visitor number**

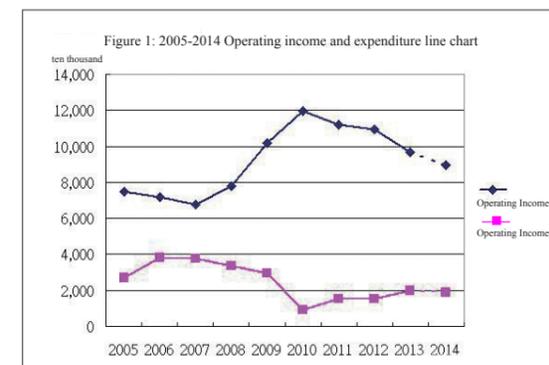
Year	2005	2006	2007	2008	2009	2010	2011	2012
Number of Visitors	924,390	793,263	664,694	665,479	874,479	1,026,248	1,167,203	1,252,415

**【 Table 2 】 2005-2012 museums visitors' demand for accommodation**

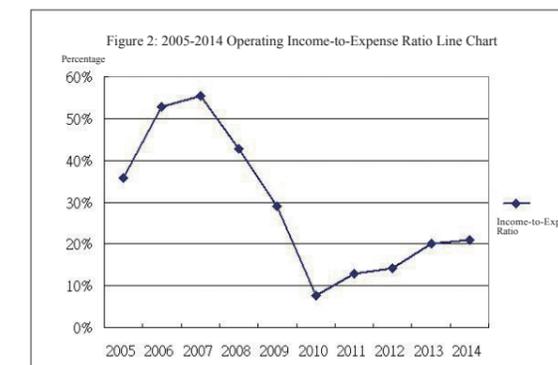
Year	2005	2006	2007	2008	2009	2010	2011	2012
Tourists who took a more-than -one-day trip and needed accommodation	21.5%	26.3%	20.1%	22.7%	24%	33%	13.3%	18.7%
Bed and Breakfast (B&B) near Jinguashi	2.1%	3.5%	3.6%	6.6%	15%	21%	20.1%	21.5%

**【 Table3 】 2005-2014 Operating incomes and expenses table**

Year	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Operating Expense	7,477	7,203	6,773	7,808	10,199	11,974	11,204	10,932	9,679	8,981
Operating Income	2,682	3,803	3,756	3,347	2,958	918	1,547	1,550	1,980	1,886
Income-to-Expense Ratio	35.8%	52.7%	55.4%	42.8%	29%	7.6%	12.9%	14.2%	20%	21%



**【 Figure 1 】** 2005-2014 Operating income and expenditure line chart (The dotted line is the estimate value)



**【 Figure 2 】** 2005-2014 Operating Income-to-Expense Ratio Line Chart

## 4. Discussion

### 4.1 In this case “Ecomuseum”, local residents play critical roles

In the area of Jinguashi mining ruins, after the production of mineral resources stopped, the village no longer has the economic function. Economic population in the community mostly left for making a living. The majority stayed was the economic minority or non-economic population, such as the elderly or children. Therefore, the model and implementation of this museum are for economic transformation of the community. With the exposure by marketing of internationally awarded movies, the museum was founded upon the investment of local government.

In 2005, at the beginning in the operation of the museum, with the increase of tourists, regional economy was enhanced. However, at the time, the planning of transportation was not satisfying. The payment system of the museum influenced the residents’ living paths. Residents’ lives were negatively affected by wastes and traffic caused by great number of tourists. Besides, at early stage, the museum actively recruited the subsidiary business facilities, including hotels, restaurants and stores, which competed with B&B and retail business operated by the community.

With the residents’ long-term efforts, the museum was founded. However, the operation of museum interfered with residents’ lives instead of enhancing community economy. Due to the complex, at the early stage of operation of the museum, the interaction with the residents was indifferent. The residents sometimes resisted it.

After the failure of business invitation in 2008, fees and operational management of the museum was changed. Residents’ living routes in core area were restored. B&D, streets and retail stores were promoted by cooperation with the residents. Residents started reconstructing their houses by imitating repair language of museum building group. It combined buildings of core area of the museum and the residents’ community. The residents undertake the functions of additional service space of the museum. Thus, their daily routines followed the open hours and closure of the museum. Tourists increase year by year and they stay in B&B around the museum.

Local residents of this case developed regional mining tourism since they have no choice. It resulted in the concern and investment from the government. In the development, the government and residents experienced the complicated relations of planning, formation, competition, conflict and cooperation. Thus, in this case, nowadays, public and private departments cooperate with each other and provide services for tourists. It is the experience of “Ecomuseum” model.

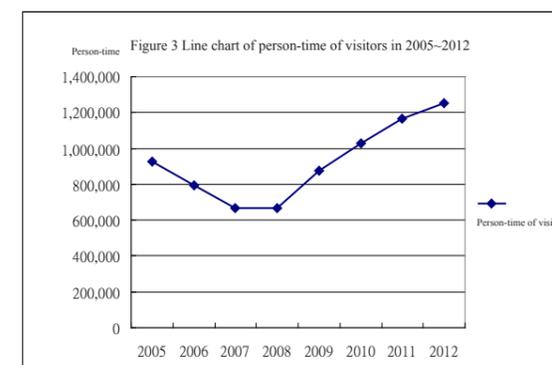
### 4.2 Formation of “Ecomuseum” and trend of tourist development

From the development to the present, this case mainly consists of two parts:

Part 1, core building group of museum: it is based on the investment of the government. The group of buildings is the imitation of buildings in the Japanese Occupation Period when the production of gold was at the peak. It includes exhibition, education, promotion and administrative facilities.

Part 2, area of community development: local residents operate the restaurants, B&B and retail stores by their own funds.

Regarding the tourists of person time/year of this case, after free entrance and cooperation with residents in 2008, number of tourists significantly increased from 665,000 in 2009 to 1,252,000 in 2012. In addition, operational expenditure of government reached the peak in 2010 and it was reducing year by year. It shows that core building group of museum operated by the government is stable. In addition, tourists who stayed in local B&B increased year by year. The increase of B&B in the community enhanced community economy. According to the phenomenon, the area of community development is expanding (see Figure 3)



【Figure 3】 Line chart of person-time of visitors in 2005-2012

The case was planned by the French term Ecomuseum. The planning of operation was based on the theory of the British scholar Conybeare (Conybeare, 1996). It tried to include private investment and introduce external capital for sustainable development. However, in this case, due to the failure of business invitation and lack of subsidiary business facilities, the number of visitors

reduced from 924,000 in 2005 (when the museum was first opened)~2008 to 665,000 person-time in 2008. After the failure to introduce external capital, idle space in the community with small-scale of capital was revived. Residents returned to the town and restored living space of community residents. They gradually undertook the surrounding business facilities of museum and solved the problem of the lack of subsidiary facilities. Thus, in 2009~2012, tourists steadily increased year by year.

According to this case, after the government invested in early facilities of core area of the museum, community economy turned to cultural tourism with the development of mining industry. If the museum can create friendly community environment and directions of exhibitions, by community construction from bottom to top, the community can develop mutually beneficial community economy and spatial development with core area of the museum; in addition, operational expenditure of museum reached the peak in 2012 and it was reducing year by year. It shows that core building group of museum operated by the government is stable. In addition, tourists who stayed in local B&B increased year by year. The increase of B&B in the community enhanced community economy. According to the phenomenon, area of community development is expanding.

### 4.3 Organization & financial sources and power and identification of management institution

From the perspective of operation in practice, museum is a persistent investment and it requires great amount of funds (Y.T. Chang, 2003). Museums must have stable funds. Thus, traditional museums tended to have the role of centralization of authority. Cultural activities out of systems of central culture and education

usually lack the resources. In order to fight for the leading role of Ecomuseum, private departments must have independent funds and operation. In Ecomuseum of France (The Museum of Man and Industry, Le Creusot-Montceau-les-Mines), the management organization changes from traditional pyramid to flat form. It significantly uses community and external professional manpower and actively encourages local residents' participation. Thus, experts tended to have disputes with the residents. It also lacked the academic precision.

In this case, in early stage of planning, it was based on the concept of Ecomuseum. Due to the limitation of sources of funding, operation of core area in the museum was traditional, management organization from top to bottom. Many exhibitions and policies were based on manager model. The museum was subordinate to department of cultural affairs of local government (financial resource) which governed other museums, such as New Taipei City Yingge Ceramics Museum, Shihsanhang Museum of Archaeology and Tamsui Historical Museum, that were based on traditional operation. Thus, this case was upon performance evaluation of the authority and museum research operated by governmental department. There was no other standard and term. This case could not adopt flat managerial organization according to experience in France.

However, with the formation of this museum and trend of tourist development, after including the scope of residents' living community, tourists traveled in core area of public museum and private community. Thus, the museum voluntarily installed the signs in large area, drew the map and included the cleaning of public streets of community in the management. Tourists travelled on the streets of the community. Because of the privacy, some living space on the first floor was changed into shops or space for exhibitions. Business of B&B and restaurants

was expanded. Residents were in charge of the decoration. The repair language, such as appearance of the buildings, was based on the imitation of buildings in core area of the museum.

The above retail stores, exhibitions and decoration upon the reconstruction of community buildings show the living style of regional literature and history workers, artists and community life as well as local legends.

Thus, the area of this museum involves expert domination "from top to bottom" in core area and presents the life scenes and memory of local community "from bottom to top". As to history of this case, the mining industry for hundred years stopped and the area was deserted. New movies then increased the business opportunities of nostalgic mining tourism. It resulted in residents' community construction for survival and transformation of community economy. As to the planning of the museum, after the failure of business invitation, two systems (museum of core area and residents in community development area) were combined and they tried to depict the whole story.

In addition, as to the repair of buildings, it adopted the community planning and formative language in the Japanese Occupation Period when the production of gold was at the peak. The appearance was old-fashioned. Thus, the residents presented new regional culture by modern building materials. This case is different from traditional museums which collected "object-oriented" relics. This museum presents the transformation from local mining ruins to regional cultural tourism. Planning of exhibitions of the museum not only is based on the history of the mining industry for hundred years, but also shows the present and future interaction between tourists and residents.

## 5. Conclusion

The term "Ecomuseum" is defined and manipulated differently in different countries of the world. However, according to experience of this study, there is no "ideal model" of operation. Regarding "Ecomuseum" of this case, the following key factors effectively maintain the sustainable development:

- (1) Planning is based on common consensus of transformation of community economy since there is no other choices.
- (2) Investment of government and planning assisted by experts.
- (3) Close combination and cooperation between museum operation and local residents' community economy.

The neighborhood of Jinguashi has been the most important mining area in Taiwan. With the declination of mining industry and for the survival of private community, the government invested in and planned the construction of "Gold Museum". The neighborhood is transformed from simple mining economy to mining cultural tourism with co-existence of the museum and community nowadays. However, with the rise of prices of commodities and precious metals for the past 25 years and progress of international mining technique, in recent years, professional teams in Australia and Germany and Central Geological Survey in Taiwan actively evaluate the possibility to re-extract the precious metal in this area. Interaction between "Ecomuseum" of this case and community is the realization of self-definition and re-definition of local culture. With the unique characteristic, it becomes the world-class tourist spot currently.

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