Health-related elements in green space branding in Hong Kong

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ABSTRACT

A green city image of urban green spaces can provide positive benefits such as a stronger local identity, better socio-cultural ecosystem services, and ultimately the creation of a green city brand that attracts tourism and investment. This paper studies how urban green spaces can become a green brand that encompasses health-related elements. The health-related elements form part of the Green Brand Hexagon (GBH), as proposed in previous studies, and are tested with a sample of Hong Kong citizens (n = 301). The empirical results confirm the interrelation between these attributes and other GBH elements. The interrelation reveals a moderate association between the health-related elements and other green brand elements through regression model formulation. The findings suggest an extension of the health promotion value of the green spaces to the brand elements, focusing on the quality and the landscape aesthetic function of urban green spaces. While the effort of the public sector is highly recognized by the citizens, there should be an opportunity to thematize and brand the green city attributes to the public so that some of the problems of environmental gentrification and socio-environmental disconnection can be alleviated.

1. Introduction

Numerous studies support the multi-dimensional health benefits of urban green spaces to urban populations (Cicea and Pîrlogea, 2011; Lee and Maheswaran, 2011). These benefits integrate with other functions of urban green spaces, and this contributes crucially to the development of a green city (Kahn, 2006). Although the concept of "green city" widely embraces the multi-dimensional economic, socio-cultural, and environmental aspects of a city, some of these aspects, such as their relevance to health improvement, may be less controversial but nevertheless strongly influence the image of a city held by different local and non-local city users, and ultimately their travel or residence decisions (Jonas and While, 2007; van Dijk, 2011). A green city image, especially supported by highly visible and publicly accessible green spaces, such as public parks, trees and landscapes, can strengthen local identity (Matsuoka and Kaplan, 2008), establish a human–nature-balanced society (Register, 2006), and market the attractions of a particular urban destination to tourists (Tamanini, 2012; Hendriksen and Peereboom, 2013). Furthermore, an image of a green city with advantageous green spaces can contribute to creating a destination brand which attracts more tourists and even attracts potential investors and immigrants (Braiterman, 2011; Insch, 2011). One important area which the policy-makers should understand is how

a green city brand can carry health-related elements perceived by experienced city users, especially by the residents.

This rationale shows an implicit connection between public health and city brand development through the provision and positive image of urban green spaces; this is because a city brand is made up of a city image, which is a collection of diverse and sometimes conflicting perceptions by city users (Hankinson, 2010). In particular, the elements of a city brand can be health-related, either directly (*e.g.*, the provision of hospitals and medical facilities) or indirectly (the beauty of the landscapes and the recreational opportunities for citizens). A city brand embedded in high-quality public green spaces may also embrace elements that are health-related, *e.g.*, pleasant experience of green spaces, trees and landscape beauty, quality and accessibility of parks, etc. These health-related elements may intentionally be highlighted by the city marketers or municipal governments, or unintentionally linked to the city brand that is implicitly valued by the residents or visitors through their experiences in different types of urban green spaces. The latter circumstance, which is a focus of this paper, appears to be influential because people's perception of urban green spaces can exert policy implications upon the creation and revision of a green city brand. The health-related elements in a green city brand, if strongly perceived and associated by local residents in a brand, can lead to a well-projected, competitive and positively recognized green city brand (Giovanardi, 2012) which can itself influence residence decisions (Zenker, 2011). Such a widely accepted green city brand will ultimately provide the political impetus to achieve urban greening

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Table 1
Elements of the Green Brand Hexagon (GBH).

Green status (GSt)	1. Familiarity as green city
	2. Enhancement of the quality of life in form of greening living environment in the city
	3. Provision of parks and green spaces by city government
	4. Greening policy by city government
	5. Role of greening in city planning by city government
Green space (GSp)	6. Pleasant experience in parks and green spaces
	7. Trees and greenery beauty in urban areas of the city
	8. Landscape beauty in hillside and slopes of the city
Green potential (GPot)	9. Willingness to cost more for business investment
	10. Willingness to cost more for employment search or working
	11. Willingness to cost more for education stay
	12. Willingness to spend more as tourists
Green pulse (GPul)	13. Educational experience in parks and green spaces
	14. Recreational opportunities in various types of parks and green spaces
	15. Valuable fauna and flora species in green spaces
	16. Old and valuable trees
Green citizenship (GCiti)	17. Greening-supportive citizenship
	18. Environmentally friendly citizenship
	19. Communicable and friendly citizenship in parks and green spaces
	20. Safety in parks and green spaces
Green prerequisites (GPre)	21. Overall quality of parks and green spaces
	22. Quality of facilities of parks and green spaces
	23. Accessibility to green spaces

(Source: Chan and Marafa, 2014, p. 7).

and thereby improve public health. To realize this political agenda, it is necessary to study and prove to link the residents' perceptions of green branding to health-related determinants in an urban green branding model. A prerequisite, in short, is a user perspective that can assess whether there is a strong relation between the health-related elements and the other aspects in a green brand.

Nonetheless, the connection between green city image and the provisioning of urban green spaces has been critically discussed (Gibbs and Jonas, 2000; Jonas and While, 2007; Gulsrud et al., 2013; McKendry, 2013; Gulsrud and Ooi, 2015; McKendry and Janos, 2015). The questionable benefit distribution and social sustainability of green urban movements have complicated the environmental governance of cities (Jonas and While, 2007; Wolch et al., 2014). There is therefore a need for mutual understanding between the government and the residents with a participatory approach of green growth in cities (McKendry and Janos, 2015). The use of urban green spaces is a way of visualizing ecological modernization discourse (McKendry, 2013) although a sustainability discourse based on an entrepreneurial city governance is still cautionary (Jonas and While, 2007). This shows that urban greening and its use for branding are very often controversial issues in this era of post-industrial and urban entrepreneurial governance, especially given the existence of a great variety of modes in urban environmental governance (Buizer et al., 2016; Rutt and Gulsrud, 2016). It is an important step forward to address this complexity by understanding diverse citizen perceptions of the positive influence of urban greening on their collective benefits.

This paper reports a study linking the residents' perceptions of green branding in Hong Kong to health-related determinants in an urban green branding model. This green brand is represented by a multi-dimensional structure named the GBH that contains facets of urban green resource attributes (*e.g.*, parks, trees, landscape, etc.) (Chan and Marafa, 2014) modified from a holistic city brand measurement, as proposed by Anholt (2006). This paper utilizes the dataset of the local residents in that study to answer two research questions: (1) Is there any interrelation between the health-related elements and other elements in the GBH by local perception? and (2) Among the elements of the GBH, what are the significant underlying factors determining the health-related elements?

Hong Kong is selected as the study area because the city has had a mature destination brand for over 15 years (Dodwell, 2001; Fleishman-Hillard Hong Kong Limited and Taylor Nelson Sofres,

2010; Loo et al., 2011; Li et al., 2013). The current core values of the city brand include the "quality living" dimension, which represents some extents of the health-related aspects, such as quality of life, green living environment, and work–life balance (ISD, 2016). These aspects in the core value are neither directly connected to the attributes promoted in the brand nor to the meaning in the brand logo. Nevertheless, out of a conventional urban destination image, Hong Kong unleashes a great "green city" potential because of its outstanding green spaces and protected area coverage (EIU, 2011, 2012; AFCD, 2013). Most of the urban green spaces in Hong Kong are visible (*e.g.*, trees, hillside vegetation, urban greenery) and accessible to the public (*e.g.*, various types of public parks). Clearly, Hong Kong citizens closely link health-related benefits to public parks (Marafa and Fung, 2004), while the citizens have the longest life expectancy in the world (Japanese Health and Welfare Ministry, 2016). The urban green spaces may largely contribute to public health although these public resources are not specifically incorporated into the umbrella brand of the city (Fleishman-Hillard Hong Kong Limited and Taylor Nelson Sofres, 2010; Chan and Marafa, 2014).

2. Literature review

2.1. "Green" city controversy

The concept of "green city" has undergone mature discussions among scholars and practitioners worldwide and across a wide range of topical areas (*e.g.*, EIU, 2011; Hammer et al., 2011; White, 2011; Beatley, 2012; OECD, 2014). The Asian Development Bank (ADB) has broadly defined a "green city" as one that "*ha[ve] already achieved, or are moving toward long-term environmental sustainability in all of its aspects*" (Lindfield and Steinberg, 2012, p. 9). The term "green city" often appears interchangeably with "eco-city" even though the latter has a deep ecological concern, but they have fundamental differences in definitions and components (Wong and Yuen, 2011). Both a green and an eco-city, and even other relevant concepts such as "green infrastructure", "liveable city" and "sustainable city", should not only be environmentally benign but build on the synergy, interdependence and the reinforcement of ecological and economic sustainability in the urban context (Benedict and McMahon, 2006; World Bank, 2011). The concept of "greenness" extends to a broader and holistic perspec-