Economic Valuation for Cultural Heritage

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OUTLINE

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2. The Concept of Cultural Heritage Value
3. Valuing Cultural Heritage
4. Case Studies: Valuing Prambanan Temple
5. Investing in Cultural Heritage

DEFINITION OF ECONOMIC HERITAGE

‘Cultural heritage’: The tangible and intangible expression of the ways of living developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expression and values (ICOMOS 2002

‘Intangible Cultural heritage’: The practices, representations, expressions, knowledge, skills—as well as the instruments, objects, artefacts and cultural spaces associated therewith—that communities, groups and, in some cases, individuals recognize as part of their cultural heritage.

‘Natural heritage’: Land, water, landscapes, geological and physio-geographical formations, biological diversity, biological processes, and ecosystem-provided environmental services that are valued and have significance. (UNESCO 1972, 2011)

The economics of heritage has emerged as a distinct field of research and empirical application in cultural economics. *Cultural Economics* is a branch in economics that investigates and analyses the contribution to and role of the creative industries and their products and services in the overall economy.

CONCEPT: HERITAGE PRODUCT CHARACTERISTIC

Heritage Product is divers and unique.

Non excludable

It is impossible or very costly to exclude others from enjoying the particular heritage product.

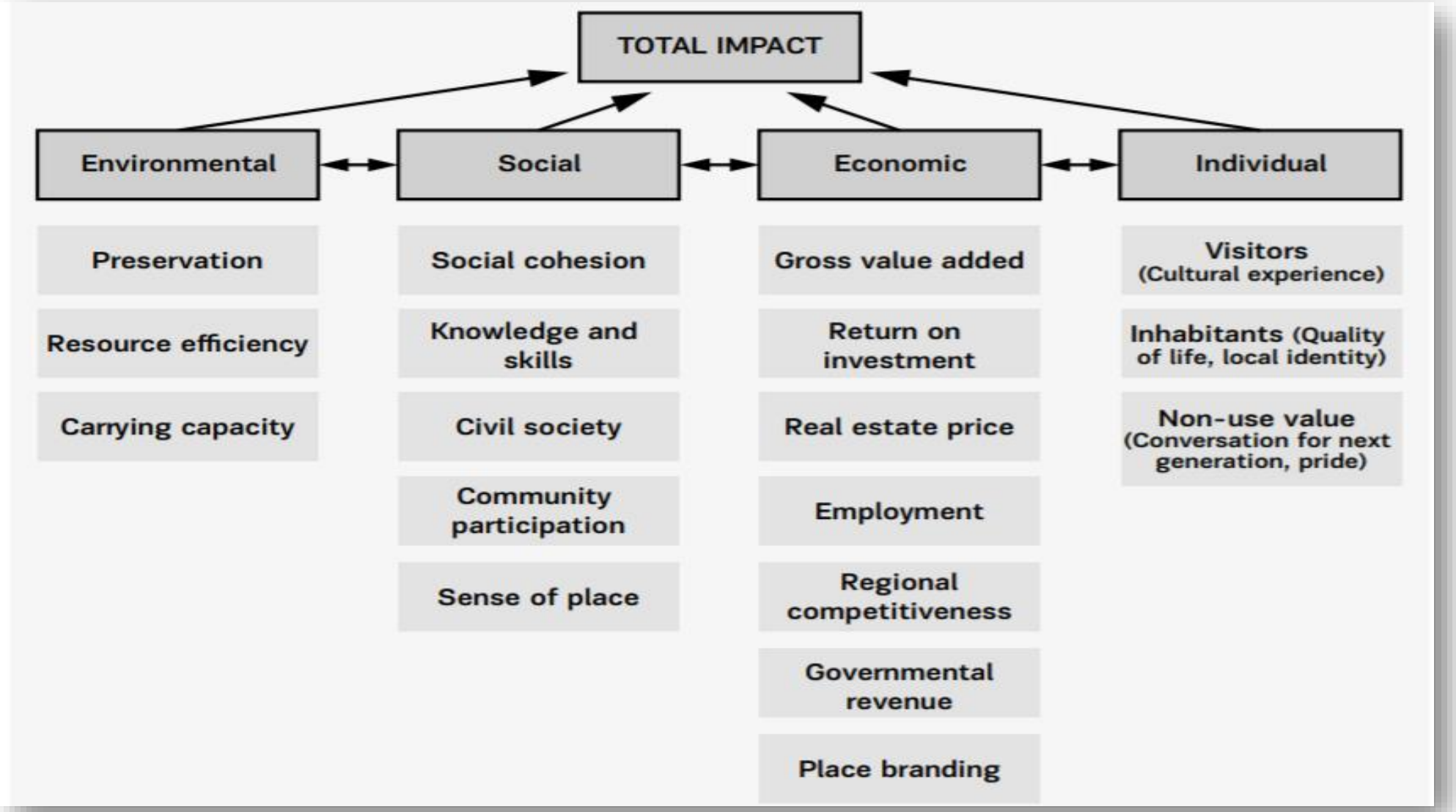
Non rival

two or more people can enjoy the heritage product without interfering or preventing each other from enjoying the same

However, when the use of the product by an additional person diminishes the enjoyment by another person (congestible) can cause characteristic to change from non rival to rival and non excludable to excludable.

The characteristic of heritage product is similar to public goods. **This makes heritage product not attractive to the private sector therefore there is no marketplace to obtain the market value**.
Usually heritage product need funding from government.

CONCEPT: HERITAGE PROJECT'S BENEFIT

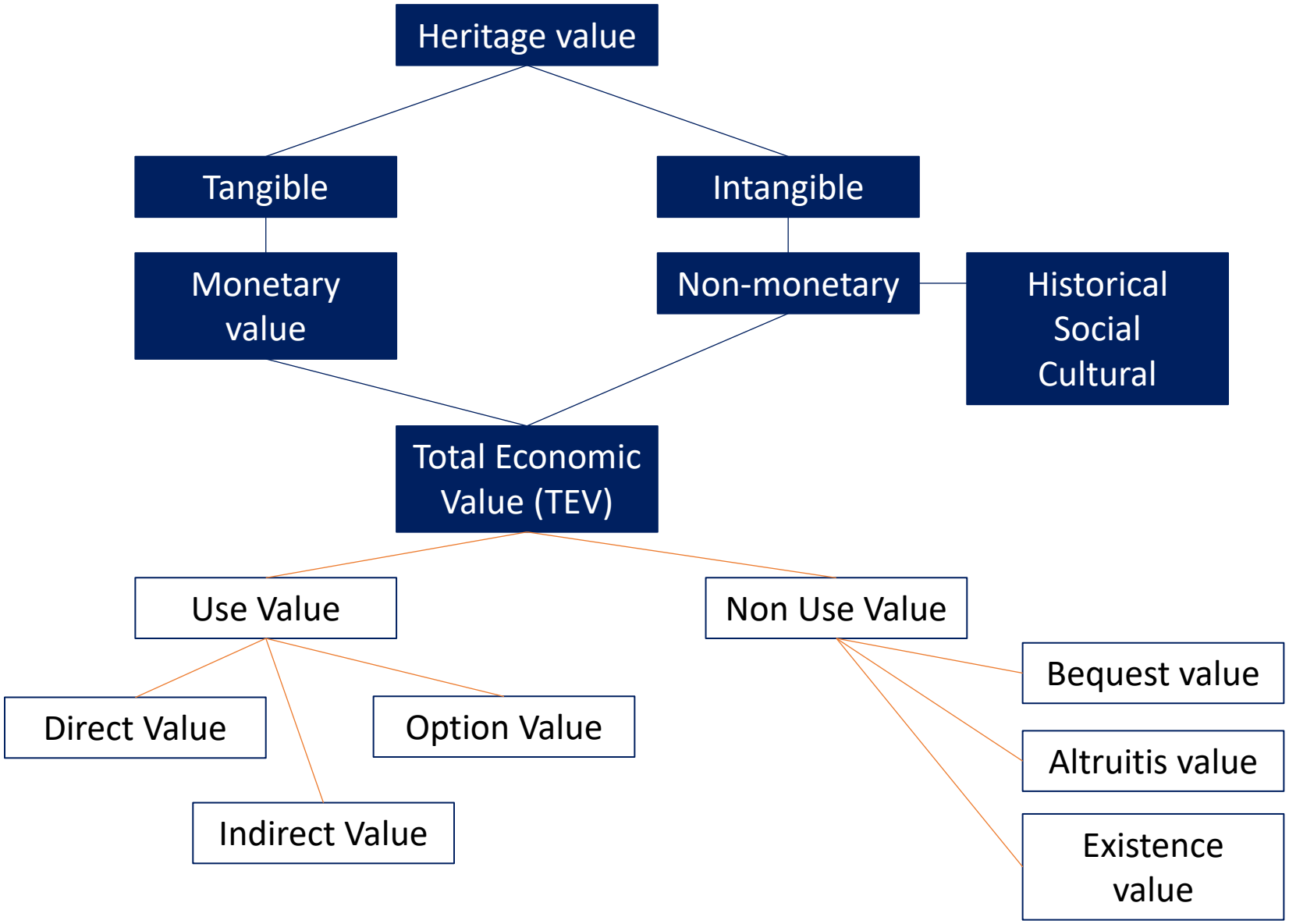


Source: Mergos, 2017

CONCEPT: VALUING CULTURAL HERITAGE

- Pro conservation group: insist that we must conserve at all cost while for those that don't find conservation important will insist that funding be spent on the utilities that are important.
- Preserving, restoring, and maintaining cultural heritage requires financial resources. While the financing resources are limited, how do we decide who should be responsible to protect heritage? Government/people or should be the heritage product be self-sustaining?
- Cultural heritage, like the environment, consists of public capital assets that provide to society a stream of services, that are non-marketed but which can be quantified and valued.
- For selecting heritage projects and public policy measures we need to understand how the concepts and methods for valuing cultural heritage goods and services are defined and used.
- Need to understand the economic characteristics of goods and services provided by cultural heritage assets, thus to know how to estimate benefits and costs of projects in the sector of cultural heritage.

METHOD: CULTURAL HERITAGE VALUE



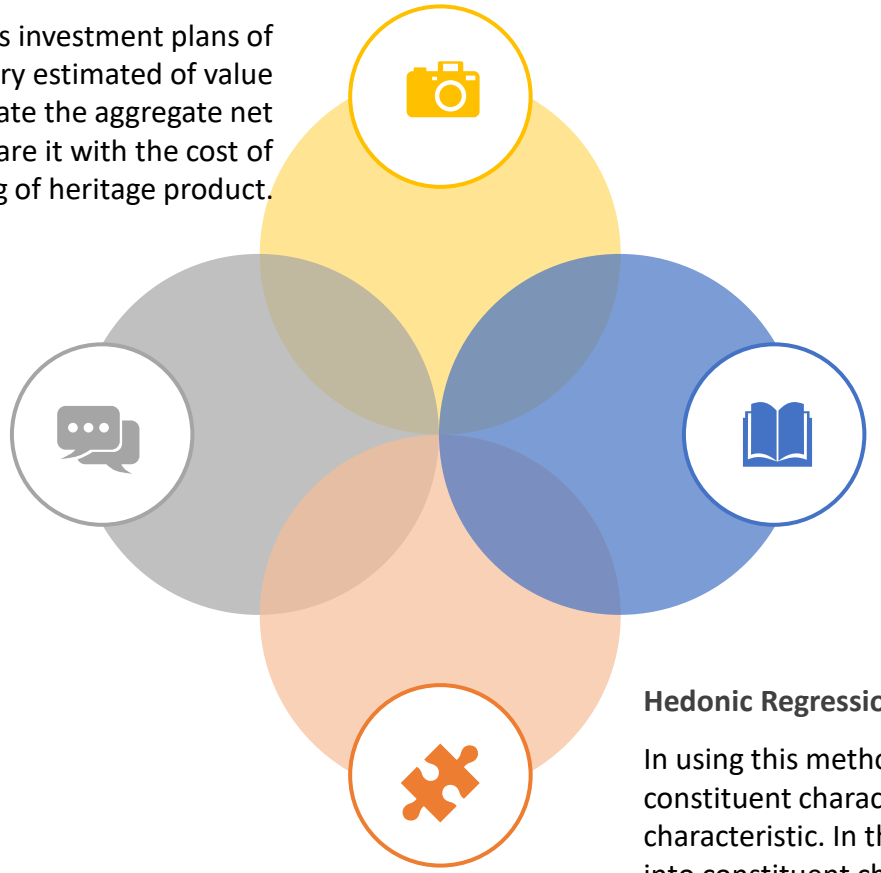
In order to capture both the tangible and intangible value the concept of TEV (Total economic Value) is used.

TEV includes the benefits that heritage creates from using the heritage directly which is use value and also benefit derived from not using it (non-use value).

METHOD: CULTURAL HERITAGE VALUE

Cost Benefit Analysis

Measure cost and benefits of alternative scenarios investment plans of development programs. It can provide monetary estimated of value heritage. This method is used when we need to estimate the aggregate net benefit from using the heritage product and compare it with the cost of providing of heritage product.



Contingen Valuation Method

Estimating the value that a person place on a heritage product. This method uses a questionary survey asking people their wtp (willingness to pay) for the benefits that they receive from heritage product or willingness to accept compensation for the loss of heritage product. this method usually used to estimates non-use value

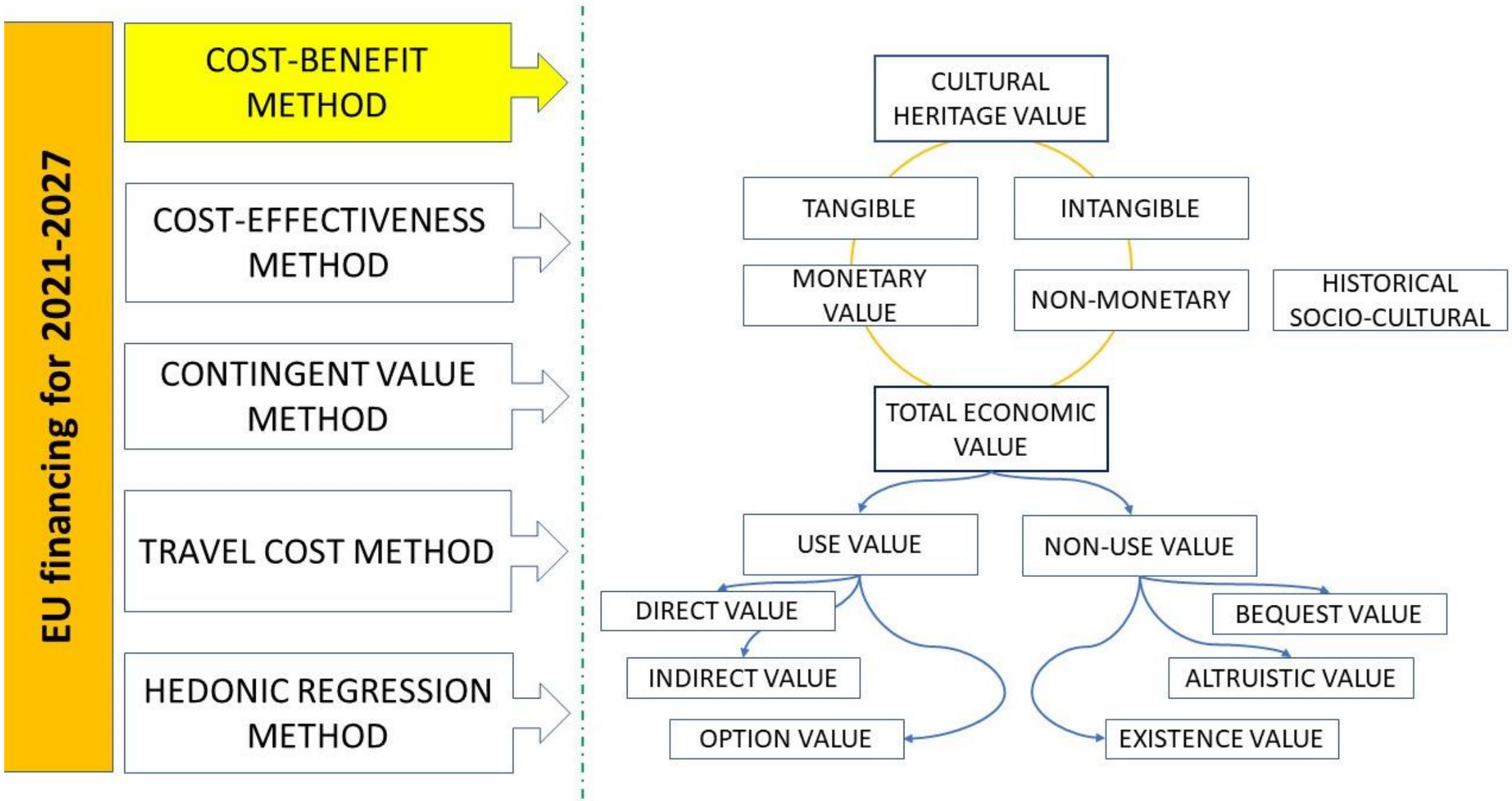
Travel Cost Method

Measure the amount that people are prepared to pay in making the journey to visit a heritage product. This concept uses the amount that visitor is willing to spend to visit the heritage product, and include the time spent for travelling as part of the value.

Hedonic Regression Model

In using this method, heritage buildings or historical site is broken up into constituent characteristic and obtains inferences the value of each characteristic. In this method heritage building or historical site is broken up into constituent characteristic and obtains inferences of the value of each characteristic. This method calculated using econometric models that showing the price how the price would change if the quality of relevant attributes change. This method benefits such as water views and building characteristics

Maintenance cost method → Measure the value that people are willing to pay to maintain the heritage product..
Difference in difference model → Compares the changes in the outcome between two groups (treatment group and the comparison group).


EU financing for 2021-2027
COST-BENEFIT METHOD
COST-EFFECTIVENESS METHOD
CONTINGENT VALUE METHOD
TRAVEL COST METHOD
HEDONIC REGRESSION METHOD
CULTURAL HERITAGE VALUE
TANGIBLE
INTANGIBLE
MONETARY VALUE
NON-MONETARY
HISTORICAL SOCIO-CULTURAL
TOTAL ECONOMIC VALUE
USE VALUE
NON-USE VALUE
DIRECT VALUE
INDIRECT VALUE
OPTION VALUE
BEQUEST VALUE
ALTRUISTIC VALUE
EXISTENCE VALUE

CASE STUDIES: VALUING PRAMBANAN TEMPLE

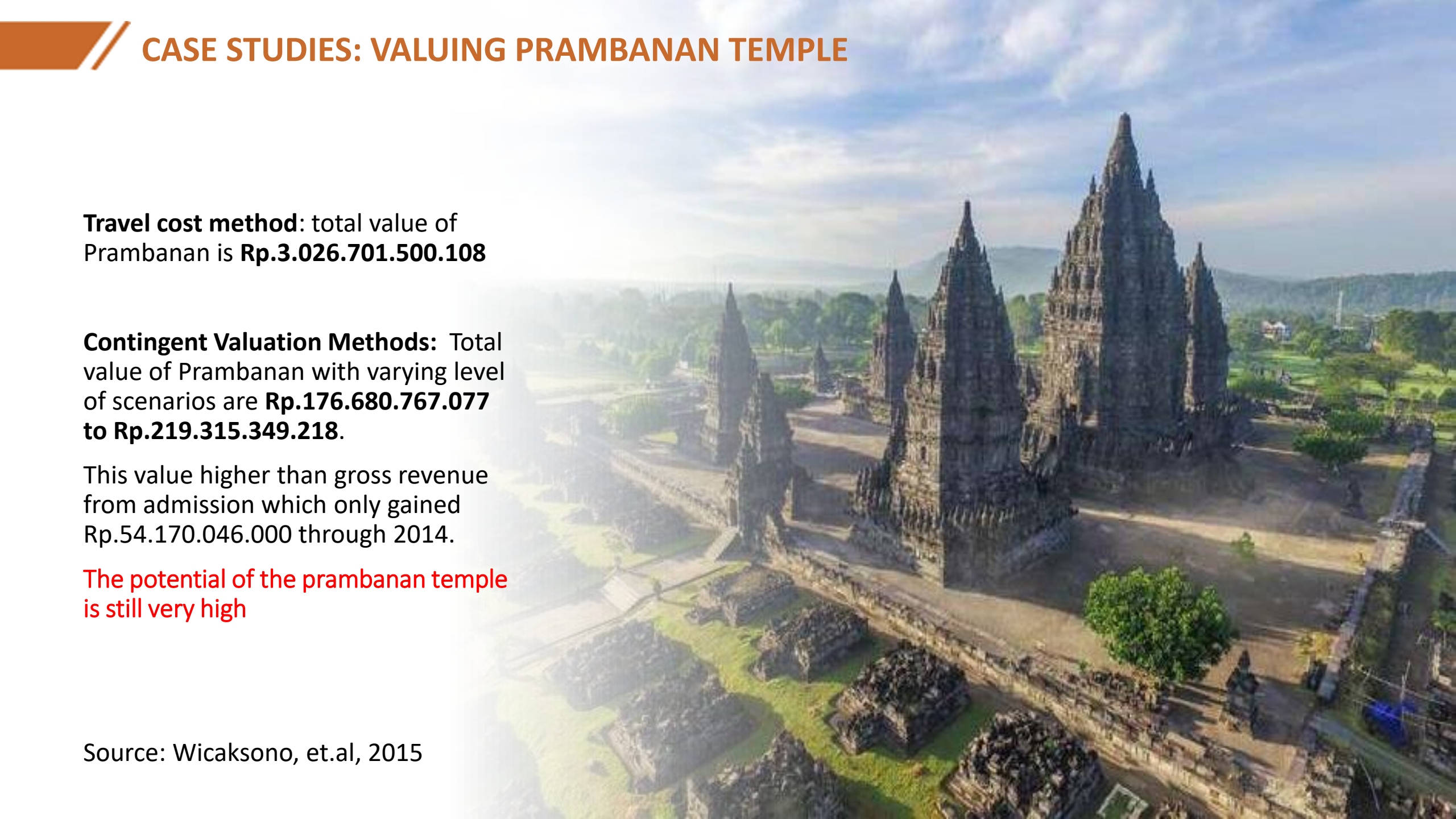
Travel cost method: total value of Prambanan is **Rp.3.026.701.500.108**

Contingent Valuation Methods: Total value of Prambanan with varying level of scenarios are **Rp.176.680.767.077 to Rp.219.315.349.218**.

This value higher than gross revenue from admission which only gained Rp.54.170.046.000 through 2014.

The potential of the prambanan temple is still very high

Source: Wicaksono, et.al, 2015



METHODOLOGY: ESTIMATION

This study uses two methods in the analysis stage, the method of travel costs and contingency valuation method. The second equation modeling method is as follows

Travel Cost Method:

$$V = \beta_0 + \beta_1 TC + \beta_2 INC + \beta_3 EDU + \beta_4 AGE + \beta_5 DSB + \beta_6 DQ$$

Contingent Valuation Method

$$WTPi = \beta_0 + \beta_1 TC + \beta_2 INC + \beta_3 EDU + \beta_4 AGE + \beta_5 DQ$$

where:

V	: number of visits in Prambanan Temple Compounds
WTP	: willingness to pay for Prambanan Temple Compounds
TC	:travel cost to visit Prambanan Temple Compounds
INC	: Income
EDU	: education level
AGE	: age
DSB	: dummy for substitute tourist attraction beside Prambanan Temples Compound
DQ	: dummyfor attraction quality perceived of Prambanan Temple Compounds
i	: scenarios

Source: Wicaksono, *et.al*, 2015

METHODOLOGY: ESTIMATION RESULT

Table 1. Descriptive Statistic

	Travel Cost	Number of Visits	Income	Education Levels (in years)	Age
Mean	203.276,4	2,858	10.492.311	13,63208	37,85
Median	175.000	2	6.000.000	15	37
Maximum	610.000	14	72.000.000	17	70
Minimum	3.500	1	750.000	6	21
Obs	**106**	**106**	**106**	**106**	**106**

Source: Wicaksono, *et.al*, 2015

Result in Table 1 shows that travel expenses average of Rp.203,276.4 and the average visitor visit Prambanan Temple Compounds as much as 2.8 times a year. The mean value of age of the respondents in this study is 37.85 with an average education of 13.6 years or graduated from high school.61 percent of respondent used private vehicles to this area which make their travel cost higher than used public transportation. reasons behind this were they were not only visit prambanan temple but also visit other destinations like Malioboro street or Borobudur Temple and using private vehichle was the easiest way to do that.

METHODOLOGY: ESTIMATION RESULT

Tabel 2. Williness to Pay at Various Scenarios

	Initial WTP	WTP at Enviromental Scenario (I)	WTP at Conservation Scenario (II)	WTP at Facilities Scenario (III)
Mean	42.283	51.028,30	51.575,47	49.113,21
Median	30.000	35.000	35.000	35.000
Maximum	360.000	280.000	298.000	222.000
Minimum	5000	30.000	30.000	30.000
Standart Deviation	48.702, 55	51.875	51.835,63	47.658,77
Obs	**106**	**106**	**106**	**106**

Source: Wicaksono, *et.al*, 2015

Table 2 shows mean value of WTP in this study was Rp.42.283 on initial conditions, and Rp.51.028 the first scenario, Rp.51.575,47 in scenario II, and Rp.49.113,21 in scenario III. All values above the current admission fee for visitors at Prambanan Temple Compounds (Rp.30.000). WTP in second scenario was the highest value above the other scenarios, this result suggest that respondent more concern about conservation condition in this area rather than other conditions such as increased the facilities and amenities.

METHODOLOGY: ESTIMATION RESULT

Table 3. TCM and CVM Results

Variables	Methods				
	TCM	CVM			
		Intial	Scenario I	Scenario II	Scenario III
Travel Cost	-1,42E-06*	0,000000522	0,000000122	0,0000000881	-0,0000000781
	(-3,073526)	(1.248572)	(0.384188)	(0.288225)	(-0.267290)
Income	-2,68E-08*	0,0000000287*	0,0000000275*	0,0000000279*	0,00000000273*
	(-4,083153)	(7.033442)	(7.706712)	(7.607774)	(7.773647)
Age	0,015193*	-0,002298	0,000691	-0,008908	-0,006404
	(2,555155)	(-0.119674)	(0.044497)	(-0.557341)	(-0.432268)
Education	-0,15788	-0,010876***	-0,001889	-0,002714	-0,004481
	(-1,231684)	(-1.749596)	(-0.380755)	(-0.574934)	(-0.966803)
Perceived	1,036292***	0,572356**	0,182446**	0,219572*	0,166419**
Quality	(1,772847)	(2.365477)	(2.563599)	(3.174052)	(1.913492)
Attraction	-1,42E-06*	-	-	-	-
Substitute	(-3,073526)				

Note: * statistical significance at α 1%
** statistical significance at α 5%
*** statistical significance at α 10%

Source: Wicaksono, *et.al*, 2015

Studi Kasus: REVITALIZING HISTORICAL BUILDING

Meningkatkan nilai tambah dan tetap melestarikan warisan sejarah

Name: University of Milan
Location: Milan, Italy
Date of construction: 1456
Date of renovation: 1958
Original function: Hospital
New function: University

Name: Orsay Museum
Location: Paris, France
Date of construction: 1810
Date of renovation: 1986
Original function: Railway station
New function: Museum

Name: Royal Palace of Milan
Location: Milan, Italy
Date of construction: 16th century
Date of renovation: 1978-1989
Original function: Palace
New function: Cultural centre

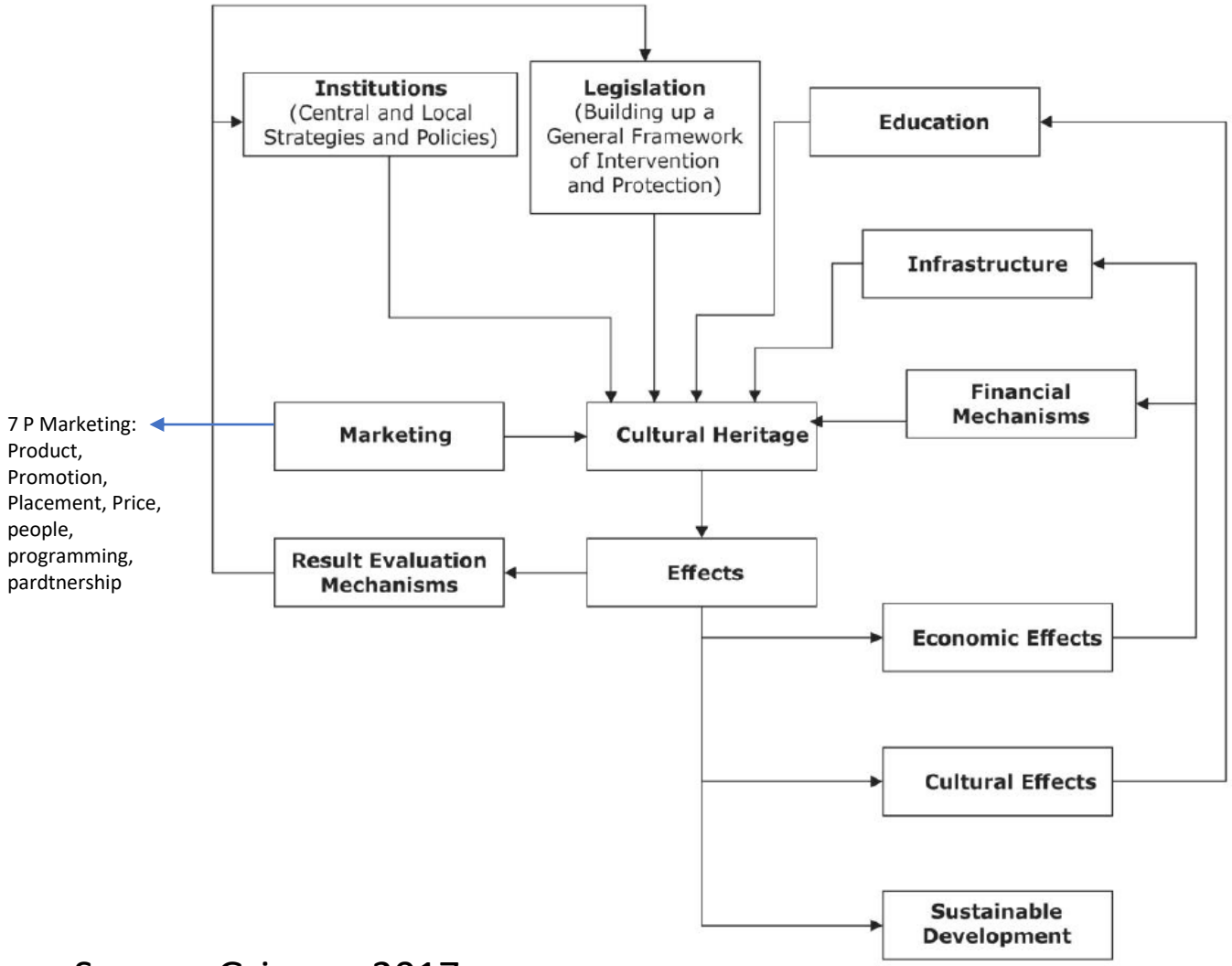
Name: Gasometers
Location: Vienna, Austria
Date of construction: 1896-1899
Date of renovation: 1999-2001
Original function: Gas storage
New function: Housing complex

Name: Il Gattopardo Cafe
Location: Milan, Italy
Date of construction: 1900s
Date of renovation: 2001
Original function: Church
New function: Entertainment place

- ***Adaptive reuse strategy*** *(eco sirkular concept)* on abandoned or unused heritage buildings.
- Increase value added: economically, socially, culturally and to preserve heritage buildings in urban areas

Sumber: Misilisoy, 2016

INVESTMENT IN CULTURAL HERITAGE



Source: Grigore, 2017

Cultural heritage could be considered an ecosystem, with multiple inputs and outputs and with a network of connections both within and outside.

In order to capitalize on cultural heritage, a multicultural approach is needed, we need not only specialists (art historians, construction engineers, architects, etc.) but also managers, attorneys and civil society. This approach involves the conjugation of different kinds of procedures.

TERIMAKASIH

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