Examining the Effect of Social Media Marketing in Tourism

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ABSTRACT
A growing number of travel agencies in the tourism industry use social media to promote their services and reach target customers despite some doubt regarding the effectiveness of these tools. Nevertheless, few researchers have examined the effects of social media marketing, and especially its effects on sales. Therefore, our study aims to assess the impact of social media on the purchase of tourism products. Additionally, to explore whether the influence of social media marketing changes among different types of tourism products, we develop a typology of tourism products that classifies tourism along the following five dimensions: (1) the structure of tourism, (2) the involvement of tourists, (3) the scope of tourism, (4) the price of products, and (5) the length of a tour. All tours with Facebook campaigns conducted by our case company from February 1, 2012 to November 30, 2013 are selected as our target tourism products. Moreover, we choose certain products without Facebook campaigns that were available for purchase during the same time period as a control group. We obtain the sales data from the case company and calculate the sales of each product before and after the Facebook campaigns. We then apply a difference-in-difference approach, comparing the average changes in sales performance of the treatment group with those of the control group. The results show that Facebook campaign activities have a positive impact on purchases of tourism products. Furthermore, sales are more likely to increase when a travel agency promotes products that are less structured, limited in scope, relatively lower-priced, or require less tourist involvement.

Keywords
Social media marketing, tourism, travel agency, social media performance, Facebook campaign.

1. INTRODUCTION
In tourism, social media have dramatically changed how consumers plan and buy travel-related products (Buhalis and Law 2008). A study conducted by the Opinion Research Corporation indicates that 82 percent of respondents expressed that they had checked online reviews, blogs, and other online customer feedback before purchasing a travel-related product, accounting for the largest portion of all products and services (eMarketer 2008). As social media have appeared to gradually change existing marketing practices on a fundamental level, companies cannot ignore this new marketing channel. However, companies appear to have different views on the effect of social media marketing. According to the Social Media Marketing Industry Report in 2013, 97 percent of marketers indicate that they participate in social media marketing, but only approximately one in four marketers claim that they are able to measure the return from their social media activities. Additionally, regarding the effectiveness of Facebook marketing, 37 percent of marketers agree that their Facebook efforts are effective, whereas the remainders are uncertain or have opposite opinions (Stelzner 2013).

A number of studies have discussed opportunities related to social media marketing and provided strategies and principles for utilizing online social networking applications for managers (e.g., Berthon et al. 2012, Kaplan et al. 2010); however, few researchers have examined the effects of social media marketing, especially the effects on sales. Moreover, although some studies have focused on the important influence of social media usage such as online reviews or word of mouth in the travel planning process (Sparks and Browning 2011, Chen et al. 2013), few studies have considered the effect of social media on travel-related purchasing decisions.

Therefore, our study aims to assess the effects of social media marketing in the tourism industry by examining the influence of social media on the purchase of tourism products. We are also interested in exploring whether the influence of social media marketing changes among different types of tourism products. The results can help companies in the tourism industry to justify the financial outcome of social media marketing and further enhance their understanding of which types of tourism products are suitable for selling through social media.

2. CONCEPTUAL BACKGROUND

2.1 Social Media Activities in Tourism
Bernoff and Li (2008) have found that companies launch social media for five different purposes-- listening, talking, energizing, supporting, and managing. Among them, talking and energizing directly link to marketing and sales. Bernoff and Li (2008) have noted that social media are widely used as a “talking” channel by which companies can promote products and services to customers. Companies also use social media to “energize” enthusiastic customers to increase sales. In tourism, we note that companies conduct social media campaigns for similar reasons. For example, Malaysia's low-cost airline AirAsia conducted the Friendsy campaign to increase brand awareness of Sydney as a new

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Australian hub. The company developed a Facebook app showing a virtual plane that AirAsia's fans could fill with 302 of their Facebook friends. The winner of the campaign would have an opportunity to take their friends from Sydney to Kuala Lumpur, where they would then spend three nights with accommodations paid for by AirAsia, before returning home on their private plane. As a result, the AirAsia Facebook fan base grew by 30 percent, and the Friendsy competition reached 2,291,483 people on Facebook. The campaign helped achieve an average 82.5 percent load factor on all routes from Sydney, exceeding the initial goal of AirAsia (Facebook Studio 2013).

Obermutten is another noted example of the use of social media marketing. This village, located in Switzerland's remote mountain region of Graubunden, uses Facebook to increase awareness of this place that has fewer than 80 residents. Obermutten began a campaign that allows anyone who likes the village's Facebook page to have their pictures posted on the village bulletin board. Because generating the connection between the online world and this remote village attracts attention from users all over the world, the Facebook page quickly reached more 40,000 fans. Additionally, this activity also draws traffic to the Graubunden tourism website, with visits increasing by 250 percent. An effort that cost 10,000 Swiss francs resulted in the media equivalent of $2.4 million, with approximately 60 million media impressions (Advertising Age 2012).

The above-mentioned examples show that various social media activities are conducted by travel providers to serve different objectives with respect to talking and energizing. In this study, we would identify these types of social media activities from all the campaigns conducted on the Facebook fan page of our case company and further explore their influences by examining changes in the sales of its tourism products. Moreover, we would explore whether these influences change with the promotion of different types of tourism products.

2.2 Media Effects with Different Types of Products

The suitability of the media for marketing to consumers greatly depends on the characteristics of the marketed products and services (Peterson et al., 1997). Legg and Baker (1987) proposed that the effectiveness of service advertising depends on both the service type and the media forms that are selected. Therefore, it is necessary to clearly consider product and service characteristics when evaluating the effects of media.

Some early research suggested that different categories of products were likely to affect the marketing performance of traditional media (e.g., Stafford and Day 1995). Some more recent studies explored the effects of Internet advertising campaigns on different types of products (e.g., Choi and Lee 2012). There are also studies interested in comparing Internet with traditional media with respect to the marketing effects based on types of products (Dijkstra et al. 2005, Peterson et al. 1997, Yoon and Kim 2001). However, few studies have examined the effectiveness of social media based on different types of products.

In this study, we would investigate the effectiveness of social media along five dimensions of tourism products:

(1) Structure of tourism (structure versus independence)

Highly structured travel refers to trips that are to a large extent arranged by travel agencies. This type of tour generally contains transportation, food, accommodation and entertainment, which are advertised and sold together at an inclusive price. In contrast, independent travel does not include a set of scheduled sightseeing activities, and hence, tourists have more flexibility in making their own travel arrangements.

(2) Involvement of tourists (stimulation versus tranquility)

Stimulation indicates a desire for high levels of interaction with surrounding environments that can be satisfied by participating in adventure activities, water sports (e.g., sailing, scuba diving, whitewater rafting) or winter activities (e.g., skiing, snowboarding). In contrast, a more tranquil journey involves little interaction with the local environment. Tourists merely want to relax and escape to a vacation destination. They enjoy the change of pace and want to take it easy during their stay (Dolnicar and Leisch, 2003).

(3) Scope of tourism (broad versus limited)

Specific tourism proposed by Lew (1987) means that tourism is limited in scope and there is often a specific theme to satisfy the needs of tourists. An island destination is usually regarded as specific tourism. In contract, when tourists visit many cities or regions during a trip, we consider the tourism is broad in scope.

(4) Price of products (high versus low)

The cost of tourism to visitors includes the cost of transportation to and from the destination and the cost of ground content, such as accommodation, tour services, food and beverages, and entertainment (Dwyer et al. 2000). In our study, tourism products were classified as either higher- or lower-priced based on their selling price.

(5) Length of tour (long versus short)

Length of stay is one of the key elements in a tourist's decision-making process, and promotional campaigns must therefore be adjusted to the tourist's decisions with regard to the length of time spent at a destination (Martínez-Garcia and Raya, 2008). In this study, tourism products were classified as either longer or shorter trips based on duration of travel.

Our conceptual framework is shown in Figure 1. We aim to explore the effect of social media marketing on sales performance and examine the moderating effects of various product characteristics. Therefore, two research questions would be answered: (1) can social media marketing facilitate the sale of tourism products, and (2) what types of tourism products are more suitable to conduct social media marketing activities for increasing sales, whereas what types of products are less suitable?

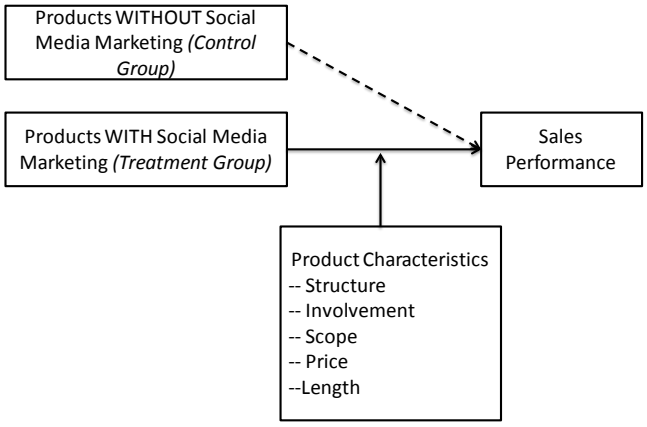

Figure 1. Conceptual Framework

3. HYPOTHESIS DEVELOPMENT

3.1 Traditional E-Commerce Marketing Versus Social Media Marketing

Traditional e-commerce is enabled by Web 1.0, featuring one-way communication. Social commerce is enabled by Web 2.0, a platform that allows bidirectional communication, making consumers become better informed than ever before (Baghdadi 2013). According to Stephen and Toubia (2010), social media allow people to actively participate in the marketing and selling of products and services in online communities. Moreover, Kim and Hawamdeh (2011) state that companies utilize social media that help them improve their marketing strategies, increase website traffic and improve sales. That is, traditional e-commerce marketing has some weaknesses that can be complemented by social media, and thus, companies that incorporate social media marketing into traditional EC marketing can generate better sales.

Some companies can indeed increase sales using social media marketing activities. Dell, for example, state that its use of Twitter has generated $1 million in incremental revenue resulting from sales alerts (Kaplan et al. 2010). The Royal Opera House in London makes 30 percent of its sales through its Facebook fan page (Ang 2011). Old Spice, an American brand of male grooming products, successfully increases its sales through posting on YouTube with millions of downloads, humorous tweets on Twitter, and the creation of a massively popular fan page on Facebook (Berthon et al. 2012). Therefore, we expect that tourism agencies can increase the sales of tourism products with the assistance of social media marketing. Our hypothesis is as follows:

H1. Marketing tourism products in dual channels (i.e., e-commerce and social media) is likely to achieve better sales performance than simply marketing in traditional e-commerce.

3.2 Effect of Social Media Marketing on Tourism Products

3.2.1 Structure of Tourism

The structure of tourism indicates the level of planning that is performed by travel agencies. Accordingly, highly structured travel refers to trips that are to a large extent arranged by travel agencies, such as package tours. In contrast, less structured travel refers to trips that are primarily planned by tourists themselves, such as independent travel, flight and hotel packages.

According to Lo et al. (2011), people who like to share travel photos on social networking sites appear to prefer independent travel rather than package tours. Such individuals are more likely to become acquainted with locals and even attempt to learn some of the local language. Shih (2011) also notes that Facebook can be a preferable channel for companies to market independent travel compared with package tours because independent travel typically requires more conversations between companies and tourists than package tours do, and Facebook can thus provide a more flexible channel for companies to discuss with customers in terms of travel dates and travel plans compared with traditional websites. Our hypothesis is as follows:

H2. Incorporating social media into the marketing of independent travel is more likely to increase the sales than in the marketing of package tours.

3.2.2 Involvement of Tourists

A high-involvement tourist refers to an individual's need for active stimulation from his/her surrounding vacation environment. Their desires can be satisfied by physical or adventure activities that require more interactions with the surrounding environment. In contrast, those who prefer tranquil environments tend to have little interaction with local tourist attractions.

One of the main characteristics of social media is that these media gather engaged and active participants of a given company (Kaplan et al., 2010). Bartram (2001) has stated that increased exposure of adventure activities in the media may indeed stimulate involvement in an activity. Additionally, those who primarily use social media to share their trips appear to want a deeper, more authentic travel experience (Lo et al., 2011). Therefore, using social media to promote tourism products that include more exciting activities may attract active users and increase their intention to engage in these activities and to subsequently purchase the products. Thus, our hypothesis is formed as follows:

H3. Incorporating social media into marketing products that require greater tourist involvement is more likely to increase sales than in marketing products that require less tourist involvement.

3.2.3 Scope of Tourism

According to Section 2, tourists may have fewer opportunities to gain a deeper understanding of local destinations when tourism is broad in scope. In contrast, specific tourism is relatively limited in scope, such as visiting only one city or island during a trip. Moreover, there is often a specific theme to satisfy the needs of tourists.

According to Lew (2008), specialty tourism products that are different from mass tourism destinations may have less information available and may be treated with greater caution by consumers. However, advances in communication technology and social media have led to rapid growth in special-interest travel destinations and experiences as well as travel to more remote corners of the globe. Therefore, tourism businesses can also participate in online social media to build a web presence and reputation for these products. For example, providing special interest blogs and tailoring the content may be an effective approach to target specific interest groups (Schmallegger and Carson 2008). Consequently, we hypothesize as follows:

H4. Incorporating social media into marketing tourism that is limited in scope is more likely to increase sales than in marketing tourism that is broad in scope.

3.2.4 Price of Products

When the price of a product is relatively high, customers tend to search for more information (Beatty and Smith 1987). Because product price is a stimulus for customer thinking, high-priced products lead customers to devote more thought to their purchase intentions (Wathieu and Bertini 2007). Additionally, product price is related to perceived risk (Wang and Chang 2013). That is, higher risk is involved when selecting products with higher prices.

According to the research findings of Wang and Chang (2013), if a product's price is relatively high, then the information and recommendations provided by strong-tie contacts from Facebook have a more significant effect on purchase intentions than the information and recommendations provided by weak-tie sources from Facebook. However, this effect is not found for low-priced

products. Accordingly, we expect that interpersonal influence and communication on social media are more important when consumers consider buying relatively high-priced tourism products. Thus, we develop the following hypothesis:

H5. Incorporating social media into the marketing of higher-priced tourism products is more likely to increase sales than in the marketing of lower-priced tourism products.

3.2.5 Length of Tour

In general, the risk of travel increases with the length of stay. Consequently, the anticipation of a longer trip stimulates more information search (Fodness and Murray, 1999). According to Tsiotsou and Ratten (2010), Web 2.0 technologies can foster the sharing of information and lower product uncertainty. Additionally, Litvin et al. (2008) described online interpersonal influence or eWOM as a potentially cost-effective means of marketing tourism, especially for high-risk tourism products. Therefore, we believe that social media supported by Web 2.0 technologies can be an effective tool to reduce the perceived risk of a longer trip and thus to promote better marketing effects. Our hypothesis is as follows:

H6. Incorporating social media into the marketing of longer trips is more likely to increase sales than in the marketing of shorter trips.

4. RESEARCH METHODOLOGY

4.1 Case Background

The tourism industry has grown and developed into one of the largest businesses in the world because of the increased interest in leisure activities. For outbound tourism from Taiwan, the official tourism bureau indicated that the total count of overseas travel in 2012 was greater than 10.2 million. Approximately 20.6 percent of people traveled abroad at least once in 2012. Moreover, approximately 85 percent of them have sought the assistance of travel agencies, whereas less than 5 percent of people would entrust their domestic travel to travel agencies. In view of the importance of international travel for travel agencies, we would focus on this type of travel product of our case company (called Company A).

Company A was founded in 1978 and is one of the most well-known travel agencies in Taiwan. Company A has three subsidiary companies, one of which takes responsibility for managing e-commerce and online marketing. The company sells various tourism products on the official website, including domestic travel, international travel, personal travel, corporate travel, and inbound tourism. When business would most likely benefit from the advantages of Web 2.0 applications, Company A began to exploit them for interactions with consumers. Company A built its own Facebook business fan page as a marketing platform to interact with its consumers since September 2009, and the page currently has more than 250,000 Facebook fans.

Based on our interview with their e-commerce managers, we understand that the Facebook fan page manager encounters problems in developing effective campaigns for a particular tourist product. The page manager makes ad hoc decisions, which are mostly based on heuristic methods. Furthermore, they lack direct evidence to justify the investments on Facebook, which affects the budget allocation of the e-commerce expense in a great amount.

According to prior literature on the five uses of social media (Bernoff and Li 2008, Li and Soonius, 2012), we classified Company A's Facebook campaigns which have been posted and identified those that would be studied in this research (see Table 1).

Table 1. Classification of Company A's Facebook Campaigns

Five Usages of Social Media	Description of Company A's Facebook Campaigns	Observation Objects in This Study
Listening	The company uses a "review app" that allows consumers to give ratings and opinions about their products and services. There are currently more than 4,300 reviews on the Facebook page, and anyone can respond to these reviews.	
Talking	The page talks about daily life and shares moods with customers while uploading a cheerful photo.	
	The fan page uses spellbinding landscape pictures, beautiful words, sweet quotes, questions or contests to engage customers. Moreover, the page may provide links to related products for customers.	√
Energizing	The company directly post special offers and links on Facebook.	√
Supporting	When customers raise questions about their products or services, the company can address customers' doubts quickly.	
Managing	Company A **does not** use Facebook as an internal tool for sharing knowledge or recruiting new employees.	

4.2 Data Collection

First, we identified all international tours that have been marketed using any of the Facebook campaigns listed in Table 1. All the tours with campaigns conducted from February 1, 2012 to November 30, 2013 were selected as our target tourism products. Because we want to inspect the changes in the sales of tourism products before and after Facebook campaigns, we excluded the products if the product has been ready to sell just few days before the marketing campaigns are posted or the product would be removed from online store soon after the campaigns (i.e., there might be no purchase order for the product before or after Facebook campaigns). We obtained the sales data of all our target products from Company A.

The manager of the case company indicated that the sales price of each product changes over time, and hence the company uses the number of customers to evaluate annual sales performance. Therefore, according to the trading volume of each target product, we calculated the average monthly number of customers to measure sales performance before and after the Facebook campaigns. Additionally, because some products might be the subjects of more than one campaign, for each target product, we calculated the sales (i.e., the average monthly number of customers) before and after the first campaign activity began. However, if the length of time between the first campaign and any subsequent ones to market the

same product exceeded four months, we also calculated the sales performance before and after the later campaign to examine its influence on the target product.

Essentially, we calculated the sales result of each target product based on its sales start and end dates. That is, for each target product, sales performance of pre-Facebook campaign was measured from its sales start date to the time when its first Facebook campaign was conducted. Sales performance of post-Facebook campaign was calculated from the first Facebook campaign to its sales end date. However, there are long and short periods for products sold in the store. Hence, if the sale's start date was earlier than three months before the first Facebook campaign, the sales performance was calculated based on the three-month sales data before the first campaign. Additionally, if the sale's end date was later than three months after the first Facebook campaign concluded, the sales result was calculated based on the first three-month sales data after the campaign was conducted.

To examine the effects of Facebook marketing activities based on different types of tourism products, the measurements of tourism product classification, including the structure of tourism (ST), the involvement of tourists (IN), the scope of tourism (SC), the price of products (PR) and the length of tour (LE), are defined in Table 2. Another point to note is how to determine the price and the length of a product. Although package tours and independent group trips had fixed departure and return dates, consumers who bought flight and hotel packages could decide their length of stay at tourism destinations for themselves. Therefore, for each flight and hotel package, the number of travel days was decided by calculating the average length of tour in the sales data. Additionally, travel agencies sell the same product at different prices that vary according to the moment, the place of purchase and other factors; hence, the price of each tourism product was decided by calculating the average sales price based on sales data.

Table 2. Measures of Tourism Product Classification and Sales

Components	Items	Description of measures
Structure of tourism (adapted from Yiannakis and Gibson 1992)	ST	The level of planning that is performed by travel agencies. Accordingly, a tourism product is less structured when it includes only air tickets and accommodations and not a set of scheduled sightseeing activities (e.g., independent travel, flight and hotel packages). In contrast, a package tour is labeled a highly structured tourism product.
Involvement of tourists (adapted from Yiannakis and Gibson 1992)	IN	The extent of needs for active stimulation from the surrounding vacation environment. Therefore, a tourism product requires greater tourist involvement when it includes a least one adventure activity (e.g., whitewater rafting, scuba diving, visiting a theme park or amusement park) to satisfy the need for stimulation. In contrast, a tourism product requires less tourist involvement when it is more tranquil and does not include any adventure activity. Tourists merely want to sightsee or shop for a relaxing vacation.
Scope of tourism (adapted from Lew 1987)	SC	Number of tourism attractions during a trip. A tour is broad in scope when tourists travel to many cities or regions during a trip. In contrast, a tourism product is limited in scope when tourists travel to one city or island during a trip and often when there is a specific theme to satisfy the needs of tourists.
Price of products	PR	The average sales price of a tourism product. A tourism product is labeled a higher-priced product when its price is greater than the mean sales price of all the samples plus 0.5 times standard deviation. In contrast, it is labeled a lower-priced product when its price is less than the mean sales price of all the samples minus 0.5 times standard deviation.
Length of tour	LE	The difference between the departure and return dates. A tourism product is labeled a longer trip when its length is greater than the mean length of all the samples plus 0.5 times standard deviation. In contrast, it is considered a shorter trip when its length is less than the mean length of all the samples minus 0.5 times standard deviation.
Sales performance	Sales	The average monthly number of customers (i.e., the average monthly trading volume of each product).

4.3 Sample Design and Evaluation

Based on the sale start and end dates of each target product, we also selected a product from those without Facebook campaigns conducted during the same time period. Moreover, to eliminate some of the effect of selection bias, we chose those that matched the target products in term of the types or geographical relations of tourism destinations as a control group. The treatment group contained 188 samples, as did the control group. We then calculated the sales (average monthly number of customers) of the control group based on the dates and times when Facebook campaign activities were conducted for their paired samples in the treatment group. Comparisons of sales in the treatment and control groups before and after the Facebook campaigns offer a simple method for evaluating the effects of Facebook marketing.

Table 3 presents the means for several key variables in our data set. The means are presented separately for stores in the treatment and control groups, along with t statistics for the null hypothesis that the means are equal in the two groups. The results suggest that the distribution of product types in the control group is similar to that in the treatment group, which meets the threshold for further research. Additionally, the average sales before the Facebook campaigns in the treatment and control groups are not significantly different; however, the average sales after Facebook campaigns in the treatment group are significantly greater than those in the control group. That is, Facebook campaigns are likely to impact the sales of tourism products.

Table 3. Means for Key Variables

Variable	Samples in:		
	Treatment Group	Control Group	t*
1. Distribution of product types (percentage):			

a. Independent travel	37.77% (0.49)	38.3% (0.49)	-0.106
b. Package tour	62.23% (0.49)	61.7% (0.49)	0.106
c. East Asia	60.64% (0.49)	59.57% (0.49)	0.210
d. Southeast Asia	15.96% (0.37)	18.09% (0.39)	-0.548
e. Europe	10.64% (0.31)	11.70% (0.32)	-0.327
f. America	7.45% (0.26)	3.72% (0.19)	1.573
g. Oceania	4.26% (0.20)	5.85% (0.24)	-0.705
h. South Africa, Middle East, South Asia	1.06% (0.10)	1.06% (0.10)	0.000
i. Price	36346.78 (32486)	35606.94 (28072)	0.236
j. Tour length	5.54 (2.62)	5.59 (2.38)	-0.206
2. Sales (means):			
Before treatment group's Facebook campaigns	33.93 (37.99)	37.04 (44.91)	-0.725
After treatment group's Facebook campaigns	48.67 (59.27)	33.41 (36.93)	2.995***

Note: See text for definitions. Standard deviations are given in parentheses. *Test of equality of means in treatment and control groups. *p< 0.1 **p<0.05 ***p<0.01

5. RESULTS

To determine the impact of Facebook campaign activities on product sales, we employ a difference-in-difference approach, comparing the average change in sales before and after Facebook activities for the treatment group with the average changes in sales over the same time period for the control group. This method is adopted because it is intended to eliminate some of the effect of selection bias.

The following Table 4 summarizes the changes in average sales in our data. We present the data by different sample group in columns (i) and (ii). We also show the differences in average sales between the treatment group and control group in column (iii). Row 3 of the table presents the changes in average sales over time. These entries are simply the differences between the averages before and after the Facebook activities (i.e., row 2 minus row 1). We find that the relative gain (the "difference in difference" of the changes in sales) is 18.37, with a t statistic for the null hypothesis that the changes in mean sales are equal in the two groups (t = 4.58, p = 0.00). The results in Table 4 suggest that Facebook campaigns conducted by the case company led to a 18.37 increase in sales (the average monthly number of customers).

Table 4. Average Sales Before and After Facebook Campaign Activities Conducted in the Treatment Group

	Samples		
Variable	Treatment Group (i)	Control Group (ii)	Difference, Treatment-Control (iii)
1. Average sales before Facebook campaigns	33.93	37.04	-3.11
2. Average sales after Facebook campaigns	48.67	33.41	15.26
3. Changes in mean sales	14.74	-3.63	18.37

The same result can be obtained by using the following regression model:

$$Sales = \alpha + \beta_1 Post + \beta_2 Face + \beta_3 Post * Face + \varepsilon$$

, where Sales is the average monthly number of customers per product, Post is a dummy variable equal to one if the period is after the Facebook campaign and zero otherwise, Face is an indicator variable taking the value of one if the tourism product has been marketed by Facebook campaign activities between February 2012 and November 2013 and zero otherwise, Post * Face is an interaction term between Post and Face, and ε is an error term. The estimate of coefficient β_3 is directly comparable to the simple difference-in-difference of sales changes in column (iii), row 3 of Table 4.

The coefficients of the key variables are presented in Table 5. The coefficient of Post*Face ($\beta_3 = 0.173$) is found to be significant at the 0.01 level and thus provides support for H1. That is, Facebook campaign activities have a significantly positive impact on sales of tourism products, supporting our hypothesis 1.

Table 5. Testing of Hypothesis 1

Variable	B	t
Post	-0.039	-0.771
Face	-0.034	-0.661
Post*Face	0.173	2.758 ***
N	752	
mean of sales	38.26	
SD of sales	45.98	
R^2	0.018	

Note: *p< 0.1 **p<0.05 ***p<0.01

While the comparisons in Table 4 make no allowance for examining the moderating effects of product type on the influence of Facebook campaigns, these effects can be incorporated in the regression model. As shown in Table 6. The coefficients β_3 in both clusters of structure of tourism are significant; however, the coefficient of less structured tourism products ($\beta_3 = 0.213$) is greater than that of highly structured tourism products ($\beta_3 = 0.156$). Then, we used Pseudo-F statistics to compare β3 between two clusters. For p = 0.01, the result of the analysis (f-value = 54.25) is greater than F (0.99, 1, 749) = 6.669, and hence, the difference in

coefficients between the two groups is significant at the 0.01 level. That is, H2 is supported, and the result provides evidence that treatment has a stronger effect when Facebook campaigns are conducted to market less structured tourism products (e.g., independent tours) than those that are highly structured (e.g., package tours).

Table 6. Testing of Hypothesis 2

Variable	Structure of Tourism	
	Package tour (ST=0)	Independent tour (ST=1)
Post	-0.031 (-0.481)	-0.057 (-0.692)
Face	0.022 (0.337)	-0.152 (-1.824)*
Post*Face	0.156 (1.958)*	0.213 (2.096)**
n	466	286
mean	41.3	33.31
SD	49.6	38.95
R^2	0.024	0.020

Note: *p< 0.1 **p<0.05 ***p<0.01

In Table 7, the coefficient β_3 for tourism products requiring greater tourist involvement is 0.153, whereas the coefficient β_3 for those that require less tourist involvement is 0.183, and its treatment effect is significant at the 0.05 level. Additionally, for p = 0.01, f-value = 27.5 is greater than F (0.99, 1, 749) = 6.669, indicating that the difference in coefficients between the two groups is significant at the 0.01 level. Therefore, H3 is not supported but is significant in the opposite direction. That is, treatment has a greater effect when Company A promotes products that are more relaxing and less stimulating on its Facebook fan page.

The characteristics of users may affect the results. In fact, the ratio of women to men on the fan page of the case company is 66:33. That is, Company A has a much larger female fan base than male fan base, which may be one reason why the research has the opposite result. According to Lehto et al. (2004), married women demonstrated the highest level of involvement in tourism decisions, including selection of tourist sites, length of stay at each site, restaurant and hotel selection, shopping expenditures and others. Nevertheless, female travelers usually prefer good food, stylish rooms and furnishings, popular sightseeing and shopping options and value-added services (e.g., spa treatments) to make their travel comfortable, rejuvenating and relaxing; hence, we find that treatment has a greater effect when Company A promotes tourism products that are more relaxing and less stimulating on its Facebook fan page. This result also highlights the importance of catering to female users on tourism-related Facebook fan pages.

Table 7. Testing of Hypothesis 3

Variable	Involvement of Tourists	
	Tranquility (IN=0)	Stimulation (IN=1)
Post	-0.032 (-0.527)	-0.056 (-0.605)
Face	-0.042 (-0.672)	-0.022 (-0.234)
Post*Face	0.183 (2.424)**	0.153 (1.349)
n	514	238
mean	36.08	42.98
SD	46.55	44.56
R^2	0.021	0.013

Note: *p< 0.1 **p<0.05 ***p<0.01

In Table 8, the coefficient β_3 of tourism products that are limited in scope (β_3 = 0.232) is significant at the 0.01 level and greater than the coefficient β_3 of those that are broad in scope (β_3 = 0.057). Moreover, for p = 0.01, f-value = 170.67 is greater than F (0.99, 1, 749) = 6.669, showing that the coefficients differ significantly at the 0.01 level. Therefore, H4 is supported. That is, treatment has a stronger effect when Facebook campaigns are conducted to market city tours abroad or island destinations than travel that is broad in scope (i.e., tourists travel to many cities, regions or even countries during a trip).

Table 8. Testing of Hypothesis 4

Variable	Scope of Tourism	
	Broad (SC=0)	Limited (SC=1)
Post	0.001 (0.007)	-0.056 (-0.914)
Face	-0.083 (-0.961)	-0.011 (-0.170)
Post*Face	0.057 (0.521)	0.232 (3.037) ***
n	268	484
mean	37.64	38.61
SD	42.53	47.82
R^2	0.005	0.039

Note: *p< 0.1 **p<0.05 ***p<0.01

To obtain a better understanding of the influence of price on the purchase of products, we use the mean sales price of all the samples (mean = 35,977) plus or minus 0.5 times standard deviation (SD = 30,301) as cut-off points, as shown in Table 9. As a result, the coefficients β_3 in lower-priced products (β_3 = 0.194) are significant at the 0.1 level and greater than that in higher-priced products (β_3 = 0.052). Then, for p = 0.01, f-value = 65.71 is larger than F (0.99, 1, 373) = 6.703. That is, the difference in coefficients between the two groups is significant at the 0.01 level. Therefore, H5 is not supported, and the prices of products posted on Facebook are negatively related to sales performance. This result shows that the effect of Facebook campaigns on sales is stronger when Company A promotes products with relatively lower prices.

According to Wang et al. (2013), when consumers consider buying relatively high-priced snacks, the recommendations provided by strong-tie contacts on Facebook have a significant effect on purchase intentions, while this effect is not found for snacks with lower prices. However, this finding is not supported in our study because our results show that the effect of Facebook campaigns on sales is stronger when Company A promotes lower-priced products. The possible reason is that, most Facebook users have higher price sensitivity and tend to search for information before making any purchase. Since the information may include pricing information, low-priced tourism products have higher advantage to attract users' eyeballs.

Table 9. Testing of Hypothesis 5

Variables	Price of Products	
	Low (PR<20,827)	High (PR>51,128)
Post	-0.064 (-0.723)	0.031 (0.250)
Face	-0.166 (-1.847)*	0.062 (0.496)
Post*Face	0.194	0.052

	(1.777)*	(0.342)
n	246	130
mean	34.62	20.35
SD	39.01	17.3
R^2	0.018	0.013

Note: *p< 0.1 **p<0.05 ***p<0.01

Using the mean length of all the samples (mean = 5.6) plus or minus 0.5 times standard deviation (SD = 2.49) as cut-off points, samples that are larger than 6.85 are defined as longer trips and those that are less than 4.36 are defined as shorter trip, as shown in Table 10. Compared with the coefficient of longer trips (β_3 = 0.046), that of shorter tours (β_3 = 0.162) is larger because they are significantly different from each other at the 0.01 level (for p = 0.01, f-value = 49.49 > F (0.99, 1, 407) = 6.698). However, the coefficients of interaction term in both the clusters of tours' lengths are not significant on sales. That is, the change in mean sales between the treatment and control groups are not significantly different for both clusters. Therefore, H6 is not supported. This result indicates that although the treatment effect of shorter trips is much greater than that of longer tours, the moderating effect of the length of stay is not strong enough to affect the relation between Facebook campaign and sales performance.

One reason for this finding may be that tourism consumers usually face time restrictions, that is, they may decide their length of stay at destinations according to the amount of time that they are available (Bull 1995, Martínez-Garcia et al. 2008). Therefore, for those without travel plans, providing shorter tours on social media platforms is relatively likely to facilitate an unplanned purchase. Meanwhile, those who have travel plans may decide how long they will stay at destinations before looking for related tourism products. Accordingly, the duration of tourism products marketed through social media are less able to affect consumers' purchase decisions unless these durations fit into consumers' original plans.

Table 10. Testing of Hypothesis 6

Variable	Length of Tour	
	Short (LE<4.36)	Long (LE>6.85)
Post	-0.051 (-0.557)	0.039 (0.343)
Face	-0.162 (-1.837)*	0.134 (1.181)
Post*Face	0.162 (1.452)	0.046 (0.332)
n	256	154
mean	36.58	19.32
SD	39.22	16.35
R^2	0.016	0.031

Note: *p< 0.1 **p<0.05 ***p<0.01

6. DISCUSSION AND CONCLUSION

While few researchers have examined the effects of social media marketing, and especially its effects on sales, this study evaluates the effects of Facebook marketing in tourism, and the results show the positive effects of Facebook campaigns on the purchase of tourism products. Additionally, a review of the literature indicates that the types of the marketed products are likely to influence the performance of the marketing medium. Therefore, to provide deeper theoretical insight to understand the influence of social media marketing among different types of tourism products, we developed a typology of tourism products, including five dimensions based on related literature. The analysis results show that the types of tourism products have a moderating effect between Facebook campaigns and sales performance. More specifically, there is a stronger treatment effect on sales performance when the case company uses Facebook campaigns to promote tourism products that are less structured (e.g., independent tours), more relaxing and less stimulating (i.e., requiring less tourist involvement), limited in scope (e.g., city tours, island destinations) or relatively lower-priced.

This study helps the case company evaluate the effects of its Facebook campaigns on purchases of its tourism products. The results identify the financial outcomes of Facebook marketing and reduce uncertainty regarding the effectiveness of these tools. Therefore, social media marketing activities are worth the efforts of tourism industry suppliers. Additionally, this study provides a guide to enhance suppliers' understanding of which types of tourism products are more or less suitable for conducting social media marketing campaigns, and especially on Facebook.

This study has limitations. Sales are the only metric used to examine the effect of Facebook campaigns on the purchasing of tourism products. In the future, this study can extend other metrics to evaluate the effects of social media campaigns in tourism. Additionally, the data is collected within one case company. Whether the results can be generalized to other tourism companies deserve further studies. Besides, based on previous research, we observe that tourism industry suppliers take advantage of various social media to reach consumers, and thus we can also examine the use of other social media platforms and investigate their impacts on sales to achieve a more comprehensive understanding of the influence of social media in tourism.

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