

Review on the process of identifying a city brand slogan and power brand assets: The case of Daejeon, Korea

著者	Gim Tae-Hyoung Tommy, Yang Kwang Sik, Kang Byung Su, Yang Kwang Sik
journal or publication title	IRSPSD International
volume	7
number	4
page range	37-55
year	2019-10-15
URL	http://doi.org/10.24517/00057216

doi: 10.14246/irspsd.7.4_37



Review on the process of identifying a city brand slogan and power brand assets

The case of Daejeon, Korea

Tae-Hyoung Tommy Gim¹, Jeongseok Choi², Byung Su Kang³, and Kwang Sik Yang^{4*}

1 Graduate School of Environmental Studies, Seoul National University

2 Department of Planning and Design, Joongbu University

3 Department of Public Administration, Chungnam National University

4 Department of Public Administration, SoonChunHyang University

** Corresponding Author, Email: ksyang@sch.ac.kr*

Received: June 7, 2018; Accepted: February 28, 2019

Key words: City Brand Asset, Place Marketing, Analytical Hierarchy Process, Importance-Performance Analysis, Daejeon

Abstract: This study, as part of the 7030 project, which celebrates in 2019 the 70th anniversary of the establishment of Daejeon as a city and the 30th anniversary of its promotion to a Metropolitan City, places its first purpose on analysing the internal and external marketing-related environments of the city and accordingly, identifying core values (keywords) for the city marketing and finally, suggesting an alternative brand slogan comprising the keywords. A second purpose is, for the purpose of achieving the slogan, to define power brands through the exploration, classification, and assessment of the existing brand assets. Firstly, this study identifies 18 keywords based on the internal and external environmental analysis and, based on two criteria, whether the value is shared by citizens and how it differentiates Daejeon from other cities. The study suggests a revised slogan: “a city of innovation and capacity, pursuing a life of composure and dignity”. Subsequently, to actualize this slogan, this study detects a total of 423 city brand assets and classifies them into eight categories, based on which it conducts an AHP analysis and computes the relative weights of the categories, while it conducts the IPA to evaluate the levels of the recognition and importance of each asset. The AHP weight evaluation, as well as the IPA, is conducted by a citizen planning board of about 50 people. The results of such a group evaluation differs by the background of the rater, and acknowledging the tendency, this study suggests how to interpret and utilize the evaluation results. Finally, it computes the final power brand asset score, which is a function of the AHP weight and IPA point. Such a power brand selection process is then used to develop guidelines and principles for the marketing of each category of brand assets.

1. INTRODUCTION

Because of excessive urban competition in line with increasing globalization and expanding local autonomy, as well as rapid changes in the internal and external urban environment such as the fourth industrial revolution, world cities face strong requests for the vitalization of regional economies and culture and the maintenance/reinforcement of their urban competitiveness. As a means of responding to these requests, a city uses a brand in order to promote its image

and/or to create its identity. Meanwhile, for Daejeon, Korea, the year of 2019 is the 70th anniversary of the city's establishment and the 30th anniversary of its promotion to a Metropolitan City. As part of 7030 project, the official celebration of this anniversary, the city has been attempting to upgrade its city brand. This attempt is particularly meaningful as the current brand has been evaluated extremely negatively. In fact, Yeo and Kim's study (2013) conducted a survey to ask 20 Korean naming and slogan experts to evaluate the slogans of the 16 Metropolitan Cities and Provinces of Korea, and as a result, the slogan of Daejeon, "It's Daejeon", was ranked the lowest. Also, [Lee, H. and Shin \(2015\)](#) evaluated the brand slogans in terms of attitudes and behavioral intentions and reported that for both, the slogan of Daejeon was the poorest.

At this juncture, this study gives an overview of the internal and external settings for the city branding of Daejeon, and on this basis it critically reviews a real-world project that develops a long-range city branding and marketing masterplan for the city. The major purposes of the project are to conduct a census of the existing city brand assets of Daejeon and to select "power" brand assets, and as the principal participants of the process of the project, the authors intend to report the objective and perceived results of the branding-related analyses and evaluations, and to deliver planning implications. Specifically, this study focuses on the identification of core values (keywords) and the development of a brand slogan as an integration of the keywords, as well as the establishment of a database of the city brand assets from which it plans to draw power brand assets.

2. ENVIRONMENTAL ANALYSIS OF THE STUDY AREA

In the field of city branding and marketing, the environmental analysis of the Political, Economic, Social, Technological, Environmental, and Legal (PESTEL) aspects are conventions, including the demographic, social, and industrial structures of a city ([Fahey & Narayanan, 1986](#)). First, Figure 1 presents the population pyramid of Daejeon. Between two pyramid shapes for advanced societies, bell- and spindle-shaped pyramids, Daejeon has the latter type, that is, it experiences a low fertility rate and population contraction. Indeed, according to [Statistics Korea \(2017\)](#), as of 2015, Daejeon faces the most rapid population reduction at the metropolitan/provincial level. Meanwhile, between the urban and rural types of the population pyramid (star- and gourd-shaped pyramids, respectively), Daejeon is additionally equipped with the star-shaped population pyramid, which is characterized by the influx of young people for education and/or employment. Also, because of the rapid aging across the entire of Korea, the largest age group has become those in their 40's.

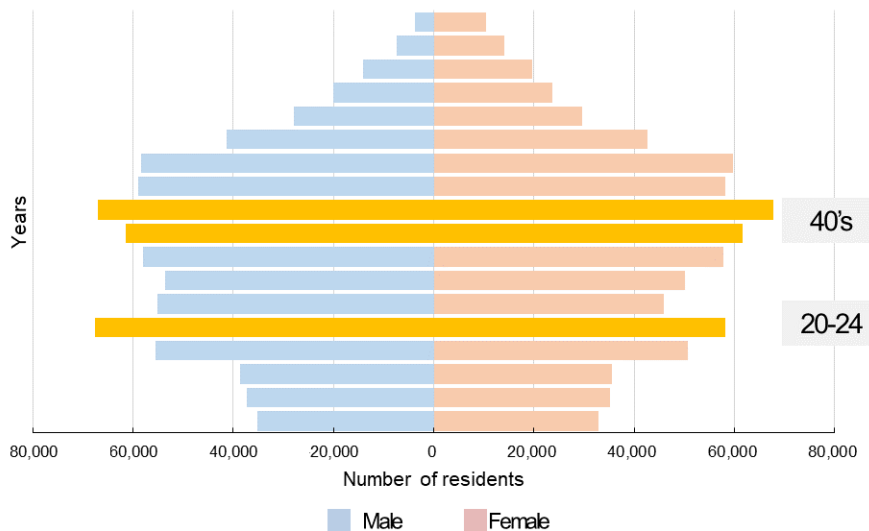


Figure 1. Population pyramid of Daejeon in 2016

Note: The bar interval is five years. Source: [Statistics Korea \(2016\)](#)

Overall, Korea was once an UN-defined “aging society” (in 2000, 7% of the population was made up by people more than 65 years of age) and in 2017 became an “aged society” (14%). It is due to become a “super-aged society” in 2026 (20%) ([Statistics Korea, 2017](#)). As such, senior marketing strategies and programs (e.g., medical tourism) have often been called on to prepare in response to this rapid aging. As discussed above, however, Daejeon has a low proportion of the senior population and instead, it has a substantial proportion of the young population, so it (simultaneously) requires marketing alternatives for welcoming the inflow of the youth. Nonetheless, the current leisure and living infrastructure appears to be biased to the elderly rather than the youth. For example, the 2016 National Travel Survey ([2016](#)), which is administered by the Korean Ministry of Culture, Sports and Tourism, shows that 38% of domestic tourists to Daejeon are those in their 60’s and above; as the highest at the metropolitan/provincial level, the rate is far above the national average of 22% and substantially higher than that of the second-ranked Jeongnam (31%).

Regarding the industrial structure, Daejeon is largely dependent on service and information technology (IT) industries. As reported in the 2016 Daejeon Regional Industrial Development Program ([Daejeon Metropolitan City, 2016b](#)), service businesses occupy 89.9% (27.19% of wholesalers and retailers, 27.19% of hotels/restaurants, 27.19% of other private services, 10.09% of transportation businesses, and others) and other sectors (manufacturing, construction, utilities, agriculture/forestry/fishery, and mining) comprise only 10.01%. Especially, in respect to the IT field, [EasyPark Group \(2017\)](#) reported in its 2017 Smart Cities Index that among more than 500 cities in the world, Daejeon is ranked the 63rd, which is comparable to Brussels, the capital of Belgium (62nd) and Lisbon, the capital of Portugal (64th).

Such a technology-centered industrial structure is not unrelated to the historical image of Daejeon: science city, transportation city, and so on. In fact, as presented in Table 1, the regional image of the Daejeon area was centered on science and transportation. As for the positive aspects of the image, transportation convenience was consistently ranked the first. On the other hand, monotonousness and lack of enjoyments were persistently considered major negative aspects.

Table 1. City image of Daejeon

	Ranks	Year 2004	Year 2007	Year 2010	Year 2013	Year 2016
Regional image	1st	Science	Science	Science	Science	Science
	2nd	Transportation	Administration	Administration	Transportation	Transportation
	3rd	Hot spring	Transportation	Transportation	Territory	Administration
	4th	Research	Territory	Education	Administration	Territory
	5th	Administration	Education	Territory	Education	Education
	6th	Territory	Information	Culture	Economy	Culture
Positive evaluation	1st		Transportation convenience	Transportation convenience	Transportation convenience	Transportation convenience
	2nd		Climate conditions	Climate conditions	Climate conditions	Facilities
	3rd		Safety	Facilities	Facilities	Educational aspects
Negative evaluation	1st		Souvenirs	Souvenirs	Hygiene	Things to experience
	2nd		Monotonousness	Enjoyments	Souvenirs	Monotonousness
	3rd		Enjoyments	Tourist information systems	Historic relics	Enjoyments

Sources: [Daejeon Sejong Research Institute \(2013\)](#) and [\(Daejeon Metropolitan City, 2016a\)](#)

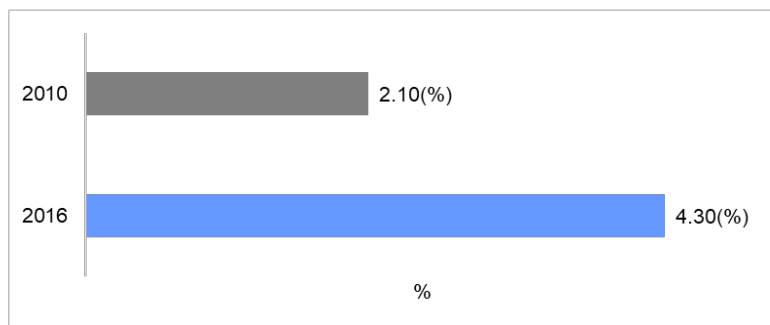
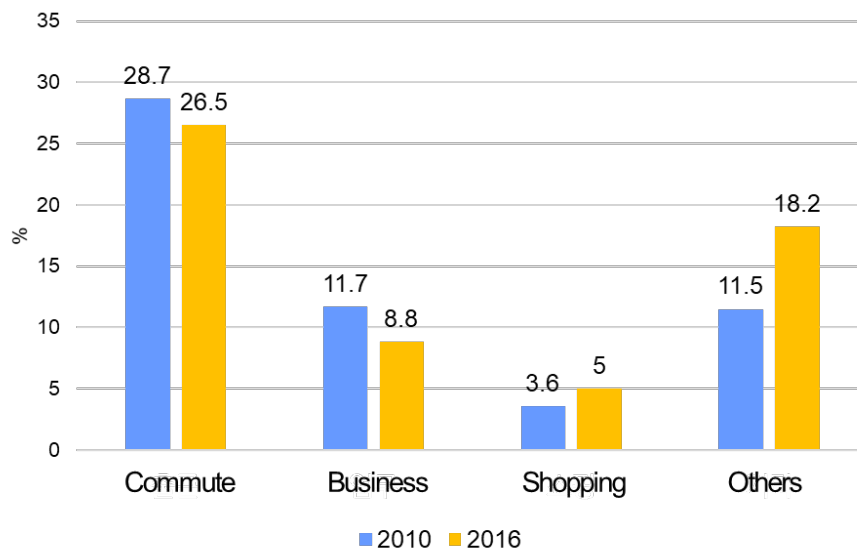


Figure 2. Weekday internal trip purposes in Daejeon and inbound commutes to Daejeon from its neighbouring cities and counties

Sources: [\(Korea Transport Institute, 2016a, 2016b\)](#)

This study analysed the distribution of weekday internal purpose-based trips and the jobs–housing balance. In terms of the ratios of the trip purposes, Figure 2 shows that in lieu of a reduction in “compulsory” purposes of trips, such as for commuting and business, the proportions of those trips for “discretionary”

purposes have become larger, such as for shopping, leisure/recreation/social, and personal affairs. This result denotes the improvement of the mobility among Daejeon citizens; it is partially associated with the recent national-scale syndrome of walk–life balance. Secondly, as presented in Figure 2, the rate of commuting from neighbouring cities/counties to Daejeon became higher in 2016 compared to 2010. This phenomenon does not appear to be a sign of the rise of the gravity of Daejeon, but of the move of original Daejeon residents to neighbouring areas for the saving of high residential costs, which indicates the reduced jobs–housing balance. This expansion of the external commuting may be partially supported by highly convenient inter-regional transportation systems in Daejeon.

Additionally, this study analysed district/county-level O–D (origin–destination) distributions of external trips using data from KTDB (Korea Transport Database). Figure 3 shows that commuting trips to Daejeon (247 thousand) are more than the trips from Daejeon (200 thousand), which partially supports the above argument that this city experiences an outflow of its residents to neighbouring areas. Meanwhile, the departure and arrival zones of commutes are mostly the capital region and neighbouring provinces, which are convenient to access and geographically closer, respectively, but the zones for nonmandatory purposes of trips, such as shopping and leisure, are wider, that is, they go beyond the capital and neighbouring provinces. This phenomenon can be in part attributed to the fact that as mentioned above, Daejeon lacks facilities that can serve various leisure and living needs.

In short, Daejeon experiences a reduced fertility rate and the population is becoming older, but compared to other metropolitan cities and provinces, the proportion of the senior is relatively low. The overwhelming importance of the service sectors (especially the IT industry) attracts the young population, but supportive infrastructure for this population lacks (the city is equipped more with senior-friendly leisure facilities). In addition to lacking leisure infrastructure, convenient transportation brings about the outflow of permanent residents. In this sense, Daejeon brands are required to highlight the merits of science and transportation, and also they should be expanded to things to enjoy and experience for which Daejeon has a poor reputation.

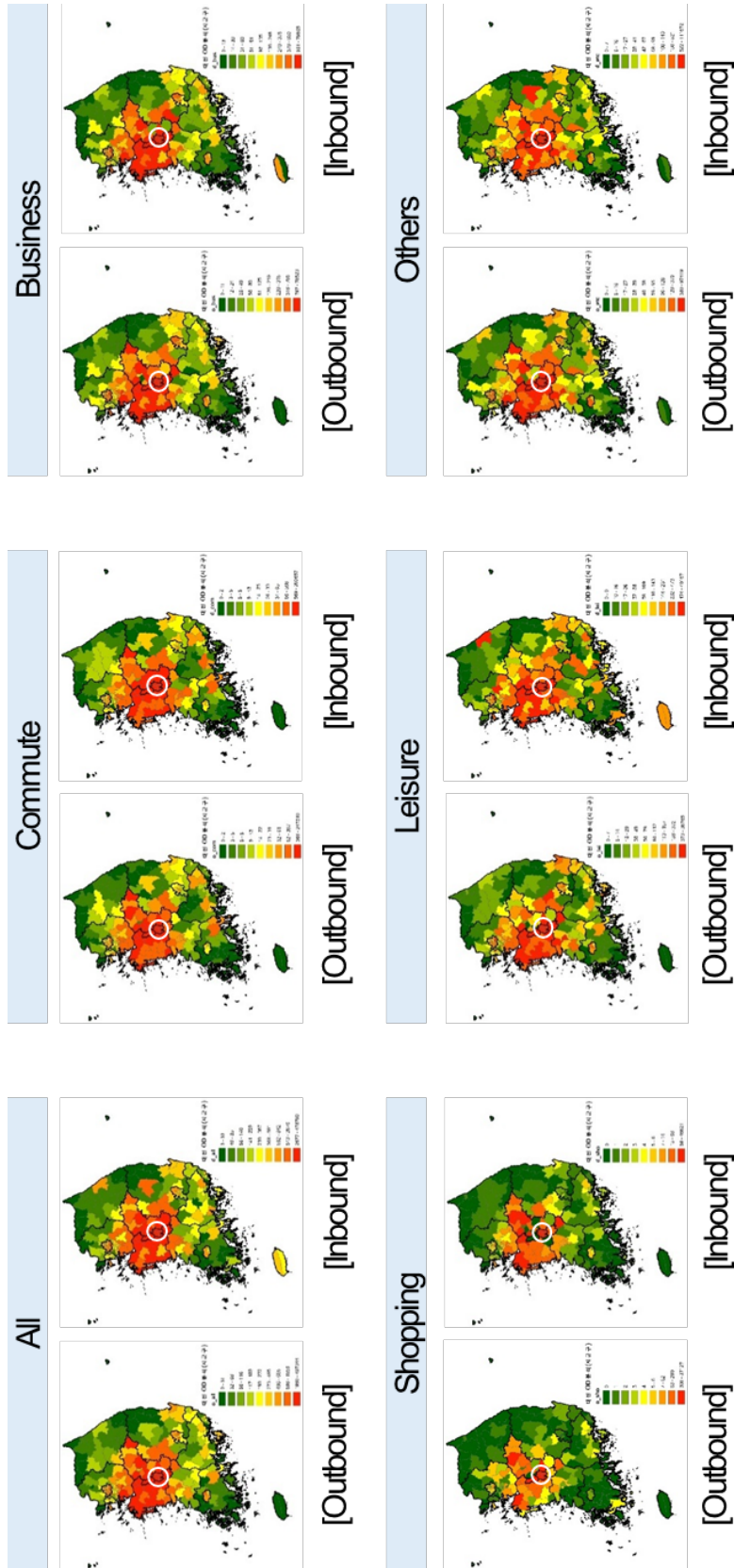


Figure 3. Daejeon district/county-level O-D distributions of purpose-based trips
Sources: (Korea Transport Institute, 2016a)

3. EXPLORING CORE VALUES

In the process of the above environmental analysis, this study explores core values for indicating the future direction of Daejeon city brands. Specifically, it identifies six keywords through demographic analysis (capacity, convenience, participation, communication, sharing, and cooperation) and another seven by industrial and city image analyses (innovation, originality, creativeness, dynamics, internationality, openness, and convergence). Also, by considering the transportation and tourism sectors along with demographics and industry, the study adds three more (amenity, safety, and composure). Lastly, it includes two keywords, fairness and justice, in a way of reflecting the political direction of the city. Among these 18 keywords in total, this study selects meaningful keywords using Google Trends (<https://trends.google.com/trends/>). Firstly, it groups similar keywords in meaning (e.g., justice and fairness). Then, as shown in Figure 4, it uses a keyword analysis function of Google Trends to compare the interest levels of the keywords in Daejeon (frequencies were analysed by defining the study area to Daejeon and the analytical period to the last five years), and selects one with a higher value (e.g., 59% was given to justice and 41% to fairness, and the former was selected). To this selected set of keywords, as shown in Table 2, this study applied to the Google Trends frequency analysis function, and extracted the top two keywords with the highest values in each category (100 is given to a keyword that is the most searched and 50 to one with a half search frequency relative to the most searched keyword, while 0 is given if a keyword does not have enough data for the analysis). Meanwhile, those keywords with less than 15 were manually excluded.

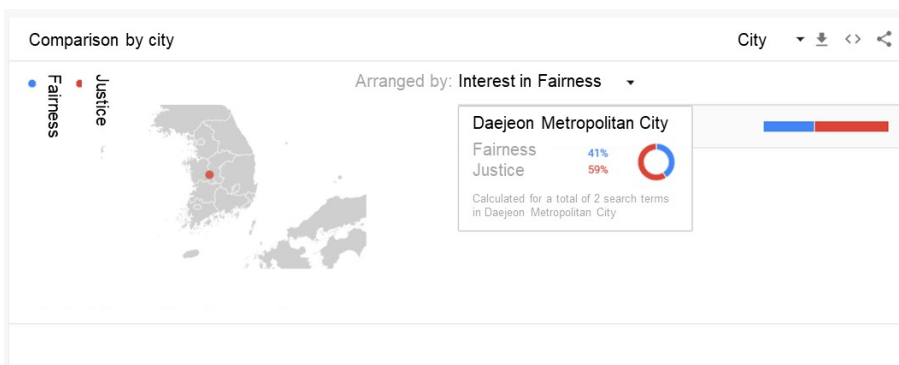


Figure 4. Google Trends: comparing interest levels of similar keywords

The above-discussed keyword selection process pulls out six keywords in Table 2 and subsequently, this study develops them into four final keywords based on two criteria in relation to the city identity of Daejeon: common and individual aspects. The common aspect refers to characteristics shared among Daejeon citizens, including consistency, continuity, and sense of belonging, while the individual aspect refers to those that differentiate Daejeon from other cities, such as individuality, superiority, and uniqueness.

The finally selected core values—composure, dignity, innovation, and capacity (currently, communication and participation, capacity and growth, and fairness and trust)—altogether specified an alternative slogan, “a city of innovation and capacity, pursuing a life of composure and dignity,” which can replace the slogan of the incumbent Daejeon administration (“new Daejeon, through citizens’ power”) and its vision (“happy Daejeon created together with citizens”). Inasmuch as a slogan is often classified into economy-centered,

culture-centered, and social integration types, this alternative can be considered to be grounded on the social integration type—this is the same type as that of the current slogan—and inclusive of cultural (dignity) and economic (innovation) components.

Table 2. Big data analysis of Daejeon core values for the city identity

Evaluation criteria	Existing categorization (counts)	Recategorization (counts)	Revised recategorization (counts)	Final selection
Consistency, continuity, and sense of belonging	Fairness (17), justice (24), capacity (0), innovation (19), participation (12), and communication (11)	Fairness (17), justice (24), innovation (19), participation (12), and communication (11)	Internationality (28), safety (26), justice (24), sharing (21), innovation (19), and fairness (17)	Composure, dignity, innovation, and capacity
Individuality, superiority, and uniqueness	Originality (10), creativeness (18), dynamics (0), internationality (28), openness (3), convergence (19), amenity (0), safety (26), dignity (7), convenience (0), sharing (21), and cooperation (12)	Originality (10), creativeness (18), internationality (28), convergence (19), safety (26), sharing (21), and cooperation (12)		

4. CONDUCTING A CENSUS ON CITY BRAND ASSETS AND IDENTIFYING POWER BRAND ASSETS

4.1 Exploring brand assets

To realize the slogan as identified above, this study explored investigated city brand assets of Daejeon among which it picked out power brand assets. Academically, city brand assets are a subset of regional assets and assets in general ([Chang & Jun, 2010](#)): city brand assets \subset regional assets \subset assets. Assets means goods with economic values, and regional assets are various tangible/intangible assets—they define a spatial range of a program—with which a specific area is equipped. In comparison, city brand assets refer to settings, functions, facilities, services, etc. as tangible/intangible regional assets with values that cause distinct urban conditions from other cities. For a census on Daejeon city brand assets, this study goes through three steps: exploration (database construction), classification, and assessment. As shown in Figure 5, the exploration and classification tasks are led by experts (the authors of this study) and the assessment by citizens.

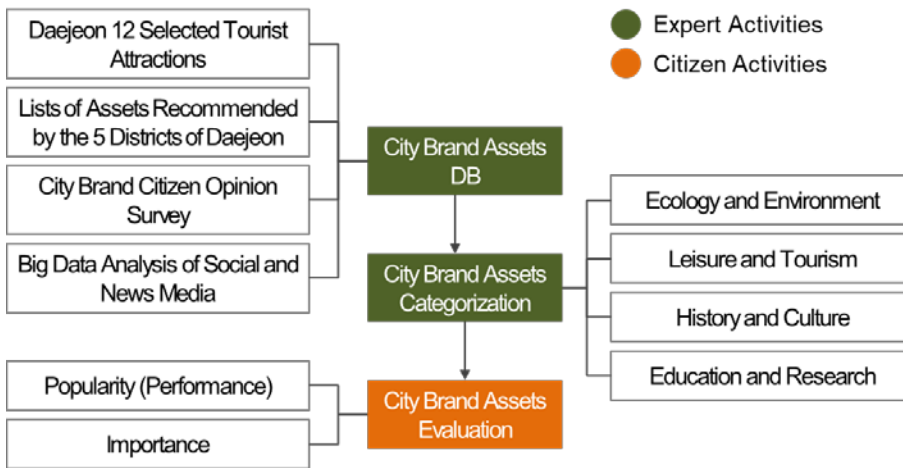


Figure 5. Brand assets’ analysis process: exploration, classification, and assessment

First of all, in order for the comprehensive and exhaustive exploration of Daejeon city brand assets, this study utilized four sources: (1) A Survey on Citizens’ Perception on City Brands for Establishing a Daejeon City Marketing Masterplan [a survey of 1,369 people, administered by [Sejong University and Consumer Insight \(2018\)](#)], (2) 2016 and 2017 Daejeon Guinness and other written documents, (3) a list of potential assets recommended by each of the five districts in Daejeon, and (4) a big data analysis of social and news media [keyword search of news articles for the last five years through the “BigKinds” system (<https://www.bigkinds.or.kr/>) of the Korea Press Foundation]. Through such a microscopic exploration, this study finally identified a total of 423 assets. Then, these assets were grouped into eight detailed categories (to be discussed).

4.2 Categorizing brand assets

Regarding the brand asset taxonomy, categorisation systems suggested by previous studies and the description of each category are summarised in Table 3. In particular, according to [Parkerson and Saunders \(2005\)](#), a full list of tangible assets is as follows: (1) culture, arts, history, nightlife, shopping, etc., (2) hotels, airports and trains, etc., (3) safety, cleanliness, transportation, etc., and (4) education, health, housing, employment, business, infrastructure, etc. Meanwhile, even among these assets, tangibility differs: in the ascending order (from 1 to 4), it becomes higher for the ordinary world (residents) and lower for the non-ordinary world (tourists). Among the three studies, [Benedek \(2017\)](#) attempted to suggest a comprehensive set of categories that can be generally applicable, but in reality, a taxonomy needs to be specified appropriate to each and every city; for example, [Rehan \(2014\)](#) developed a taxonomy for a case of Stuttgart, Germany, and [Parkerson and Saunders \(2005\)](#) used a case of Birmingham, in the UK.

Table 3. International studies on the classification of brand assets

Author(s) (year)	Categories	Descriptions	Examples
Benedek (2017)	Artefacts and spatial plans	Physical aspects forming the cityscape, from built heritages to scales	Landmarks (e.g., museums and bridges), districts/regions (urban cores, commercial districts, business districts, etc.)
	History and	Historic events, figures,	Historic festivals, events,

	heritage	etc. that have a meaning to a city/region	historic figures, etc.
	Events and activities	One-time or repeated events held on a city or regional scale	Regional festivals, sports-related events (e.g., Olympics), hallmark events (e.g., beer festivals), etc.
	Graphics and symbols	Visual symbols and advertisements that represent the identity of a city	Logos, slogans, websites, photos, videos, advertisements (e.g., brochures and maps), etc.
	Processes and institutions	Mechanisms and standing institutions for conducting city brand operations	Institutions specialising in the planning and management of a city brand (e.g., I am Amsterdam), governance, consultants, marketing, campaigns, public hearings, etc.
Rehan (2014)	Branding urban projects	An urban project can best explain a city, and this project can be branded as a consistent cultural event.	“Stuttgart 21”, one of the largest urban regeneration projects in Germany and the entire Europe, was used as a city brand of Stuttgart.
	Branding of city life	Cultural activities in a region can make a city an attractive place.	Various events and cultural activities (regional festivals).
	Historic buildings	Through historic buildings, cities can attract tourists and create a brand.	Opera House, the Residence Castle, the New Palace, etc.
	Signature architecture	The landmark architecture of a city substantially affects the city brand image and sustains it.	Mercedes-Benz Museum, Planetarium Stuttgart, etc.
	Media-generated imagery	Branding the image of a city through advertisements and campaigns, TV news, movies, websites, etc.	Logos, slogans, websites, etc.
	City form	Branding a city by marketing the features of those places and buildings that comprise the city.	Public facilities, parks, landmarks, libraries, museums, streets, etc.
Parkerson and Saunders (2005)	Tangibles	Physical components that can be utilised for the branding of a city.	Tangible assets such as arts, culture, history, shopping, hotels, education, transportation, etc.
	Intangibles	Elements regarding tourists’ and residents’ thoughts and perceptions toward a city.	Intangible images, perceptions, feelings, etc. (image, style, personality, awareness, recall, recognition, perceived quality, consideration, emotional and self-expressive elements, loyalty, bond, and engagement).

Accordingly, this study also determines its own categorization relevant to Daejeon settings by refining the taxonomy of the Korea Research Institute for Human Settlements ([Korea Research Institute for Human Settlements \(KRIHS\), 2011](#)), the Korean planning think-tank. Meanwhile, based on the KRIHS taxonomy, [Lee, S.-Y. and Nam \(2015\)](#) categorized regional assets into (1) natural, (2) structural, (3) cultural, (4) social, and (5) economic assets, each of which was further divided to (1-1) environment, (1-2) places, (2-1) facilities, (2-2) places, (3-1) history, (3-2) tourism, (4-1) people, (4-2) images, (5-1) businesses, and (5-

2) labor. This study also revised the KRIHS classification considering the characteristics of the brand asset population. First, the 12 categories of the KRIHS (cultural properties, tourism sites, historical facts, festivals, architecture, images, figures, symbols, etc.) are arranged into six: ecology/environment, history/culture, tourism/festivals, figures/images, architecture/places, and education/research. Then, they are reclassified into four so that first, each category can carry a comparable number of assets and second, each of the current divisions of the Daejeon administration has a clear responsibility for employing related programs/plans/policies: (1) ecology and environment, (2) culture and history, (3) education and research, and (4) leisure and tourism. Subsequently, each major category is further classified into two subcategories: (1-1) natural ecology, (1-2) artificial ecology, (2-1) modern culture, (2-2) historical culture, (3-1) education, (3-2) research and development, (4-1) food and shopping, and (4-2) festivals (see Table 4).

Notably, while the selection options of a survey item are supposed to satisfy two conditions, comprehensiveness and mutual exclusiveness, the taxonomy adopted in this study somewhat intentionally ignored the second condition of mutual exclusiveness. For example, for a traditional preference question, if the options are apples, oranges, and fruit, the last option is not mutually exclusive of the former two and thus, the selection options are not appropriate. However, this study acknowledges the fact that an asset can fall into more than one category and, if so, it can measure the performance of the asset in each of the two dimensions. For instance, one can indicate the possibility that a certain university is a quality education institution, but at the same time, not a quality research institution. Among a total of 423 brand assets, 395 tangible assets could be geographically located. This study manually identifies their street addresses, which were subsequently transformed to GIS point data through the Python coding of their longitude and latitude coordinates. Figure 6 presents the spatial distribution of the tangible assets. The first map shows the asset point dataset along with satellite imagery in order to indicate how the topography of Daejeon has affected the concentration/distribution of the assets. The second illustrates how many assets were located on the same coordinates using the ArcGIS Collect Events operation. The third map carries the result of the Fishnet-based Hot Spot Analysis, and the last shows the Kernel Density of the assets.

Table 4. Classification of the assets in Daejeon

	Categories	Definitions	Examples	Counts
Ecology and environment	Natural ecology	Naturally created geographical or geological environment and places where the environment can be enjoyed.	Mountains, recreational forests, trails, forest baths, flower roads, etc.	24
	Artificial ecology	Ecology as artificially created or managed for protection of the natural landscape or contribution to citizens' health, leisure, and emotional utility.	Theme parks, nature parks, children's parks, sports complexes, arboretums, etc.	51
Culture and history	Modern culture	Places, architecture, activities, etc. in relation to knowledge, arts, convention, etc.	Art museums, cultural centers, libraries, etc.	101
	Historical culture	Cultural, artistic, and life-related properties,	Old public buildings,	124

		people, and people-related relics that were generated from the pre-historic to recent times.	Confucian temples, birthplaces, folk villages, stock farms, etc.	
Education and research	Education	Institutions that teach and train knowledge, techniques, skills, etc.	Universities, technical colleges, etc.	28
	Research and development	Institutions or centers where members are mainly involved in research and development, or where citizens can experience such activities.	Science centers, research institutions, public corporations, etc.	68
Leisure and tourism	Food and shopping	Restaurants, vendors, and other commercial places where goods and services are purchased.	Traditional markets, bakeries, traditional streets, arcades, etc.	53
	Festivals	Cultural, artistic, and sports events with particular themes.	Science festivals, marathon events, etc.	25
Sum [†]				474

[†] The total number of assets is 423, but some assets fall into two or more categories (e.g., universities are usually educational as well as research institutions).

The above GIS analyses denote that among the five districts in Daejeon, city brand assets are densely distributed in the central part of the jurisdiction, that is, near the border between the northwest Yuseong District and the southwest Seo District and that between the south Jung District and the east Dong District. Such a concentration in the center may be linked to the unique topography of the city: Daejeon is a basin surrounded by mountains. Meanwhile, the two hotspots have differing characteristics. The Yuseong–Seo hotspot is characterized by densely situated national research institutions in Yuseong District and an arboretum and other leisure facilities in Seo District [as the new central business district (CBD) of Daejeon] and, as the old CBD, the Jung–Dong hotspot has frequently located cultural and historical assets.

4.3 Assessing brand assets

The assessment of brand assets was conducted not by experts, but by citizen stakeholders. A secondary role of the citizen planning committee was to suggest and discuss city marketing projects for each of the assets. The assessment meeting was held on October 23, 2018 from two through four in the afternoon. The committee consisted of 39 participants who were representative citizens recommended by public institutions, such as the Council on Daejeon Studies (<http://www.djs.re.kr/>) and university students whose original residences are in Daejeon (39 = 8 divisions according to 8 asset subcategories * 5 citizen planners; one did not show up) as well as 8 Daejeon planning experts (professors at universities in Daejeon and researchers at national and Daejeon planning institutions). The experts worked as facilitators for the eight divisions, respectively.

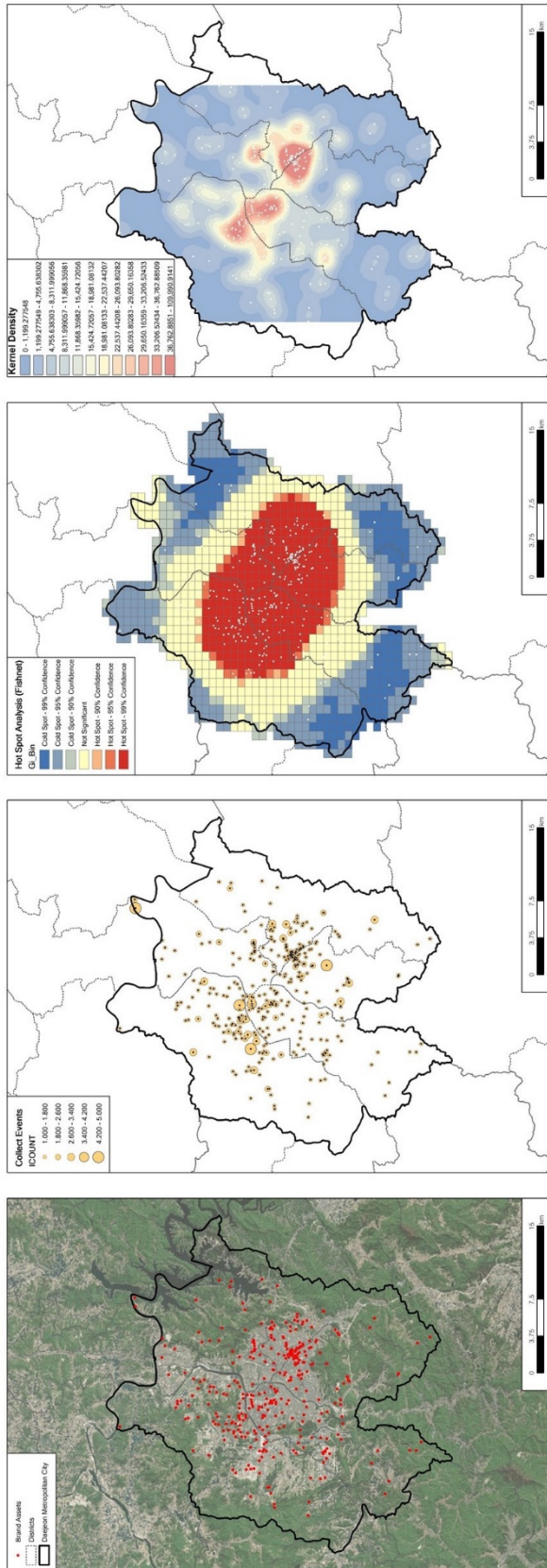


Figure 6. Distribution of tangible city brand assets in Daejeon

The citizen planning committee meeting was structured with a briefing of the Daejeon city brand investigation by the authors of this study (on the environmental analysis, brand asset identification and categorization, and how to assess each asset based on its popularity and importance) and the assessment by category/division of each asset on the basis of the levels of recognition and importance. The recognition refers to how widely the asset is known within and beyond Daejeon, that is, the performance of the asset, while the importance refers to the ultimate value of the asset. As such, this study can perform an importance–performance analysis (IPA), and its results can be used for effective brand marketing.



Figure 7. Meeting of a citizen planning committee

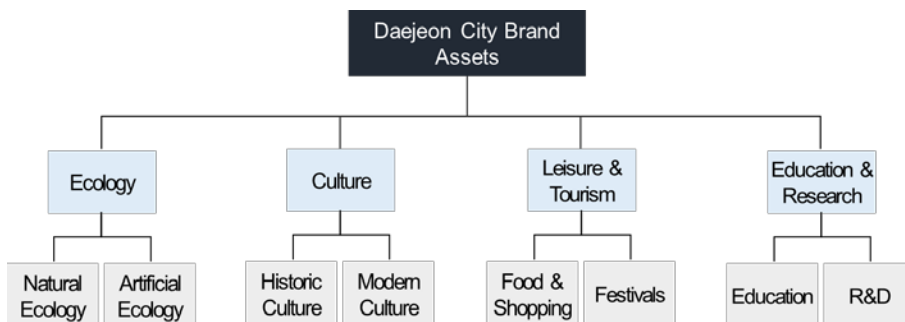


Figure 8. Tree structure of AHP assessment items

The four primary categories of the brand assets and two subcategories for each primary category altogether have a tree structure (see Figure 8) based on this study’s conducted analytical hierarchy process (AHP). In the analysis, the number of pairwise comparisons were 10 in total: six comparisons at the primary category level (e.g., assessing the relative importance of ecology and environment vs. history and culture) and four comparisons by subcategory (e.g., natural vs.

artificial ecology). AHP conventionally has response items on the 11-point scale: one mid-point for the equal importance, and five steps in each of the two directions of the importance (= 1 + 5 + 5).

As for the relative weights of the brand asset types at the primary category level, firstly, citizens similarly weighed the four categories (0.23 through 0.27), whereas experts imposed substantially different weights: The weight for leisure and tourism was 0.19 while the education and research category was 2.05 times more important, assessed with the weight of 0.39. Nevertheless, the order of the weights was consistent between the citizens and experts: education and research > ecology and environment > culture and history > leisure and tourism (the education and research category is likely to best reflect the predominant images of Daejeon such as IT and transportation). Meanwhile, at the subcategory level of education and research, weights given by citizens and experts differed: Citizens considered education to be slightly more important (education vs. R&D = 0.52 vs. 0.48), but according to the experts, R&D is twice as important (0.37 vs. 0.63).

The expert–citizen difference in the weight assessment at the subcategory level also occurred for the leisure and tourism category. By citizens, food and shopping were assessed equally to festivals (both 0.50), but for experts, the former (0.63) were far more important than the latter, festivals (0.37). By contrast, no expert–citizen differences existed at the ecology and culture categories. That is, both considered that in the ecology category, natural ecology is twice as important as artificial ecology and in the culture category, modern culture somewhat outweighs historical culture.

Table 5. AHP results

Experts					Citizens				
Primary categories	Relative weights (A)	Sub-categories	Relative weights (B)	Final weights (A * B)	Primary categories	Relative weights (A)	Sub-categories	Relative weights (B)	Final weights (A * B)
Ecology and environment	0.26	Natural ecology	0.67	0.17	Ecology and environment	0.25	Natural ecology	0.65	0.16
		Artificial ecology	0.33	0.09			Artificial ecology	0.35	0.09
Culture and history	0.16	Historical culture	0.47	0.08	Culture and history	0.25	Historical culture	0.48	0.12
		Modern culture	0.53	0.08			Modern culture	0.52	0.13
Leisure and tourism	0.19	Food and shopping	0.63	0.12	Leisure and tourism	0.23	Food and shopping	0.5	0.12
		Festivals	0.37	0.07			Festivals	0.5	0.12
Education and research	0.39	Education	0.37	0.14	Education and research	0.27	Education	0.52	0.14
		R&D	0.63	0.25			R&D	0.48	0.13

A: Sum of the weights for the four primary categories = 1.00

B: Sum of the weights for the two subcategories within each primary category = 1.00

Consequently, weight assessment becomes different between the expert and citizen groups according to group characteristics. Experts were composed of professors and researchers and accordingly, they highly weighed the education and research category, but citizens tended to similarly weigh the primary categories, which were mutually exclusive and starkly different from each other. Also, even within the education and research category, citizens equally considered education and R&D, but experts found the importance of R&D to be twice that of education.

These group characteristics substantially influenced the computation of the final weights (= relative weights between primary categories * between-subcategory relative weights). That is, experts put higher weights on the education and research category from the very beginning (at the primary category level),

and this was reflected in the final results. By comparison, citizens gave different weights only at the subcategory level, particularly within the ecology category, which was decisive on the final weights (weight differences between subcategories were nominal in the culture, leisure, and education categories, but in the ecology category, a large difference existed between the natural and artificial subcategories). As a result, R&D became the most important subcategory by experts (weight = 0.25) and natural ecology by citizens (0.16).

The recognition and importance scores of the assets by subcategory (on the five-point Likert-type scale) were presented using IPA. The IPA is known to have been firstly introduced in 1977 by [Martilla and James \(1977\)](#). In this analysis, the four quadrants of the performance and importance scores define the characteristics of the brand assets. The first quadrant (high performance and high importance assets) is regarded as the “keep up the good work” dimension while the second as the “concentrate here” dimension. The two high importance dimensions are the focus of the marketing strategy. The third (low performance and importance) and fourth (high performance, but low importance) are called the “low priority” and “possible overkill” dimensions, respectively. A list of the results, that is, which brand asset is categorised into which quadrant is available online:

<https://drive.google.com/open?id=1szrFjLRIvRMXvBC6LBH9hbYYs4N1iMA>

Table 6. Final city power brands for Daejeon

Ranks	Ecology and environment	Culture and history	Leisure and tourism	Education and research (symbols and figures)
1st	Daejeon <i>Dullesan-gil</i> (circular mountain trail)	<i>Ppuri</i> (Family Root) Park (park with the theme of filial piety)	Yuseong hot spring	Science
2nd	Hanbat Arboretum	Dongchundang (built in 1653, National Treasure No. 209, residence of Song Jung-gil, a noted politician in Joseon dynasty)	Sungsimdang Bakery	Railway
3rd	Jangtaesan (Mt. Jangtae) Recreational Forest	Old Chungnam (South Chungcheong) Provincial Hall	Expo Science Park	<i>Jungang-ro</i> (Central Street)
4th	Daecheongho (Daecheong Lake)	Daejeon Culture and Art Complex (a cultural belt consisting of Daejeon Arts Center, Daejeon Museum of Art, and Ungno Lee Museum of Art)	O-World (amusement park)	Seodaejeon (East Daejeon) Park
5th	Bomunsan (Mt. Bomun)	Daejeon National Cemetery	Gyejoksan (Mt. Gyejok) red clay trail)	Chaeho Shin (Korean independence activist)

Lastly, this study multiplied the IPA recognition and importance scores of Daejeon brand assets by the above-discussed AHP weights in order to produce the final “power” brand scores. Based on these scores, this study determined power brands, which was supported by expert group meetings and advisory meetings. Specifically, for the determination, this study considered the standards of identity,

publicity, symbolism, and the feasibility and effectiveness of related projects as well as Anholt's city brand assessment criteria ([Anholt, 2006](#)). Anholt's city brand hexagon is defined by six P's, including presence (people know the presence of the city), place (physical landscape), potential (people consider that there would be a new opportunity in the city), pulse (joy, vigor, etc.), people (people's openness and kindness), and pre-requisites (infrastructure). Ultimately, this study selected a total of 20 brand assets as power brands: five assets from each primary category. The final brands are shown in Table 6.

5. CONCLUSIONS

As part of the 7030 project, which celebrates the 70th anniversary of the city formation of Daejeon and the 30th anniversary of its promotion to a Metropolitan City, this study conducted an environmental analysis of the marketing-related environment of the city and, based on its results, it suggested the core values (keywords) for the marketing, and as a composition of the keywords, a new brand slogan. Then, it discussed the selection of the power brand assets by identifying, classifying, and assessing current city brand assets.

In terms of the demographic structure, the rapid aging across Korea has made the major age group of Daejeon those in their 40's and, particularly, the population pyramid was a combination of the spindle form (an advanced society experiencing a birth rate reduction) and the star form (an urban society with an influx of youth—people in their early 20's—for the purpose of education and employment). However, the nonwork infrastructure such as leisure facilities tended to be biased for the elderly, not for the youth. This partially contributed to forming the negative aspects of the city: monotonousness and lack of enjoyments. Regarding the industrial structure, Daejeon largely depends on service sectors and IT industries (90% of the total businesses), and this has provided the city with the image of smart city, science city, and transportation city. Based on the analysis of these internal and external settings of the city, this study identified 18 keywords to which it applied the keyword analysis function of Google Trends and reduced these to six. Finally, the six were summarized into four keywords according to two criteria, that is, whether the values are shared by Daejeon citizens and whether they differentiate Daejeon from other cities. The four keywords comprised an alternative slogan: "a city of innovation and capacity, pursuing a life of composure and dignity".

So as for the actualization of the slogan, this study subsequently investigated city brand assets that are dispersed across Daejeon and then, classified and evaluated them to pick out power brand assets. First, a total of 423 assets were explored from online, offline, and human resources and they were reclassified into ecology (natural and artificial), culture (modern and historical), leisure and tourism (food/shopping and festivals), and education and research (education and R&D). The relative importance of the four primary and eight minor categories were evaluated by a citizen planning committee of 47 people (39 representative citizens and 8 experts), and the evaluations were analyzed through AHP to compute the weight of each minor category. At the same time, the committee evaluated the levels of the recognition (popularity) and importance of each asset. The AHP results showed that experts and citizens differently judged the relative importance of the categories. Specifically, experts offered quite different weights at the major category level while citizens imposed differing weights at the minor category level. This led to differences in the final weight: Experts gave a higher weight to the major category of education and research—so one of its two sub-categories received the highest weight—and citizens imposed differing weights

within the major category of ecology (accordingly, natural ecology as one of its two sub-categories was given the highest weight). This finding implies that differences in the evaluation according to the characteristics of the referees should be considered in understanding and applying AHP results. An alternative is that categories with higher weights are accepted in a group. This is because a group of those with high weights were consistent between experts (R&D 0.25 > natural ecology 0.17 > education 0.14) and citizens (R&D 0.16 > natural ecology 0.14 > education 0.13). That is, instead of the arithmetic value or absolute order of the weight, one may be desirable to accept as a cluster those categories with higher values.

In addition to AHP, this study conducted IPA of the recognition (current knowledge level about an asset) and importance (level of its ultimate value). The IPA scores were multiplied by the AHP weights, and this resulted in the final recognition and importance scores. Finally, based on the scores, this study selected a total of 20 power city brands (five assets from each of the four major categories) considering the identity and publicity, the symbolism, and the feasibility and effectiveness of those projects in relation to the brands. Expert discussions and group evaluations were also conducted according to Anholt's city brand assessment criteria.

Through the entire process of revising the brand slogan and identifying power brand assets, the authors suggested that if Daejeon conducts marketing projects at the government level, the target should mainly be at public facilities and if so, the government should be equipped with a "place marketing" perspective considering the social, cultural, historical (1) identity, (2) symbolism, (3) aesthetics, and (4) marketability of Daejeon. This perspective is compared to a traditional place/physical planning perspective: Physical planning is oriented to providers, but place marketing is to customers; the planning is responsive and retrospective, but the marketing is preparatory and proactive; the planning is tentative/temporary, but the marketing is strategic; and, the planning is centered on establishing facilities while the marketing is on building networks. Lastly, while the existing brand assets of Daejeon are classified into four main categories (ecology/environment, culture/history, leisure/tourism, and symbol/figures), the authors believe that different marketing philosophy and principles should apply to each of them: Basically, it appears to be necessary that the characters of the activities be centered on "conservation" for ecology/environment, "education" for culture/history, "experience" for leisure/tourism, and "advertisement" for symbol/figures.

ACKNOWLEDGEMENTS

This study is based on the project "Daejeon City Marketing Long-Range Masterplan Construction", which was administered by the Foundation of Research and Business of Chungnam National University and funded by Daejeon Metropolitan City. The authors are grateful for a group of research assistants at the Seoul National University Integrated Planning Lab, which is directed by the first author of this study, as well as Seok Gil Jang, Juri Kim, Haurin Lim, and Minkyong Yoon.

REFERENCES

- Anholt, S. (2006). "The Anholt-Gmi City Brands Index: How the World Sees the World's Cities". *Place Branding*, 2(1), 18-31.

- Benedek, J. (2017). "Measuring Place Brand Equity: A Review of Current Models". *Journal of Media Research-Revista de Studii Media*, 10(27), 42-57.
- Chang, D. R., & Jun, M. Y. (2010). "A Study on Place Branding for Promotion of the Value of City Brand". *Journal of Korean Society of Design Science*, 23(4), 351-366.
- Daejeon Metropolitan City. (2016a). *The 6th Daejeon Tourism Development Plan*. Daejeon: Daejeon Metropolitan City.
- Daejeon Metropolitan City. (2016b). *2016 Daejeon Regional Industry Development Plan*. Daejeon: Daejeon Metropolitan City.
- Daejeon Sejong Research Institute. (2013). *City Marketing Strategies through the Application of City Images*. Daejeon: Daejeon Sejong Research Institute.
- EasyPark Group. (2017). "2017 Smart Cities Index". Retrieved from <https://easyparkgroup.com/smart-cities-index/>.
- Fahey, L., & Narayanan, V. K. (1986). *Macroenvironmental Analysis for Strategic Management*. St. Paul: West Publishing Company.
- Korea Research Institute for Human Settlements (KRIHS). (2011). *Korea Transport Database (Ktdb)*. Anyang: Korea Research Institute for Human Settlements.
- Korea Transport Institute. (2016a). *Korea Transport Database (Ktdb)*. Sejong: Korea Transport Institute.
- Korea Transport Institute. (2016b). *Passenger Travel Index Book*. Sejong: Korea Transport Institute.
- Korean Ministry of Culture, Sports and Tourism. (2016). *National Travel Survey*. Sejong: Korean Ministry of Culture, Sports and Tourism.
- Lee, H., & Shin, M. (2015). "A Study on Personality of City Brand Slogan: Focus on Seoul and Metropolitan City". *Korean Journal of Advertising*, 26(2), 289-315.
- Lee, S.-Y., & Nam, J. (2015). "The Concept of Regional Properties as Techniques of Urban Regeneration and the Analysis on Actual Utilization of Regional Properties". *Journal of Korea Planners Association*, 50(3), 123-151.
- Martilla, J. A., & James, J. C. (1977). "Importance-Performance Analysis". *Journal of Marketing*, 41(1), 77-79.
- Parkerson, B., & Saunders, J. (2005). "City Branding: Can Goods and Services Branding Models Be Used to Brand Cities?". *Place Branding*, 1(3), 242-264.
- Rehan, R. M. (2014). "Urban Branding as an Effective Sustainability Tool in Urban Development". *HBRC Journal*, 10(2), 222-230.
- Sejong University and Consumer Insight. (2018). *Analysis of Basic Settings for Activating Regional Tourism*. Seoul: Sejong University Tourism Industry Research Institute.
- Statistics Korea. (2016). *Population Census: District-Level Population by Age and Sex*. Daejeon: Korean Statistical Information Service.
- Statistics Korea. (2017). *Metropolitan and Provincial Population Projection: 2015-2045*. Daejeon: Korean Statistical Information Service.
- Yeo, J., & Kim, S. (2013). "Assessing Business and Metropolitan Government Slogans: Customers Nod Naturally When Philosophy and Values Are Reflected". *DBR (Dong-A Business Review) Premium*, 134(1), 1-2.