DETERMINING USER CHARACTERISTICS AND LOYALTY WITH LOCATION-BASED SERVICE FOR HOSPITALITY OPERATORS

by

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ABSTRACT

Location-Based Services (LBS) create new channels of client communication for hospitality owners and operators. Activities such as tracking and way-finding systems, information and directory services, promotional tools, and various mobile commerce applications are readily available. LBS applications can be used in conjunction with other popular internet services such as Facebook Place, Google Place, Foursquare, Gowalla, Yalp, and Twitter. An example of such an application is from Foursquare which enables operators to target customers with proximity-tailored services and promotions. As a consequence of the advent of this new dimension of information technology, effective hospitality marketing strategy must understand the user's characteristics when using LBS and adopt appropriate techniques to create increased customer loyalty. The objective of this study is to determine users' characteristics and the correlation to loyalty when using LBS applications via smart phones. Research questions are 1) What are the demographics and behaviors of LBS users?; 2) How does LBS affect loyalty to hospitality operators?; and 3) What inferences can be made for hospitality operators considering using LBS? The survey-research method was used to conduct this primary research. The survey has three parts: demographics profile; LBS usage characteristics; and the affect, if any, on loyalty to hospitality operators. The survey was used to form the dataset for purposive sampling and include participants who have engaged in LBS enabled activities through mobile applications. Data analysis will be carried out by using various statistical techniques such as descriptive statistics, factor and regression analysis.

KEYWORDS
Location-Based Service, Decision-Making, Loyalty, Hospitality Operators

INTRODUCTION

The rapid growth of smart phone users continues to increase and is becoming common among travelers and holiday makers. This makes mobile applications as critical to business operators as their websites. Many hospitality operators such as restaurants, accommodation, transportation and travel destinations have adapted themselves to attract and keep their customers by using Location-Based Service (LBS).

LBS in hospitality operations creates channels for users to engage in many activities such as tracking and way-finding systems, directory services, information and directory services and various mobile commerce applications (Dhar and Varshney, 2011) . Example marketing benefits can be derived by delivering content, coupons and special offers based on a user's actual location. Many surveys have predicted billions of dollars in revenues as a result of this new realm of mobile advertising and marketing (Geo *et al*., 2010; Xu *et al*., 2009; Peng and Spencer, 2006; Merisavo *et al*., 2007).

As a consequence, effective hospitality marketing endeavors require an understanding of not only user characteristics on LBS usage but also what effective strategies can be offered to benefit clients. There has been very limited research to help determine where hospitality operators should invest time and money on LBS applications intended to attract their customers. The objective of this study is to determine users characteristics and identify any correlation to loyalty when using LBS applications via smart phones. Three research questions are:

1) What are the demographics and behaviors of LBS users?
2) How do LBS affect loyalty to hospitality operators?
3) What inference can be made for hospitality operators considering using LBS?

REVIEW OF LITERATURE

Mobile technology and Location-Based Service

There are many mobile applications that users can choose from such as Facebook Places, Google Place, Foursquare, Gowalla, Yalp, Twitter and many others. LBS special offers are currently provided on Foursquare which allow hospitality operators to target customers who come to check-in at their location. Almost three-quarter (74%) of American smartphone owners use form of LBS to connect from their smatphones (Zickuhr, 2012). More than 8 million businesses have verified their listing on Google Places - which has effectively become the starting point from which Google automatically, compiles location related data, including contact information, websites, and associated reviews. Foursquare claims an audience of 10 million users and 500,000 businesses worldwide that use its merchant platform. SCVNGR connects 5,000 enterprises and small local businesses with groups that build audience-engagement challenges on its platform (Mulvihill, 2012).

Location based service and Hospitality operators

Hospitality operators can readily partner with LBS providers to set up a local presence and appearance on local search listings as a check-in location or to provide location-specific content. Geo-social services such as foursquare and SCVNGR can also allow users to share information about their locations. Beyond that, now rewards are given for frequent visitors if users check- in enough times and earn enough points to reach a milestone such as "mayor." Users are usually enticed by special offers, such as a free coffee or a discount.

Localized search is one of the most popular ways to get directions and recommendations. Hospitality operators may find tips or reviews left by tourists allowing others to discover feedback or complaints about their business. Most applications allow operators to segment demographics, behavior, frequency and other information about visitors. Statistics from Clarion Consulting (2011) show that the places where most people check-in from are the actual venue itself, be it a shop, restaurant, building, or park (84.8%); an activity such as sports, events, parties; content such as movies, songs, and TV shows), and Brands (Coca cola, Nike). Thus hospitality operators and users consider mobile LBS a win-win proposition. Mobile applications are a channel to reach customers while the hospitality operators can translate existing marketing tactics using LBS to access new and increase loyalty from existing customers. To determine user loyalty, this study examines three important, related responses: repeated usage behavior, word-of-mouth intent, and intention to use LBS with the hospitality operators in the future.

METHODOLOGY

The survey was conducted over a one-month period from November 1 to December 1, 2012. Specifically, we used a purposive sampling method by screening participants who have engaged in LBS activities through mobile applications on their personal smart phone devices. The survey was comprised of three sections focusing on participants responses to questions about: a) demographic profile; b) location-based service behavior; c) general attitudes toward decision making; and d) the influence on loyalty to hospitality operators.

RESULTS

To answer three research questions, the findings are from the analysis of the questionnaire for the study.

Research question 1: What are the demographics and behaviors of LBS users?

Profile of participants

Demographic profiles of participants in the survey were identified through descriptive analysis. Among the 285 survey participants, there are 174(61.1%) males and 111 (38.9 %) females. As for the age distribution, the majority of participants are between the age group of 21-30 were 136 (47.7 %) participants, while there were 120 (42.1%) participants of age 31-40, and 16 (5.6 %) participants of age 41-50 year olds. These results prove that participants in the sample can be classed as 'working age'. In general, participants were highly educated, with almost all but 22 (7.7 %) of participants possessing less than a college degree. Furthermore, 181(63.5 %) of participants possessed a Bachelor Degree, and 82 (28.8 %) of participants had Masters Degree. Employment statistics resulting from the study indicate that158 (55.4 %) of participants were employed in the private sector, 51(17.9 %) of participants were employed in public

sectors, 39(13.7%) of participants were self-employed, 31(10.9 %) of participants were students, and 6 (2.1%) participants were unemployed.

Behaviors of LBS users

There are 49.8 % of participants using LBS application via iPhone, 33.7 % of participants using Android based systems, 5.3 % of participants using Blackberry, and 11.3 % of participants using other types of devices. With regard to LBS usage purposes, the statistics indicate: 51.2 % of participants using LBS primarily for navigation and tracking, 40.7 % of participants using LBS for information and directory services, 5.3 % of participants using for search advertising, and 2.8 % of participants using LBS for other purposes. Participants were also asked to indicate locations they were mostly likely to use LBS to check-in. In this regard, travel destination was indicated by 62.8 % of participants, while 27.1 % of participants indicated restaurants and coffee shops. Accommodation and lodging were identified by 8.1 % of participants, and only 2.2 % of participants checked-in at other places such as an airport, department store, or sporting facility.

Research question 2: How does LBS effect loyalty to hospitality operators?

Factor analysis was conducted with varimax rotation. There were four factors that were extracted from the process regarding 22 decision-making items: travel essentials and planning, personal identity, accessibility to LBS applications, and promotion tools as shown in Table 1. The Cronbach's alpha of each factor was greater than 0.70, suggesting good internal consistency.

TABLE 1
SUMMARY OF PRINCIPLE COMPONENT ANALYSIS RESULTS FOR SMART PHONE USERS ON LBS DECISION MAKING *(n=285)*

Factor Loadings					
Factor	Loading	Eigenvalue	% of Variance Explained	Cronbach alpha	Commonalities
F 1: Travel essential and planning		**2.849**	**12.432**	**.784**	
Ability to get direction and navigate to destination	.512				.512
Provide information on service operators and travel destination	.751				.751
Provide information on airlines and buses	.557				.557
Obtain the new location and service operators information	.756				.756
Finding recommended services and destinations	.698				.698
Obtain accommodation information	.809				.809
Ability to plan your trip such as times and budget	.744				.553
F 2: Personal identity		**2.412**	**11.674**	**.830**	
Ability to check-in and pinpoint your location	.765				.578
Ability to check-in and share your location to others	.565				.319
Ability to check-in in order to become mayor and privileges	.750				.624
Ability to check-in to get through social network such as Facebook	.581				.338
Able to create personal branding	.671				.475
F 3: Accessible to LBS application		**2.293**	**13.467**	**.856**	
Be able to follow friends and family members location	.491				.676

Be able to locate your cell phone	.417				.754
Be able to locate your car position	.917				.842
Be able to find new friends	.855				.738
Able to exchange information with friends	.605				.528
Provide easy to access device	.636				.581
F 4: Promotion tools		**2.527**	**12.18**	**.803**	
Obtain information on special promotion	.679				.874
Obtain information on products from shops or shopping mall	.746				.902
Obtain information on store discount after checking-in	.602				.792
Access to gaming such as badges, items, and pins	.393				.568

The mean scores of the individual factors were recorded as four independent variables, and the three response variables as the dependent variables. The result of regression analysis appears in Table 2 and suggests that travel essential planning and promotion tools had a positive effect on repeated usage, word-of –mouth intention, and intention to use. That means users primarily use LBS to get location, accommodation, transportation information, and recommendations. Similarly, the results of promotion tools indicate that LBS users tend to obtain information on shops and engage their promotional activities.

TABLE 2
THE IMPACT OF FOUR LBS DECISION MAKING ON RETURN USAGE BEHAVIOR, WORD-OF-MOUTH, AND INTENTION TO USE

	Dependent variable		
	Repeated usage	Word-of-mouth	Intention to use
F1: Travel essential and planning	0.50 (2.48)*	0.42(6.20)**	0.40(5.12)**
F2: Personal identity	0.38 (2.64)**	0.05(1.24)	0.00(0.04)
F3: Accessible to LBS application	0.13 (1.73)	0.12 (1.63)	0.05 (0.68)
F 4: Promotion tools	0.40 (6.74)**	0.43 (6.69)**	0.18 (2.50)**
Adjust R^2	0.72	0.57	0.49
Model F statistic	18.54**	30.70**	28.89**

*p ‹ 0.05, ** p ‹ 0.01

Research question 3: What inference can be made for hospitality operators considering using LBS?

The study has several practical implications for hospitality operators who want to enhance their influence via LBS applications. Foremost among the three factors of LBS decision making are travel essentials and planning, personal identity, and promotion tools all have positive impacts on loyalty. Hospitality operators should create mobile applications which contain maps and navigation tools to help users to plan their trips. They must ensure the accuracy and keep information updated on their applications to maintain their reputation and to engender loyalty. Secondly, people who use LBS for personal identity related applications tend to report checking-in behaviors and frequently identify their locations to others. Thus hospitality operators can attract users attention with regular activity reports related to the specific hospitality venue. Third, since promotion tools have been shown to positively influence LBS loyalty, hospitality operators could create new channels with the intent of disseminating updated information on specific activities at that particular venue.

While this study investigated the characteristics of smart phone users regarding LBS applications, it does possess some limitations. First, the sample pool of the study applied using purposive sampling techniques was restricted to participants in Bangkok, Thailand. This cannot lead to a global assumption or generalization regarding the survey findings and the results may not be as applicable to other markets. Additional studies undertaken in other markets are recommended to fill this gap. This could assist in strengthening the results of this study and further support the universality of the findings.

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