A visual analysis of destinations in travel magazines

Abstract:

This study presents a visual analysis of photographs of six destinations (Hong Kong, Macau, Japan, South Korea, Vietnam and Taiwan) published in Chinese travel magazines. The object and subject categories, size, and providers of the photographs are content analyzed. The three most popular object categories were *Culture, history and art; Leisure and recreation;* and *Physical environment*. The dominant subject category was *No people*. Multiple Correspondence Analysis showed that the different destinations correlated with diverse object and subject categories. All six destinations were portrayed differently in terms of the source and size of the photographs. These findings can be utilized by destination marketing organizations (DMOs) to devise positioning and promotion activities for implementation in the Chinese market.

Keywords: destination, photograph, travel magazine, China, visual analysis, content analysis, multiple correspondence analysis

INTRODUCTION

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Pictures are widely used in marketing because they induce the formation of imagery in consumers, help them to develop knowledge and expectations (Decrop, 2007; MacKay & Smith, 2006), and arouse interest in buying the advertised product/brand (Belch & Belch, 2009). Consumers' visual response to advertising material is of considerable importance to tourism destination marketers, because photographs can influence their decision-making processes when choosing a destination to visit. Photographs are mostly used to strengthen the text in promoting intangible products such as tourist destinations to create an attractive impression and generate a sensation of pleasure (Özdemir, 2010). Moreover, the attractiveness of a destination as presented in photographs may help tourists to recall it, and then attract other people to visit (Molina & Esteban, 2006; Özdemir, 2010).

Given this significant role, almost every tourism brochure contains photographs. Marketers commonly use photographs that illustrate the most popular and unique attractions and facilities to represent the destination (Özdemir, 2010). Attributes, characteristics, concepts, values, and ideas associated with the destination are also presented (MacKay & Fesenmaier, 1997). In addition, the specific mood and atmosphere of the destination could be portrayed through photographs in printed brochures (Özdemir, 2010). Therefore, an examination of the destination photographs used in promotional materials is necessary.

Previous studies focus mainly on the photographs taken by tourists (see for example Fairweather & Swaffield, 2001; Garrod, 2009), or provided by destination marketing organizations (DMOs) (see for example Dann, 1996; Hunter, 2008), instead of analyzing the

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photographs presented in tourist information sources such as the media. Travel magazines, as one of the most vital information sources influencing travelers' perceptions and evaluations, are slightly different from other mass media (such as television and newspapers) or induced agents (such as promotion, advertising, and travel brochures). The content of destination travel magazines may be different from the descriptions given by tourists and brochures. Nowadays, almost every travel magazine article includes photographs. Although they play an important role in every travel story in such magazines, few studies look at them or in particular how destinations are portrayed visually (Hanusch, 2011). Therefore, an investigation of photographs in travel magazines has the potential to contribute to the tourism literature.

Previous studies have examined the content of pictures from two perspectives, namely the objects and subjects portrayed. Object refers to the kind of physical tourism environment that is represented by the photograph, and subject to the kinds of people shown (Hunter, 2008). Hunter (2008, 2010) divides the content of photographs into 16 categories (see the detailed review in the Literature Review section below). However, different researchers tend to use different categories based on their own evaluation and judgment. Therefore, it is important to develop an evaluation system which will be comprehensive enough for future adaptation and can present a clear and deep understanding of destination photographs. Although previous studies show that different sizes of photographs have diverse levels of influence on consumer perceptions, and that different sources may focus on different content, until now no study has considered these elements in a tourism context. In doing so, this study, for the

first time, investigates the size and provider of tourism photographs. Its purposes are to examine: 1) the photographs of destinations in travel magazines from the perspective of the object and subject categories, 2) whether there is a correlation between these categories and different destinations, 3) the size of the photographs used for the various destinations, and 4) the photograph providers for these destinations.

LITERATURE REVIEW

__Visual analysis of photographic content in tourism__

Pictorial analysis has been conducted for content presented in films, photographs, and advertising brochures (Henderson, 1991). In the tourism context, most such studies focus on brochures for destinations such as Australia (Edelheim, 2007; Jenkins, 2003); Dubai (Govers & Go, 2005); Ireland, Scotland, and Wales (Pritchard & Morgan, 1996); the UK (Dann, 1996); New Zealand (Ateljevic & Doorne, 2002); Jeju Island (Hunter, 2010) and Seoul (Hunter, 2012) in South Korea; Istanbul in Turkey (Özdemir, 2010); and general destinations (Dilley, 1986; Hunter, 2008). Other materials such as guidebooks on Girona in Spain (Espelt & Benito, 2005), postcards of Malta (Markwick, 2001), postcards of Berlin (Milman, 2012), and tourism TV commercials (Hanefors & Larsson, 1993; Hanefors & Mossberg, 2002; Pan, 2011) have also been examined.

A review of these studies shows that most researchers focus on the object category and use

different categorizations to analyze the photographs. For instance, Pritchard and Morgan (1996) categorize brochure photographs of Ireland, Scotland and Wales into the following groups: *heritage, scenery and wildlife, activities, people, urban and rural life, consumption activities,* and *destination specific icons.* Hanefors and Larsson (1993) analyze destination videos and group them into seven themes: *sun and sea; scenery; shopping; food, drink, and entertainment; accommodation and transport; sport and health,* and *history.* Dilley (1986) examines the national travel brochures of 21 countries and categorizes the photographs into four groups: *landscape, culture, recreation,* and *services.* Several studies also focus on the subject category. For instance, Pritchard and Morgan (1996) group photographs into the following categories: *young couples, young singles/groups, mature couples, mature singles/groups,* and *families/children.* Edelheim (2007) analyzes the people in photographs from the following perspectives: *number of people; age; sex; ethnicity; tourists, locals, or a mixture of both; whether the people were active, passive, or a combination of both;* and *whether people face towards the camera or away from it.*

While the early pictorial studies mainly examine either the object or subject category, recent studies apply both (Dann, 1996; Govers & Go, 2005; Hanusch, 2011; Hunter, 2008, 2010). Dann (1996) investigates the people in brochures and categorizes them into *no people, tourist, local,* and *tourist and local.* He also groups people alongside eight objects: *beach, transport, hotel, sights, local scene, entertainment, sport,* and *animal scene.* The dominant categories of subject-object combinations are *no people with hotel, tourist with hotel, tourist and local with hotel,* and *local with local scene.* Govers and Go (2005) also examine both

object and subject categories when analyzing the content of photographs. They identify eight

objects: *culture, sun and sand, hospitality, leisure/recreation, outdoor, heritage, old and new,*

and *modern*. However, they only examine one subject: *tourist*. Hunter (2008, 2010) performs

a content analysis of photographs in guidebooks and brochures from both object and subject

perspectives. Four general categories of the former are found: *natural landscapes, cultivated*

landscapes, heritage and material culture, and *tourism products*. There are also four subject

categories: *no people, host only, guest only,* and *host and guest*. The author categorizes each

photograph into one object and one subject category, generating a final scheme of 16 types.

Based mainly on the work of Hunter (2008, 2010), Hanusch (2011) examines the destination

photographs in Australian travel journalism, and categorizes the photographs into the same

subject categories as suggested by Hunter (2008, 2010) plus a revised scheme of four objects:

landscape, culture, recreation, and *services*. Gallarza, Saura, and Garcia (2002) also argue

that the object and subject categories are the two important dimensions for examining

destination attributes. Therefore, it is extremely important to examine them both when

analyzing destination photographs.

Previous studies appear to agree in terms of subject categorizations, including *no people,*

tourist, host, and *tourist and host*. However, there is no generally agreed object

categorization. The work of Hunter (2008, 2010) only examines four object sub-categories,

and the categorization is too general to capture much detailed information. Other studies

apply this unique categorization to analyze objects (Dann, 1996; Govers & Go, 2005;

Hanusch, 2011; Hunter, 2008, 2010), perhaps due to the differences between the diverse

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destinations examined. Therefore, it is necessary to develop a comprehensive categorization scheme for analyzing the content of photographs of various destinations.

Size and providers of photographs in tourism

Previous studies show that the size of photographs influences not only customer responses to the advertising, but also responses to the product, such as brand beliefs, attitudes, and intentions (Percy & Rossiter, 1983). Percy and Rossiter (1983) examine the influence of small, medium, and large pictures on customer beliefs and attitudes towards brands. They show that larger pictures generate a more favorable brand attitude than smaller ones. Codispoti and De Cesarei (2007) examine the effects of picture size on emotional perception using autonomic, facial, and subjective reactions. Many studies also focus on the effects of pictures on the memorability of advertisements and the cognitive structure (belief strengths, attitudes, and intentions) resulting from exposure to them (Edell & Staelin, 1983). Consumers pay more attention to larger pictures, so the general tactic of print advertising is the bigger, the better (Pieters & Wedel, 2004; Rossiter & Percy, 1997). Specifically, in advertisements, the photographs should be relatively large – at least more than half the size of the advertisement – with two-thirds of a page normally performing best (Pieters & Wedel, 2004). As the size of photographs influences the effectiveness of marketing communications, examining this in the context of tourism media provides valuable information.

The process of selecting, formulating, and presenting reports in the media is complicated (Walters & Walters, 1992). For example, each magazine article, by the time it reaches the readers, is the result of a whole series of selections as to what items shall be printed, in what position they shall be printed, how much space each shall occupy, and what emphasis each shall have (Carlson, 2007). Decision makers in magazines have to deal with the relationship between advertisers who provide the largest source of revenue and media content providers, such as writers and publishers, as both parties deploy their respective strategies to obtain media coverage (Baran, 2006). These factors make the selection of photographs a somewhat delicate matter.

In the travel media, many photographs come from tourism organizations (Hanusch, 2011). Tourism media are strongly associated with both advertising and the travel industry (Fürsich & Kavoori, 2001; Shure, 1994). Specifically, they are strongly influenced by the public relations efforts of the travel industry and, at the same time, have a symbiotic relationship with advertisers. Journalists are commonly invited by tourism organizations such as destinations, resorts, hotels, or airlines to take familiarization trips and then write positive reviews (Shure, 1994). In this process, some photographs may be taken by journalists but others may be provided by tourism organizations directly. Due to the complicated relationship between advertising and the travel industry, some studies recommend examining the relationship between advertisement and editorial content in the media (Hanusch, 2011). As the photographs used in the media come from different organizations or persons, their visual representations might be different. Although photographs play a vital role in attracting

tourists' attentions to travel magazines, very few studies have been carried out on their inclusion in travel magazines, particularly their source.

METHODOLOGY

Content analysis is a systematic and objective method used to reduce the complexity of the material under analysis and capture central themes and content categories (Krippendorff, 2004). It is a commonly employed approach to examining pictures or photographs (Ateljevic & Doorne, 2002; Edelheim, 2007; Govers & Go, 2005; Hunter, 2008, 2010; Pritchard & Morgan, 1996), as it can clearly and systematically present research findings, particularly when analyzing a large volume of data. Content analysis should follow the following rules: *objectivity, systematization, sampling,* and *reliability* (Kassarjian, 1977; Kolbe & Burnett, 1991). *Objectivity* refers to the process by which analytical categories are developed and used. *Systematization* requires research procedures to eliminate the biased selection of data or classification categories. *Sampling* addresses the issues of randomization and generalizability. *Reliability* in content analysis includes categorical and inter-judge reliabilities. This study follows these rules of content analysis. Firstly, the sample includes all photographs of six Chinese outbound destinations covered in major Chinese travel magazines from 2006 to 2009. Secondly, a modified categorization is developed, based on previous studies. Thirdly, the data coding process involves four stages, from coding training to main coding. Finally, the participation of two coders ensured the reliability of the coding. Generally, in this study, *sampling* and *systematization* refer to the generalizability of the data;

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objectivity and *systematization* refer to the process of developing classification categories; and *reliability* denotes the inter-judge reliabilities.

Sampling

To accomplish the research objectives, the ideal approach would be to analyze all photographs in all travel magazines over an extended period of time; however, this is difficult to accomplish in practice. Therefore, this study includes only photographs of the six major Chinese outbound destinations in the most popular Chinese travel magazines from 2006 to 2009: *Voyage, National Geographic Traveler, World Traveler, Traveling Scope,* and *Traveler*. These magazines, which focus on outbound tourism, are China's top five travel publications, with a combined annual circulation of more than 300,000 (Meihua Network, 2009). The top six outbound destinations in 2009 for Mainland Chinese – Hong Kong, Macau, Japan, South Korea, Vietnam, and Taiwan – were examined (CNTA, 2010). This study defines pictures as photographs, so only photographs accompanying articles on the six destinations are included.

In total, 3,129 photographs were produced from 271 travel articles covering the 6 destinations (see Table 1). Japan had the largest number of articles with 94, Hong Kong and Taiwan 51 each, South Korea 41, Macau 22, and Vietnam 12. Correspondingly, Japan had 985 photographs accounting for 31.5% of the total photograph numbers, followed by Hong Kong with 682 (21.8%), Taiwan 544 (17.4%), South Korea 482 (15.4%), Macau 252 (8.1%),

and Vietnam 184 (5.9%). The average number of photographs for each travel article was 12. Specifically, each of the 6 destinations had a similar average number of photographs per article, ranging from 10 to 15.

(Table 1 here)

The size of the photographs was also measured. In this study, large was defined as A3, A4, and A5; medium as A6, A7, and A8, and small as smaller than A8. The providers of the photographs were classified into four groups: journalists, DMOs, anonymous (that is, unknown), and private sectors (such as attractions, hotels, restaurants, or airlines).

Data coding

The coding of photographs covered object and subject categories, size, and providers. In the tourism context, very few researchers have analyzed the object category based on frameworks or measurements developed in previous work with most scholars basing their approach on their own perceptions. To build on earlier research, this study adopted Beerli and Martín's (2004a, 2004b) categorization to measure the object category because this framework provides detailed information about destination attributes and has been used by several studies to measure destination images (Hsu & Song, 2012; Phau, Shanka, & Dhayan, 2010; Song & Hsu, 2013). As destination photographs are mainly used to communicate and build destination image, this framework was deemed appropriate for the study. The object

categories are: *Natural resources, General infrastructure, Tourist infrastructure, Leisure and recreation, Culture, history and art, Culinary culture, Political and economic factors, Physical environment, Social environment,* and *Atmosphere*. *Natural resources* denotes attributes such as weather, beaches, and the richness of the scenery. *General infrastructure* covers areas such as roads, airports, transport facilities, and health services, while *Tourist infrastructure* comprises hotels, restaurants, and tourist centers. *Leisure and recreation* includes theme parks, entertainment and sports activities, shopping, and casinos. *Culture, history and art* consists of museums, historical buildings, festivals, and religion. *Political and economic factors* address political stability, economic development, safety, and prices. *Physical environment* includes the cityscape, traffic congestion, and overcrowding, while *Social environment* denotes the friendliness of residents, poverty, and quality of life. Finally, *Atmosphere* includes luxury, exoticism, and relaxation (Beerli & Martín, 2004a, 2004b). As food and cuisine play a significant role in Asian culture, *Culinary culture* is considered a separate object category (Song & Hsu, 2013). So the final object categories used in this paper are: *Leisure and recreation, Culture, history and art, Culinary culture, Political and economic factors, Natural resources, General infrastructure, Tourist infrastructure, Physical environment, Atmosphere,* and *Social environment* (Song & Hsu, 2013). The themes used for the subject classification were based on Hunter (2008, 2010), namely *No people, Tourist, Host,* and *Tourist and host*. These categorizations have been used successfully to examine the media's textual and pictorial representations (Hanusch, 2011; Hsu & Song, 2012; Song & Hsu, 2013), so were suitable for use in measuring the photographs of destinations in travel magazines.

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Two research assistants conducted the data coding process, which consisted of four stages. Firstly, following an initial training session in which sample photographs were coded and the coding discussed with another senior researcher, each photograph was examined by the coders working individually and scored separately by each of them. Secondly, one year of data falling between 2006 and 2009 was randomly selected as a pilot. Two research assistants coded this data independently. Thirdly, the coders discussed any differences of opinion regarding categorization with the senior researcher in order to reach a consensus. This ensured a common understanding in data interpretation for the remainder of the process. Finally, the remaining three years of photograph data were coded, and any discrepancies discussed before a consensus reached for all photographs.

Data analysis

Multiple Correspondence Analysis (MCA) is an exploratory and descriptive technique to analyze the relationships between three or more categorical variables (Hair, Black, Babin, & Anderson, 2010; Meulman & Heiser, 2010). The difference between MCA and Correspondence Analysis (CA) is that MCA can be used to analyze three or more variables, whereas CA normally allows for only two. The purpose of MCA in this study was to find the optimal quantification to describe the relationships between the three variables: destinations, object categories, and subject categories. The process of conducting MCA was based on Meulman and Heiser (2010). Firstly, multiple response crosstabs in SPSS 19 were used to

calculate the frequency and matrix of each category, as a small number of photographs could be coded into multiple categories. Secondly, the frequency and matrix of each category were entered in SPSS. Thirdly, the MCA was run using SPSS. A parametric test (Chi-square) was conducted with the Excel add-in tool, XLSTAT 2012, to examine whether at least one variable was different from the others.

RESULTS

Photographs were content analyzed based on their object and subject categories. As some could be coded into multiple categories, and others could not be coded into any category, the final frequencies of object (3,421) and subject (2,700), were different from the total number of photographs. In terms of objects, the three categories appearing most frequently were *Culture, history and art* (916)*, Leisure and recreation* (559)*,* and *Physical environment* (464). In terms of subjects, the dominant category was *No people* (1,781). These results indicate that travel magazines prefer to use photographs in the categories *Culture, history and art, Leisure and recreation, Physical environment*, and *No people.* In terms of the combination between object and subject categories, Table 2 presents a frequency matrix. The total frequency of both object and subject is 2,947, as some of the photographs could not be classified into any of the object categories and thus are not included in the matrix.

(Table 2 here)

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The 10 most popular object-subject combinations for these destinations were (see Table 2 and Figure 1): *Culture, history and art + No people* (496)*, Culinary culture + No people* (329)*, Tourist infrastructure + No people* (312)*, Physical environment + No people* (309)*, Culture, history and art + Host* (256)*, Natural resources + No people* (247)*, Leisure and recreation + Tourist* (159)*, Leisure and recreation + No people* (144)*, Leisure and recreation + Host* (101)*,* and *Social environment + Host* (74). In order to present examples of these 10 types of images, the selected photographs have been resized and formatted to fit the layout presented in Figure 1.

(Figure 1 here)

Some of the object-subject combination had frequencies of less than 5 (see Table 2), including *Natural resources + Tourist and host* (1)*, Social environment + No people* (2)*, Social environment + Tourist and host* (3)*, General infrastructure + Tourist and host* (1)*, Atmosphere + Tourist and host* (3)*, Political and economic factors + No people* (4)*, Political and economic factors + Host* (3)*, Political and economic factors + Tourist* (0)*,* and *Political and economic factors + Tourist and host* (0).

Visual categories of destinations

Table 3 shows that these six destinations are portrayed differently in the majority of visual categories. In the object category of *Culture, history and art*, Hong Kong had the lowest

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percentage, whereas the other places were portrayed more as cultural destinations. In terms of *Leisure and recreation*, most destinations were framed differently, with higher frequencies for Hong Kong and South Korea. This showed that the photographs of these two destinations frequently refer to leisure activities. *Physical environment*, which consisted mainly of cityscapes, was associated with Japan, Hong Kong, and Taiwan. For *Tourist infrastructure,* differences were also found between the destinations. Photographs of hotels and restaurants were often included in reports about Hong Kong and Macau. It is interesting that in the *Culinary culture* category, Japan had a significantly lower percentage than the other destinations. For *Natural resources*, Hong Kong and Macau obtained very low percentages, indicating that photographs of natural landscapes rarely appeared in these articles. In terms of the remaining three object categories, *General infrastructure, Atmosphere,* and *Political and economic factors,* due to the low frequencies, small variations in pictorial coverage could result in a significant difference. Thus, any statistical significance identified may not have much practical importance.

In the subject category of *No people,* Japan, Hong Kong and Taiwan had significantly higher percentages of photographs than the other destinations. The same was true in the *Host* category for Japan, South Korea, and Vietnam. South Korea and Macau had significantly higher percentages in the category of *Tourist* than the rest.

(Table 3 here)

In order to capture the close relationships between destinations and visual categories in the photographs, as noted above MCA was used. MCA is a suitable tool for presenting multiple correlations between different variables. According to Table 4, the Cronbach's Alpha values for dimensions 1 and 2 are higher than 0.6, suggesting acceptable reliabilities (Hair et al., 2010). Sharing similar eigenvalues of approximately 1.8, dimensions 1 and 2 derived from MCA could explain 62.0% and 61.6% of the inertia, respectively. The discrimination measure, which can be regarded as a squared component loading, was also computed for each dimension (Meulman & Heiser, 2010). The average of the discrimination measures for any dimension equals the percentage of the variance accounted for by it. As shown in Table 4, the discrimination measures show that object does not discriminate between dimension 1 and dimension 2, as the values are almost equal. The variable of destination is more closely associated with dimension 1, indicating its ability to discriminate dimension 1. Therefore, dimension 1 could be called "Destination." Also, the subject variable can discriminate dimension 2, which could therefore be named "Subject."

(Table 4 here)

It can be seen from Figure 2 that the six destinations were highly correlated with certain object and subject categories. For instance, Japan and Taiwan were highly correlated with three object categories: *Culture, history and art, Natural resources,* and *General infrastructure.* Looking at the information presented about Japan and Taiwan in more detail, a review of the original photographs in the travel magazines showed that *Culture, history*

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and art in the Japanese context was strongly related to temples, the kimono, and the tea ceremony. *Natural resources* included mountains, seas, snow scenery, farms, and seas of lavender plants; and *General infrastructure* focused on subways, cars, and motorcycles. Although Taiwan shared similarities with Japan, its *Culture, history and art* category focused mainly on ethnic minorities and festival activities, *Natural resources* on ocean scenery, and *General infrastructure* on boats, trains, and subways.

(Figure 2 here)

South Korea and Vietnam also shared a similar theme of *Culture, history and art*, but with slightly different foci. An original photograph check showed that representations of both countries focused mainly on the traditional culture of the country. For instance, South Korea was portrayed as a destination with traditional arts, events, and a unique costume – the *Hanbok*. However, Vietnam as a destination was highly correlated with cultural attributes such as traditional hats, accessories, and the national costume – *Ao dai*. Hong Kong and Macau were plotted in close proximity to *Tourist infrastructure*. Photographs for these destinations focused on high-level hotels and restaurants with a particular emphasis on restaurants.

There were three clusters of object and subject categories which were not related to any destination at all. The first included *Culinary culture*, *Physical environment*, and *No people*, implying that food, city views, buildings, and architecture were commonly presented without

any people in the photographs. In the second cluster, *Leisure and recreation* and *Atmosphere* were strongly related to *Tourist,* and *Tourist and host*. *Leisure and recreation* represented stores, shopping malls, commercial products, and tourist attractions in the photographs examined. *Atmosphere* portrayed the impressions of destinations, tourists, and locals, such as luxury, relaxation, energy, fun, enjoyment, excitement, and pleasure. For the third cluster, *Social environment* was highly correlated with *Host*, which can be explained as the majority of the social signals being shown by local residents wearing local, modern, or traditional dress.

Size of photographs

In this study, the average size of photographs was 138.304 cm^2. According to Table 5, Taiwan showed the largest average photograph size of 166.131 cm^2, and Hong Kong the smallest at 110.623cm^2. Figure 3 shows the distribution of small, medium, and large photographs for each destination. It can be seen that the majority of the photographs were medium, followed by small and then large. Specifically, Hong Kong was represented by more small-sized photographs than the other destinations, whereas Macau had a higher percentage of large photographs than the others.

(Table 5 here)

(Figure 3 here)

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__Photograph providers__

In terms of the percentage of photographs provided by different organizations, journalists supplied the most for all destinations, followed by anonymous sources (see Figure 4). Of these, Japan exhibited the highest proportion of pictures from journalists; Hong Kong from anonymous sources; South Korea from DMOs; and Macau from the private sectors. It is interesting to note that no photographs at all of Taiwan and Vietnam were provided by DMOs.

(Figure 4 here)

DISCUSSION AND CONCLUSION

This study has examined photographs of major Chinese outbound destinations portrayed in popular travel magazines by reference to object and subject categories, size, and source. Japan received the largest amount of coverage. Its popularity can be explained by the fact that Japan was the third most popular outbound destination for Mainland Chinese travelers during the study period. Although Hong Kong and Macau were the top two outbound destinations for this market, it should be noted that Mainland Chinese travelers visiting these two locations, which are Special Administrative Regions of China, remain within their national boundary. Both places share similar cultures and languages with Mainland China,

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whereas travelers visiting Japan experience "real" tourism in a different environment from Hong Kong and Macau. In order to cater for the interests of potential Chinese tourists, travel magazines have put a lot of effort into reporting about Japan.

In terms of the visual categories used to promote these destinations in the travel magazines, *Culture, history and art* was the dominant component. This is consistent with the findings of previous studies that photographs with cultural information are used most frequently in printed and television travel brochures (Hanefors & Mossberg, 2002; Hunter, 2008). Photographs of Asia in newspapers' travel sections also mainly focus on cultural aspects (Hanusch, 2011). In this study, *Culture, history and art* was the major image of many Asian destinations, except for Hong Kong, portrayed in travel magazines. Hong Kong was portrayed with a focus on *Leisure and recreation*, *Physical environment,* and *Tourist infrastructure.* One of the reasons for its popularity in the first two of these categories could be its stereotypical image as a shopping paradise and a metropolitan city; certainly photographs on different types of leisure activities and cityscapes were portrayed frequently in the magazines studied. Both Hong Kong and Macau were framed as destinations with a good *Tourist infrastructure,* which could be explained by the finding that a number of their photographs were provided by private businesses such as hotels and restaurants. In terms of *Culinary culture,* a significantly lower percentage of photographs of Japan were categorized under this heading than for the other five destinations. Although Japan is certainly famous for its cuisine, it seems that much of the editorial space for photographs has tended to be given over to *Culture, history and art*, rather than *Culinary culture*. As for the lack of

photographs for Hong Kong and Macau in this category *Natural resources*, it could be that

these two destinations have fewer natural landscapes in comparison to Mainland China (Hsu

& Gu, 2010).

In terms of subject category, the majority of photographs were devoid of representations of

people, similar to travel brochures and newspapers' travel sections (Hanusch, 2011; Hunter,

2008). Large numbers of photographs fell into the *No people* category as they showed

natural landscapes, the general environment, and the modern society of these destinations.

The *No people* theme was frequently associated with Hong Kong and Macau, but mainly

with Hong Kong. It is perhaps surprising that 74% of the photographs of Hong Kong had no

people in them. Some destinations such as Japan, South Korea, and Vietnam were associated

with the category *Host*, which might be due to cultural differences with China. As a result,

depictions of locals in costumes or engaging in particular activities could attract the attention

of Mainland Chinese. *Tourists* were most commonly found in the photographs about South

Korea and Macau, which made these images more dynamic.

In terms of size, Hong Kong demonstrated the largest percentage of small photographs. A

review of the originals showed that most of these had been provided by anonymous source.

Macau exhibited the largest percentage of large photographs, which showed a variety of city

views. In terms of source, more photographs of South Korea and Macau were provided by

DMOs. The Korea Tourism Organization and Macau Government Tourist Office have

successfully promoted these two destinations in Chinese travel magazines. In addition, some

photographs of Hong Kong and Macau were provided by private businesses such as hotels, restaurants, and resorts, with a focus on luxury hotels and the Hong Kong Disneyland. Photographs of Japan were mainly taken by journalists, indicating a limited promotional effort from other sources.

The findings of this study have significant implications for tourism marketers focusing on the Mainland Chinese travel markets. DMOs can now review their own and competitors' visual representations in major tourism media, and examine the specific strengths and weaknesses of the destinations. Such an analysis could lead to suggestions for how to project the specific destination images they want to promote in the tourist-generating country (Hsu & Song, 2012). As these destinations were framed differently in terms of the object and subject categories, photograph size, and source, it is important for DMOs to communicate effectively with tourism media about how best to feature their destinations.

In order to market a destination, DMOs firstly have to define a targeted message about what type of photographs should be used to profile the location (Goossens, 2000). The information presented, such as the objects and subjects depicted in the photographs, should focus on those factors that are believed to attract attention and generate interest among the targeted travelers. In doing so, advertisements have known to use photographs of some of the most unique characteristics and most breathtaking sites (Hem, Iversen, & Gronhaug, 2003; Hem, Iversen, & Nysveen, 2003; Özdemir, 2010). The size of the photographs could also influence readers' perception of the destinations portrayed, so DMOs should also try to work

with magazines to maximize the size of their images. Large and medium-sized photographs could attract more people's attention to the featured destinations and the associated text.

While working with the media, DMOs should also carefully select the photographs they make available. By reviewing the object and subject visual categories associated with each destination (Table 3), DMOs can assess whether what has already been printed matches what they would like to promote in future. A comprehensive and integrated marketing plan should include details of the specific media to pursue as well as the type of information and photographs to be provided. Ready-to-use information and photographs can make journalists' jobs easier and their reporting more accurate. DMOs could also implement practices such as inviting editors and journalists on familiarization trips to encourage coverage. During the publication process, journalists or editors may adjust the size and layout of photographs (Wardle, 2007). DMOs who have better relationships with the media may be better positioned to try to secure more magazine space and influence the selection and size of photographs used so as to best represent their destinations.

Furthermore, DMOs should also examine how travelers perceive their destinations and those with which they are competing, and identify the role photographs have played in forming those images. With this knowledge, DMOs can then judge whether they should continue to try to promote their existing destination images in the media, or develop different ones by repositioning activities. Understanding the role of photographs in forming images can also help DMOs consolidate or change these images more effectively through the use of

photographs in future marketing activities.

This exploratory study has addressed a knowledge gap in the analysis of the use of photographs in tourism media. Specifically, it has developed and used a modified measurement for analyzing photographs of destinations in order to better understand the images projected. The size and source of photographs have also been investigated for the first time in the tourism context. This study therefore broadens the scope of existing work on visual analysis in the tourism research. Nevertheless, it has several limitations, which give rise to some suggested future research directions. Firstly, although a new categorization scheme, including 10 object and 4 subject categories, was developed to analyze these photographs, this study only examined their content. In the future, researchers could use an experimental design to examine the effect of photographs on readers' destination image and future travel behavior. For example, they could explore which types of object and subject categories most effectively arouse travelers' attention and recall, and which combinations of the two could better elicit travelers' intention. Secondly, only basic information on the size of the photographs was examined here. Future studies could investigate whether larger photographs can arouse tourists' recall and recognition more effectively than small photographs. Thirdly, researchers could also interview editors or journalists to determine how photographs are selected for inclusion in travel magazines and learn more about this process.

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Table 1: Photographs of destinations

	Japan	Hong Kong	Taiwan	South Korea	Macau	Vietnam	TOTAL
Articles	94[a] (34.7%)[b]	51 (18.8%)	51 (18.8%)	41 (15.1%)	22 (8.1%)	12 (4.4%)	271 (100%)
Photographs	985 (31.5%)	682 (21.8%)	544 (17.4%)	482 (15.4%)	252 (8.1%)	184 (5.9%)	3,129 (100%)
Average photographs per article	10	13	11	12	11	15	12

Note: [a]: frequency; [b]: percentage

Table 2: Visual categories in travel magazines

Category	No people	Host	Tourist	Tourist and host	TOTAL
Culture, history and art	**496[a] (26.0%)[b]**	**256 (45.2%)**	38 (10.6%)	21 (17.9%)	**811 (27.5%)**
Leisure and recreation	**144 (7.6%)**	**101 (17.8%)**	**159 (44.4%)**	48 (41.0%)	**452 (15.3%)**
Culinary culture	**329 (17.3%)**	66 (11.7%)	19 (5.3%)	11 (9.4%)	**425 (14.4%)**
Tourist infrastructure	**312 (16.4%)**	25 (4.4%)	51 (14.2%)	21 (17.9%)	409 (13.9%)
Physical environment	**309 (16.2%)**	10 (1.8%)	23 (6.4%)	8 (6.8%)	350 (11.9%)
Natural resources	**247 (13.0%)**	11 (1.9%)	43 (12.0%)	1 (0.9%)	302 (10.2%)
Social environment	2 (0.1%)	**74 (13.1%)**	5 (1.4%)	3 (2.6%)	84 (2.9%)
General infrastructure	49 (2.6%)	13 (2.3%)	9 (2.5%)	1 (0.9%)	72 (2.4%)
Atmosphere	14 (0.7%)	7 (1.2%)	11 (3.1%)	3 (2.6%)	35 (1.2%)
Political and economic factors	4 (0.2%)	3 (0.5%)	0 (0.0%)	0 (0.0%)	7 (0.2%)
TOTAL	1,906 (100%)	566 (100%)	358 (100%)	117 (100%)	2,947 (100%)

Note: [a]: frequency; [b]: percentage

Table 3: Visual categories of destinations

	Japan	Hong Kong	Taiwan	South Korea	Macau	Vietnam	x^2
Object category							
Culture, history and art	366/1,095 (33%)[a]	90/738 (12%)	148/571 (26%)	169/535 (32%)	77/277 (28%)	66/205 (32%)	114.47**
Leisure and recreation	155/1,095 (14%)	180/738 (24%)	44/571 (8%)	114/535 (21%)	47/277 (17%)	19/205 (9%)	87.19**
Physical environment	156/1,095 (14%)	123/738 (17%)	86/571 (15%)	58/535 (11%)	26/277 (9%)	15/205 (7%)	21.92**
Tourist infrastructure	91/1,095 (8%)	170/738 (23%)	77/571 (13%)	29/535 (5%)	54/277 (19%)	29/205 (14%)	123.55**
Culinary culture	88/1,095 (8%)	119/738 (16%)	85/571 (15%)	68/535 (13%)	43/277 (16%)	39/205 (19%)	40.39**
Natural resources	163/1,095 (15%)	9/738 (1%)	71/571 (12%)	70/535 (13%)	3/277 (1%)	16/205 (8%)	130.35**
Social environment	35/1,095 (3%)	21/738 (3%)	23/571 (4%)	17/535 (3%)	12/277 (4%)	9/205 (4%)	n.s.
General infrastructure	31/1,095 (3%)	19/738 (3%)	23/571 (4%)	4/535 (1%)	0/277 (0%)	12/205 (6%)	28.03**
Atmosphere	8/1,095 (1%)	7/738 (1%)	4/571 (1%)	3/535 (1%)	15/277 (5%)	0/205 (0%)	54.38**
Political and economic factors	2/1,095 (0%)	0/738 (0%)	10/571 (2%)	3/535 (1%)	0/277 (0%)	0/205 (0%)	29.74**
TOTAL	1,095/1,095 (100%)	738/738 (100%)	571/571 (100%)	535/535 (100%)	277/277 (100%)	205/205 (100%)	
Subject category							
No people	592/860 (69%)	433/589 (74%)	305/447 (68%)	231/411 (56%)	128/229 (56%)	92/164 (56%)	54.03**
Host	187/860 (22%)	59/589 (10%)	87/447 (19%)	94/411 (23%)	43/229 (19%)	45/164 (27%)	46.60**
Tourist	58/860 (7%)	64/589 (11%)	42/447 (9%)	69/411 (17%)	50/229 (22%)	20/164 (12%)	57.70**
Tourist and host	23/860 (3%)	33/589 (6%)	13/447 (3%)	17/411 (4%)	8/229 (3%)	7/164 (4%)	n.s.
TOTAL	860/860 (100%)	589/589 (100%)	447/447 (100%)	411/411 (100%)	229/229 (100%)	164/164 (100%)	

Note: [a]: percentage; n.s.: not significant; ** $p < 0.01$

Table 4: Summary of multiple correspondence analysis

Dimension	Cronbach's Alpha	Variance Accounted For		
		Eigenvalue	Inertia	
1	.694	1.860	.620	
2	.689	1.849	.616	
Total		3.709	1.236	
Discrimination Measures				
Dimension	Variables			
	Destination	Object	Subject	Total
1	.498	.802	.560	1.860
2	.197	.830	.822	1.849
Mean	.347	.816	.691	

Table 5: Size of photographs by destination

	Japan	Hong Kong	Taiwan	South Korea	Macau	Vietnam
Minimum (cm^2)	6.9	5.2	4	5.9	5	7.8
Maximum (cm^2)	1,113.8	1,211.2	1,197	1,100	1,182.6	1,101.6
Average (cm^2)	140.8	110.6	166.1	137.2	156.8	122.6

Figure 1: The 10 most popular combinations of object and subject categories

Note: *1) Culture, history and art + No people; 2) Culinary culture + No people; 3) Tourist infrastructure + No people; 4) Physical environment + No people; 5) Culture, history and art + Host; 6) Natural resources + No people; 7) Leisure and recreation + Tourist; 8) Leisure and recreation + No people; 9) Leisure and recreation + Host,* and *10) Social environment + Host.*
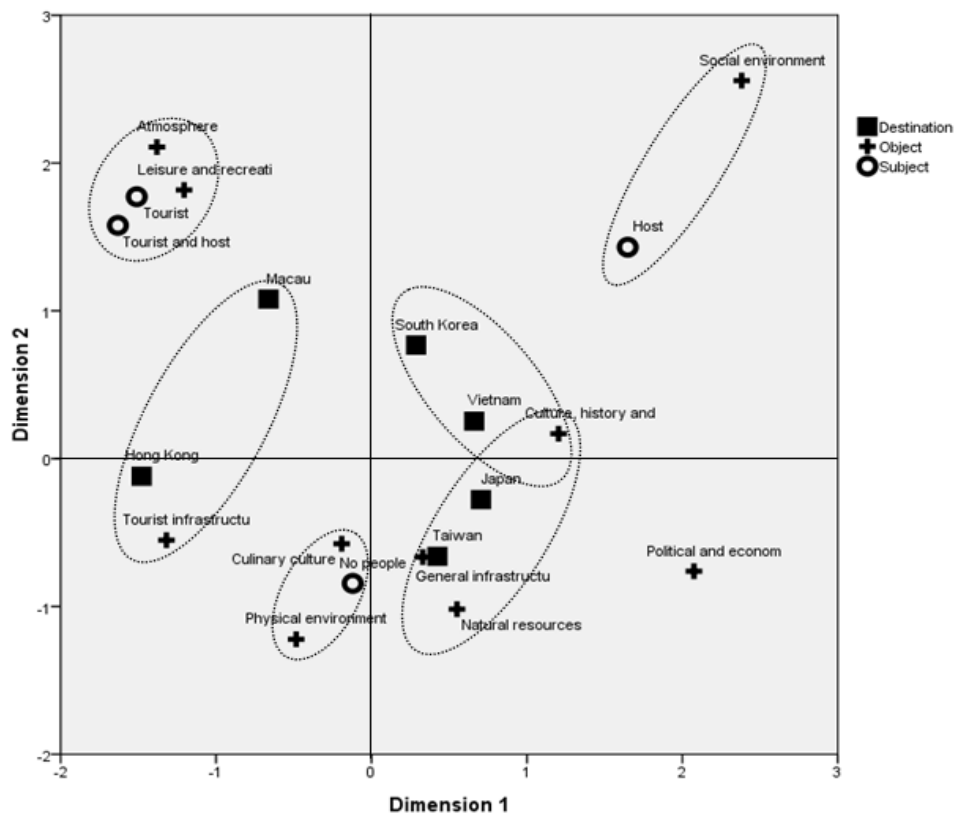
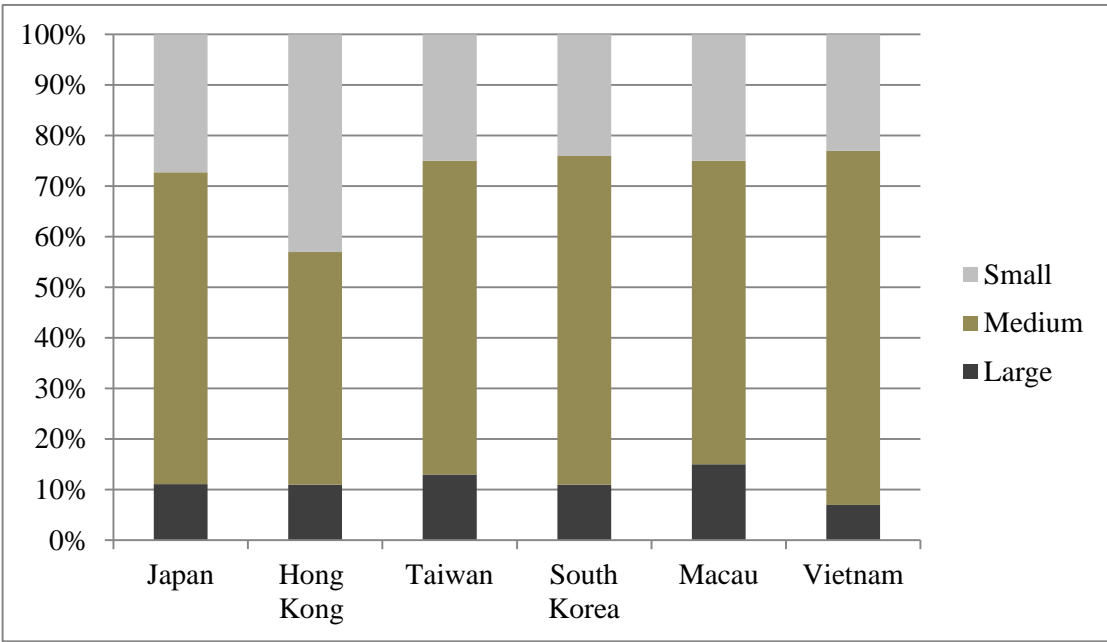Figure 2: MCA map of destinations and visual categories

Figure 3: Size of photographs by destination

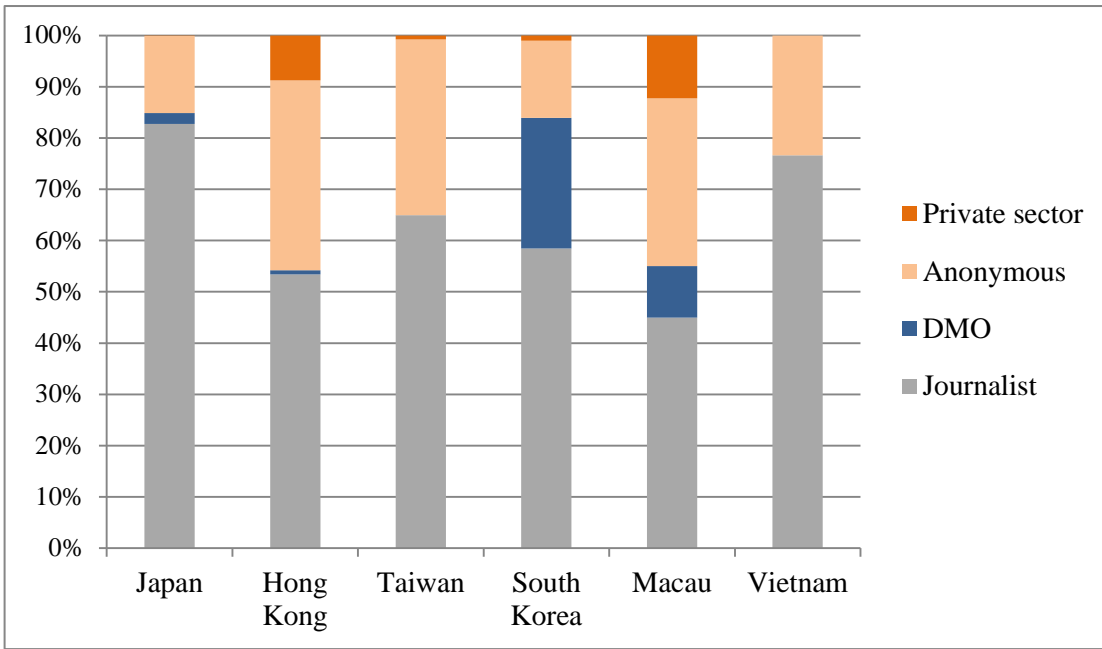Note: In this study, large is defined as A3, A4, or A5; medium as A6, A7, or A8; and small as smaller than A8.

Figure 4: Photograph providers by destination