INVESTIGATING THE EFFECT OF VALUE IN ONLINE COMMUNITIES ON ECOTOURISTS' SATISFACTION IN SOCIALISATION AND INTENTIONS TO SHARE KNOWLEDGE VIA SOCIAL MEDIA

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CERTIFICATE OF ORIGINALITY

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it reproduces no material previously been accepted for the award of any other degree or diploma, except where due acknowedgement has been made in the text.

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ABSTRACT

Ecotourism is a growing phenomenon in sustainable tourism. Ecotourism involves travel to nature-based areas for enjoying nature, appreciate ecology and culture and behave in an environmentally responsible manner by travellers. Travellers to ecotourism destinations are referred to as ecotourists and their prime motivations are learning and education, socialisation, as well as nature-seeking. The motivations of learning and education as well as socialisation are the ones from which emanates the need of information and knowledge through social interactions by ecotourists. However, there are certain challenges faced by ecotourists in obtaining effective and adequate ecotourism –related information and knowledge that affect their satisfaction levels while they are experiencing ecotourism trips. Besides, there is a lack of effective communication channels for sharing and acquiring information as well as a lack of increased access to new technologies in ecotourism that would facilitate sharing of experiential knowledge on ecotourism activities, as well as spreading awareness on ecological aspects. Social media, which provide a two-way communication, can play a significant role in addressing these difficulties and needs of ecotourists.

Previous empirical research on the contribution of social media in rendering information and knowledge sharing through socialisation via social media is deficient. Therefore, this study looked into the factor of value in online communities in affecting ecotourists satisfaction in socialisation via social media, as well as their intentions contribute more ecotourism-related knowledge via social media. The study employs the social exchange theory (SET) which helps in understanding the

effect of value in online communities on social media that can enable ecotourists in experiencing satisfaction in socialisation among them and also sharing ecotourism related information and knowledge in social media.

The study focused on Kuala Lumpur, the capital of Malaysia, which is an emerging ecotourism destination in the urban perspective, as the setting for this study. The study uses structural equation modeling (SEM), given the distinctive analytical tools available in it that can facilitate analyzing relationships and interrelationships between constructs. The study attempts to look into extending the social exchange theory in a non-organisational context (ecotourists) of online information and knowledge sharing through social interactions in social media on the basis of the 6 SET factors.

From the results of the study, it was evident that almost all the hypotheses posited were supported. Online community value was found to have a significant effect on satisfaction in socialisation which, in turn, had a significant effect on intention to share knowledge. The social exchange theory (SET) is thus supported in the context of this study. However, community identification, one of the dimensions of value in online communities, was dropped. The study concluded with contributions towards theory and practice along the lines of online community value and satisfaction in the context of ecotourists' online socialisation and knowledge sharing.

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1. Introduction

This chapter provides the audience with the backdrop information of this study. It includes the aspects of ecotourism that emerges from the concepts of sustainable tourism. This is followed by the discussion on ecotourists needs of sharing information and knowledge and socialising. The role of online communities in social media in knowledge sharing and socialisation and the use of the social exchange theory have been highlighted in this chapter. This is followed by discussions on the problem statement of the study, objectives, significance of the study, as well as theoretical and practical implications

1.1 Study Background

1.1.1 Sustainable Tourism and Ecotourism

Sustainable development issues have become crucial in current tourism discourses, given the negative impacts of mass tourism operations in terms of mainly environmental, social and economic aspects (Roberts & Tribe, 2008). Through sustainable tourism, tourism is able to prolong its activities in a locality in such a way that it does not depreciate the locality's ecological and social resources, primarily for its own long-term survival (Butler, 1999; Higgins-Desbiolles, 2010; Wall, 1997). Ecotourism is the most commonly recognized form of tourist activity that emerges from the sustainable tourism discourse (Barkin, 1996; Oslo Statement

on Ecotourism, 2007). Ecotourism, in simple words, means conservation, preservation of nature and cultural heritage and management of tourism (Patar, 2009). Ecotourism, since 1990, has grown at a rate of 20-34% per year and by 2004 it was growing 3 times faster than the tourism industry in general (The International Ecotourism Society [TIES] Global Ecotourism Factsheet, 2006). As of 2010, ecotourism was consisting of 5-10% of the global travel market and the global ecotourism market is growing currently at 5% annually (Lu & Stepchenkova, 2012). Tourists who engage in ecotourism activities are normally referred to as ecotourists. They are tourists who travel to nature-based areas and engage in recreational activities compatible with the local ecology and environment of such areas (Wearing & Neil, 2009). They tend to be interested in learning about and experiencing nature in its original state, meet and interact with people of similar interests, and inculcate pro-environmental values (Beaumont, 2011; Stein, Denny & Pennisi, 2003). They also often involve in nature-based recreational activities that can involve risks and challenges, as well as fun and excitement (Weaver & Lawton, 2007). Ecotourists, in general, tend to have higher education levels and higher incomes compared to other forms of tourists (Lu & Stepchenkova, 2012). This aspect makes them seek learning experiences, as well as a desire to interact with likeminded individuals. It is this need for learning experiences that makes ecotourists demand for knowledge on the destinations they visit more predominant than for other tourists (Galley & Clifton, 2004). Moreover, their need to interact with likeminded individuals (peer-ecotourists) enables in them a desire to socialise.

1.1.2 Ecotourists' needs in share information and knowledge Sharing

Knowledge plays an important part in the learning component of ecotourists' experiences. Previous literatures emphasizes on the necessity of ecotourists to share information and knowledge among each other in relation to ecotourism attractions and nature-based recreational experiences (Harlow & Pomfret, 2002; Lu & Stepchenkova, 2012). Moreover, in addition to the sharing of knowledge in relation to ecotourism attractions and nature-based recreational experiences, it is also a necessity for ecotourists to promote sustainability issues to peer-ecotourists (Wearing & Neil, 2009). This sharing activity of knowledge among ecotourists is considered vital, as it is a type of social influence that enriches their learning process. This process of sharing and recommending is possible through communication and social interaction among ecotourists. This communication and social interactions, as found by previous literature, is possible through means of word-of-mouth (Meric and Hunt, 1998; Weaver, 2002). The need for knowledge sharing among ecotourism emerges from some of the tourists' major motivations, which are learning and socialisation. In addition to these, nature seeking is another prime motivation, influenced by the pro-environmental behaviour that influences learning motivations.

1.1.2.1 Learning and Education

Learning motivations of ecotourists refer to the desire of ecotourists to educate themselves on ecological and social aspects, as well as ecotourism activities available at the ecotourism destination. This is often possible through a process of

interpretation and instructions available at the specific destinations. Seeking learning experiences has been one of most important motivations of ecotourists, which distinguishes them from other types of tourists when it comes to experiencing ecotourism (Beaumont, 2011). Learning through interpretation has been referred to as a means of communicating to ecotourists by the ecotourism attraction management bodies, for educating them on ecological aspects of biodiversity, conservation and sustainable issues attached to it (Hughes & Morrison-Saunders, 2005). Learning through interpretation often involves rich knowledge dissemination. This rich knowledge is usually highly demanded by ecotourists during their ecotourism experience. A number of previous studies have highlighted the importance of knowledge that influences the cognitive process of ecotourists, while they seek education through their ecotourism experiences. The availability of accurate and rich knowledge frequently has an impact on their satisfaction levels with ecotourism experiences. While the need for knowledge is an important factor for the interpretation and learning purposes of ecotourists, other purposes have been stated as purchase decisions of ecotourism trips and trip planning.

1.1.2.2 Socialisation

Socialisation refers to ecotourists meeting likeminded individuals during the process of the ecotourism experience and interacting with them. Socialisation that occurs between ecotourists during their participation in ecotourism activities influences their quality of ecotourism activities (Harlow & Pomfret, 2007). As a result, socialisation activities with peer-ecotourists can play an important part in bringing satisfaction to ecotourists in their ecotourism experience (Lu & Stepchenkova,

2012). It is hence considered a critical aspect that motivates ecotourists to participate in ecotourism experiences and influences their behavioural intentions by means of sharing them in an affective way (emotions and feelings) (Chan & Baum, 2007; Eubanks jr, Stoll, & Ditton, 2004).

1.1.2.3 Nature-seeking

Seeking nature refers to ecotourists' quest for nature-based experiences, viewing flora and fauna species, taking risks and challenges, as well as experiencing fun and enjoyment as a part of their efforts to participate in such nature-based activities (Beaumont, 2011). As a result, ecotourists' seeking nature, based on their pro-environmental values, is another main motivational aspect for ecotourists to engage in ecotourism experiences. Development of pro-environmental values refers to the desire of ecotourists to contribute to the sustainability of ecological aspects in ecotourism destinations (Wearing & Neil, p.201). This involves conservation activities, environmental consciousness and eco-friendly behaviour. These aspects, that characterize seeking nature and development of pro-environmental attitudes, also influence ecotourists' learning and educational needs (Hughes & Morrison-Saunders, 2005). This creates the need of knowledge on ecological aspects of nature and pro-environmental activities for ecotourists, which they fulfill through learning and educational opportunities during their ecotourism trips. Besides, socialisation activities of ecotourists' encompass the enhancement of ecological awareness, transfer ecology-related knowledge and pro-sustainable attitudes among them (Chan & Baum, 2007).

The motivations of ecotourists in terms of learning, socialisation, and nature seeking, make them distinct from the overall motivations of mass tourists (Beaumont, 2011; Wight, 2001). Mass tourists are purely motivated by recreational interests and relaxation needs in their experiences of nature trips. Besides, they can be motivated by other factors like negative or positive moods and cultural distance factors in their desire to experience tourism activities, making them significantly different from ecotourists (Bilei & Kim, 2009; Chen & McCain, 2011). Hence, the ecotourists motivational aspects, especially learning and socialisation, cause their knowledge seeking, as well as interaction activities to be significant.

1.1.2.4 Ecotourists medium of communication in sharing information and knowledge

From the above discussion, it is clearly evident that knowledge sharing, as well as socialising, is important aspects of their ecotourism experiences. However, given the importance of knowledge sharing and socialising among ecotourists, they face certain challenges and difficulties. Firstly, knowledge available to ecotourists is in many cases is inadequate, inaccurate and ineffective, which affects the learning component in their ecotourism experience. This occurs due to factors like poor interpretation facilities, inefficient guides and static information at biodiversity and natural areas (Hughes & Morrison-Saunders, 2002). Ecotourism guides are found not to always provide correct and up-to-date information to ecotourists (Eagles, 2001). Besides, knowledge is often provided in a way that ecotourists fail to retain it, in turn, resulting in failing to satisfy their long-term learning needs (Hughes & Morrison-Saunders, 2002). Secondly, a lack of the environmental learning

component in ecotourism promotion worldwide and lack of opportunities for sharing knowledge lowers the quality of ecotourism interpretation, resulting again in lower satisfaction levels for ecotourists (Weaver & Lawton, 2007; Wu, Wang & Ho, 2010). Thirdly, also lacking is the access to new technologies that can enable interactions for socialisation among ecotourists in terms of sharing knowledge on ecotourism, leading to awareness on sustainability aspects (Lu & Stepchenkova, 2012; Gibson et al., 2003).

Ecotourists have been found to have a strong tendency to use word-of-mouth (social interactions) as one of the most important mediums of sharing experiences with each other (Weaver, 2002). Therefore, it is imperative for ecotourists to have social interactions. Given this imperativeness, this study recognizes the need for ecotourists to have socialisation among themselves beyond the ecotrips they undertake. Technological applications like Social media, which provide a basis for a two-way dialogue, can play a significant role in facilitating socialisation among ecotourists through online word-of-mouth exchanges. This goes beyond the socialisation activities they experiences face-to-face while they are on an ecotour. However, while knowledge sharing through online social interactions has been possible at a much faster rate than in the past due to the increasing use of internet since the 90s, its use by ecotourists as a fast spreading medium of knowledge is not evident (Weaver, 2002). Previous literatures have either highlighted the use of word-of-mouth, or have mentioned that the Internet was one of the sources for the respective word-of-mouth (Meris & Hunt, 1998). But, they have not recognized the facilitating role of Internet or new Internet applications like social media in word-of-mouth

exchanges among ecotourists. Social media based on the technological foundations of Web 2.0, can play a significant role in addressing the knowledge and information sharing needs of ecotourists. This involves interactive applications that have been instrumental in dissemination of travel-based information and knowledge (Buhalis & Law, 2008; Lai & Shaffer, 2005). Social media is one of the most phenomenal Internet-based interactive applications that can significantly address these needs of ecotourists (Charters, 2009), as they enable online communities by providing an effective communication channel for sharing experiences, as well as acquiring and exchanging knowledge among ecotourists that is important for their ecotourism experience.

1.2 Online Communities in Social Media and Value in Online Communities.

Online communities in social media are digitally mediated shared spaces for socialisation between groups of individuals who, based on their shared interests, engage in social interactions and develop sustained relationships in these digital enviroments. Such sustenance of relationships is often expressed in the form of collective knowledge building through the sharing and exchange of content via online social interactions. This co-creation of content in online communities' leads to the formation of a communal value that motivates members to continuously participates in online social interactions. Value in online communities (VOC) can be described as the value in the intense social interactions between members of a community in social media sites, based on a certain area of interest that ultimately leads to their satisfaction and extended time spent on participation in online social

interactions (Seraj, 2012). Such value is not necessarily expressed in an economic sense, but refers to the value created out of intellectual, social and cultural interests and desires of members of online communities, based on a particular context and resulting in enrichment of knowledge related to a particular context (Sanchez-Fernandez & Iniesta-Bonilo, 2007).

Value in online communities involves cooperative actions of community members, who voluntarily engage in social interactions with others in order to meet the communal, interpersonal and individuals needs. Cooperative actions are vital as an aspect of value in online communities, since social exchanges in such communities are not driven or controlled by set rules or norms as in economic exchanges, but are based on voluntary behaviour of their members to engage collectively in social interactions (Fuchs et al., 2009; Seraj, 2012).

The intense social exchanges between online community members often involve the sharing of reliable and expert content by the members who have expertise in the area of interest, by virtue of extensive experience or association with it (Bagozzi & Dholakia, 2002). Such expertise brings them respect and recognition and hence, enhances their reputation in the communal environment. Such reputational benefits in turn, become an imperative part of the value in online communities. The continuous creation of expert content and views by community members due to the reputational benefits is substantially reflected in the intellectual value in online communities (Seraj, 2012).

This expertise, created through reputational benefits experienced by them, results in the availability of dependable and useful content related to the area of interest. In other words, the expert content created by members due to the reputational benefits leads to an element of trustworthiness in the online community (Seraj, 2012). This element of trustworthiness is one of the most vital factors in the participation and continuance of social interactions and hence, contributes substantially towards the building of socially-oriented value in online communities. Therefore, trust has become a major component of value for most online communities.

Value in online communities is also driven by the motives and desires of the members to assist others in the community. Such motives can be referred to as altruistic motives, which online community members possess based on their shared purpose and affective feelings to support fellow members in social media (Kozinets, 1999). Such altruistic behaviour fuels their willingness to continue participating and socialising in such communities, as well as building and sustaining strong relationships.

Cooperative, reputational, trustworthiness and altruistic behaviour lead to a sense of belonging and bonding ties among members of online communities, which helps them to identify and relate to the online community they belong (Bagozzi & Dholakia, 2002; Kozinets, 1999). Such community identification is personal and communal in nature and is a part of the cultural and social value created in the online community. The intense social interactions among members of an online community build emotional bonds among them and help them to meet their communal goals (Seraj, 2012).

The value in online communities, comprising of cooperative and altruistic motives of community members as well as reputational benefits, trustworthiness and community identification aspects experienced by them, often leads significantly and positively towards their satisfaction with online socialisation and long lasting relationships (Seraj, 2012). These long lasting relationships manifested in the form of enhanced knowledge sharing and exchange among each other, which further leads to extended periods of online participation. In the context of this study, the value created in online communities of ecotourists will be examined in terms of its ability to lead to ecotourists satisfaction in socialisation and their knowledge sharing intentions via social media.

1.2.1 Social Media use in Tourism

Social media, which facilitate an interactive, knowledge-based and information sharing online platform, have intensified the role and significance of electronic practices in tourism (Buhalis & Law, 2008; Gretzel & Yoo, 2008). Social media that incorporate user-generated content (UGC) have enabled the co-production of travel-based content among tourists, resulting in effective sharing and an exchange of key information on visitation experiences and networking (Callarisa, Garcia, Cardiff & Roshchina, 2012). Social media sites comprise 11% of search total results based on a travel related content search in Google, the most widely used search engine (Xiang & Gretzel, 2010). Social media has had a significant impact on travel bookings, destination selection and travel marketing. 40% of online travellers use social media sites in relation to their destination selection and travel intentions (Santos, 2011). 70% of tourist consumers have relied on recommendations found in social media,

and Facebook has been the most widely used social media site especially by male consumers, followed by Trip Advisor used by females (Santos, 2011). There were about 900 million monthly travel –based users on Facebook and 69 million monthly users on Trip Advisor by March 2012, in relation to travel recommendations and destination selection (Santos, 2012). Social media enabled recommendations, exchange of knowledge among tourists, as well as post-trip reviews have led the levels of trust among tourists for social media information up to 92% by 2012 (Santos, 2012).

Therefore, tourism being an information intensive industry, social media has played an important role in the information search/source of knowledge and communication for tourists and the tourism industry, as well as marketing and promotion for DMOs (Xiang & Gretzel, 2010). As mentioned earlier, social media enable the sharing of knowledge, recommendation, and personal views by tourists through all forms, text, as well as audio-visual information about tourism experiences and products (Ayeh, Leung, Au & Law, 2012; Chung & Buhalis, 2008**)**. This has facilitated, on one hand, traveler's decision-making, travel information search and sharing service experiences for tourists and, on the other hand, the marketing and promotion of tourism and understanding consumer behaviour for the tourism industry; airlines, DMOs, travel companies, and the restaurant and hospitality industry (Callarisa, Garcia, Cardiff & Roshchina, 2012; Gretzel & Woo, 2008; Xiang & Gretzel, 2010). Social media create educational opportunities by means of knowledge, shared by its members (Wang, Yu & Wei, 2012). In the context of tourists' use of social media,

knowledge sharing refers to a “travel member’s willingness to share their expertise or experiences with other members” (Qu & Lee, 2011). Tourists using social media anticipatorily share knowledge and experience out of their intentions to respond to others' information needs in a voluntary manner (Qu & Lee, 2011). Hedonic and social factors also affect a tourist’s intention to share knowledge in social media in the form of pictures and audio-visual content (Chung & Buhalis, 2008).

It has been observed from previous studies, that the reasons for social media use and satisfaction with the use by tourists are aspects like system quality, information search, observe others posts and comments. This is apart from knowledge sharing, which is one of the major reasons (Pulvirenti & Jung, 2011). However, the role of social media in facilitating the socialisation opportunities has been less evident in literature related to social media use by tourists. Socialisation in social media has been found as one of the most important aspects of online travel communities. This is manifested through the voluntary deeds of users in responding to travel content shared and produced by others, as well as producing or co-producing travel content for others to reciprocate to (Pan & Crotis, 2012). This results in a collective knowledge and sense of belonging (Schmalleger & Carson, 2008; Sreenivasan, Lee & Goh, 2012). It is therefore that these social media enabled socialisation activities enhance the sharing of experiences. The users of social media are often friends and peers, who share knowledge and provide learning opportunities to individuals who act as socialising agents (Wang et al., 2012). Therefore, this study looks into the socialising potential of social media. Moreover, it also looks into the user

satisfaction aspects of socialisation via social media in the context of ecotourists, which can lead to enhancing the intentions of knowledge sharing among them.

1.2.2 Social Media in Ecotourism

Social media has the potential to offer ecotourists an effective platform for information dissemination, trip research, as well as facilitate exchange (through interaction, collaboration and sharing) of knowledge amongst them on the key aspects of ecotourism destinations (Charters, 2009; Gibson et al., 2003). Knowledge is a compilation of information, acquired through experience and education about ecological aspects and ecotourism activities. Social media encompasses online social networks, online forums and blogs, audiovisual content and photosharing sites, which can enable a two-way dialogue among travelers for ecotourism experiences (Charters, 2009). UGC in social media is a critical element that can facilitate ecotourists who, being relatively young and reasonably educated, tend to be heavy Internet users and can therefore best utilise it for their ecotourism trip activities (Lu & Stepchenkova, 2012).

Moreover, the development of wireless technologies like Worldwide Interoperability for Microwave Access (WiMAX), and mobile technologies has enabled the internet to reach destinations of low digital access. Such wireless technologies have also enabled users of digital gadgets like smartphones and tablets to gain access to the internet from any location (Buhalis & Law, 2008; Gonsalves, 2010). This increased access to the web is cost-saving, and in turn provides access to social media for effective destination management systems and destination planning (Buhalis & Law,

2008; Sigala & Marinidis, 2010). Therefore, social media, available through internet access provided by WiMAX and mobile technologies, can enable ecotourists to interact with others and share content in ecotourism spots, which are also often found to be areas of low digital access.

Previous studies looking into the factors that lead to tourists' interactions in social media have focused on functional benefits, social benefits, psychological, socio-psychological as well as hedonic benefits (Chung & Buhalis, 2008; Parra-Lopez, Bulchand-Gidumal, Gutierrez-Tano, Diaz-Armas, 2011; Xiang & Gretzel, 2010). However, none of these studies has looked into the aspect of VOC, as well as tourists' socialisation (social interactions and exchanges) via social media and the degree of satisfaction they derive from it. Moreover, no studies have been found to look into the significance of VOC in terms of satisfaction in socialisation through social media, as well as the significance of satisfaction in socialisation through social media on knowledge sharing through social media. Ma and Agarwal (2007) had looked into the role of technological factors, like community artifacts, in their relationship with knowledge sharing mediated by satisfaction. Their study did anyhow not employ the social exchange theory to examine this relationship. Instead, this study focusses on the relationship between VOC and knowledge sharing through satisfaction in socialisation, using the social exchange theory in the context of ecotourists. Moreover, VOC comprises of the dimensions of cooperation, reputation, trust, altruism and community identification, which are contextual and personal, unlike the technological factors used in the study of Ma and Agarwal (2007). Satisfaction in socialisation and knowledge sharing through social media has been

found to significantly motivate the aspects for ecotourists in their ecotourism experiences. Therefore, this study makes an attempt to look into whether through VOCs in social media, ecotourists can fulfil their socialisation and knowledge sharing activities online. Studies on C2C interactions in the domain of information systems have increasingly emphasized factors like cooperation, trust, social norms, community identification, reputation, power, justice and altruism in consumer intentions, and behaviour of knowledge sharing and social interactions (Abdul-Ghani et al., 2011; Lee, Lee & Sanford, 2011; Liang et al, 2008; Muthusamy & White, 2005; Nambisan & Baron, 2010; Shiau & Luo, 2012). Given that ecotourism is a fast growing market segment in tourism, ecotourists can be consumers in terms of their consumption of green products and experiences involved with ecotourism. Yet, the social exchange theory factors have not been widely looked into in past studies on ecotourists' interactions in social media.

1.3 Social Exchange Theory (SET)

The social exchange theory (SET) posits that social actions are driven by an exchange of social resources, expressed in terms of social approval or esteem as rewards (Cameron & Webster, 2011). In this exchange process, when individuals contribute sufficient social resources to others, they receive the same from others, and those who receive many social resources from others contribute the same to them, based on their obligation to contribute (Cameron & Webster, 2011; Homans, 1958, p.606). This process leads to a sustainability of the interactions and the building of long term relationships (Cameron & Webster, 2011; Homans, 1958,

p.606). Therefore, as per SET, individuals engage in mutual interactions involving information, satisfaction in social contact and social approval as intangible interactive items that strengthen social relationships (Abdul-Ghani, 2011). In the context of online interactions, SET has been used to provide the theoretical foundations for individual-to-individual interactions in terms of consumer-to-consumer (C2C) interactions. C2C involves social exchanges of intangible goods between individuals that act as rewards (Abdul-Ghani, 2011). Social interactions between individual members of online communities involve cooperative and altruistic motives, trustworthiness, reputational benefits and community identification, which are also the reflects of VOC (Seraj, 2012). These dimensions are the same factors that emerge from the SET (Hsu & Lin, 2008; Hsu & Lu, 2004; Shiau & Luo, 2012). This is based on the fact that these factors are reflects of VOC, which are manifested through social interactions online and the SET conceptually also involves them as its characteristics in explaining interpersonal interactions between individuals. Moreover, these factors have been found to lead to enhanced participation for socialisation and exchange of knowledge with other users, as well as the creation of a credible communication channel (Dwyer, Hiltz & Passerini, 2007; Wang et al., 2012). While most studies in the past have used SET to understand behaviour and attitudes in terms of online knowledge sharing and online transaction, very few studies have looked into satisfaction in socialisation, an important aspect in knowledge sharing in social media. Hence, this study posits that the SET has the ability to examine the effects of VOC on satisfaction in socialisation and knowledge sharing in social media. As a result, the SET is employed to examine

the influence of VOC (representing the factors of cooperation, reputation, altruism, trust and community identification) on socialising satisfaction and knowledge sharing intentions. The study also attempts to look from an individual – to - individual perspective as the studies C2C interactions in the form of ecotourist-to-ecotourist interactions, employing the SET as the main encompassing theory. In a nutshell, the significance of the use of SET in this study lies in the understanding of the impact of VOC on satisfaction in socialisation which, in turn, leads to sharing ecotourism related knowledge in social media in the context of ecotourists. Since the dimensions of VOC are reflected in the SET through the factors of cooperation, reputation, altruism, trust, and community identification, they are briefly elucidated below.

Cooperation is a factor under the SET that basically refers to a belief among individuals that makes them reciprocate voluntarily with others in a social interaction process (Geffen & Ridings, 2002). In the context of social interactions in social media, cooperation refers to the belief of one party that motivates him/her to reciprocate voluntarily with other party/parties who have contributed valuable knowledge and information. This, in turn, motivates the contributors to voluntarily contribute/share more, which leads to a process of sustained interactions and socialisation (Geffen & Ridings, 2002). The interactions take place in the form of sharing of information, knowledge, opinions and recommendations and social relations between individuals in social media. Most previous studies using the SET have used reciprocity as a factor, but did not consider cooperation (cooperative motives). This is a major issue due to the fact that cooperation is an underlying pre-

condition leading to reciprocity (Geffen & Ridings, 2002). Therefore, this study considers cooperation and proposes it as a SET factor which can lead to satisfaction in socialisation via social media. Reputation refers to the enhancement of the self-image of users by sharing valuable knowledge with others through online communication (Nambisan & Baron, 2010). Altruism refers to a desire to assist others without any immediate expectation (Hsu & Lin, 2008). In the context of online communities, it may signify the desire of individuals to share information with others without an expectation of returns (Hsu & Lin, 2008). Trust refers to the dependency and belief on others by individuals, in terms that their personal information are not exposed to undesirable sources and the knowledge that they share is going to reliable people. Community identification refers to a sense of belonging/affiliation (Hsu & Lin, 2008).

1.4 Problem Statement

Previous studies have found that socialization with peer ecotourists which ultimately leads to knowledge seeking among them are important factors in their ecotourism experiences (Chan & Baum, 2007). However, inspite of this imperativeness for ecotourists to socialise and share knowledge, there are few or no studies that has looked into the socialization needs of ecotourists beyond their ecotourists trips. Moreover, empirical research on VOC in social media, as well as the role of social media in enabling satisfying socialisation experiences and knowledge sharing among ecotourists which go beyond the utilitarian needs of mainstream tourists, is deficient (Touray & Jung 2010; Lu & Stepchenkova, 2012). VOC has been found to have a

major aspect in terms of its impact on satisfaction in online interactions within social media related studies (Bagozzi & Dholakia, 2002; Seraj, 2012). Satisfaction in online interactions is also considered a critical factor for online activities by individuals (Shiau & Luo, 2012). However, studies on the significance of VOC in the context of satisfaction in online interactions and in turn, in the context of knowledge sharing are inevident. Finally, the advent of internet technology applications like social media has revolutionized the process of communication among tourists by providing a two-way channel for exchange, sharing and collaboration of travel related information and knowledge. However, previous studies have revealed that social media has the potential to play the role of an effective interactive tool, but its actual practical use as an improved medium of communication by ecotourists is notably lacking (Lu & Stepchenkova, 2012; Gibson et al., 2003).

1.5 Practical Issues

An improved and effective communication platform among ecotourists is lacking for socialising, sharing and exchange of knowledge on environmental and ecotourism-related aspects (Lu & Stepchenkova, 2012). Besides, as mentioned earlier, inadequate knowledge; lack of environmental learning in ecotourism promotion worldwide; and inadequate information service technologies that can enable interactions for socialisation and knowledge sharing, are some of the challenges faced by ecotourists (Lai & Shaffer, 2005; Lu & Stepchenkova, 2012; Gibson et al., 2003; Weaver & Lawton, 2007; Wearing & Neil, 2009, p. 182). This study hence focuses on the role of social media in addressing the identified challenges faced by

ecotourists by examining the effect of VOC in enabling ecotourists to derive satisfaction by socialising in social media which, in turn, affects their intention to share ecotourism-related knowledge.

1.6 Research Objectives

Based on the above discussion, the research objectives of this study are as follows:

1. To validate that the dimensions of cooperation, reputation, altruism, and trust and community identification relationship are represented by VOC.
2. To analyse the impact of VOC in affecting ecotourists satisfaction in socialisation through social media and knowledge sharing intentions.
3. To examine the impact of ecotourists' satisfaction in socialising through social media on their intentions to share knowledge related to ecotourism.
4. To validate the proposed conceptual model in this study.

1.7 Significance of the study and contributions

The significance of the study is based on the facts in that it examines the issue of role of social media in particular, which has had a phenomenal impact on different sectors of the tourism industry in terms of exchange of travel information and knowledge. Yet, it is still underutilized in the context of ecotourism and ecotourists as a dynamic means of communication. Given the fact that ecotourists needs of

information and knowledge sharing, as well as socialisation are distinct from other tourists and such needs can be addressed by the information sharing and socialising features of social media, this study makes a significant contribution from a conceptual and ecotourism practitioner's perspectives. The SET, which predicts the vitality of social interactions and relationships that constructs value in online communities in social media, has not been used in the context of tourism in general. This study makes an attempt to extend the SET to the context of tourism and ecotourists' knowledge sharing and socialisation in particular.

1.7 Structure of the Thesis:

The thesis comprises of 6 chapters. The first chapter provides an introduction of the entire thesis through the background of the study, followed by significance, research problem and objectives, and finally the theoretical and practical implications. Chapter-2 provides a detailed account of the concepts, theories and the arguments and rationale put forward in this study. The conceptual aspects of ecotourists, their motivations and needs as well as difficulties in relation to socialisation and knowledge sharing, the need for social media in enabling socialisation and knowledge sharing, as well as the theoretical aspects of the SET have been explained thoroughly, based on a wide range of literature. Chapter 3 provides an explanation of the key concepts that emerged in this study. The main aspect of this chapter is the conceptual framework comprising of hypotheses developed between the constructs emerging from the key concepts in this study. Chapter 4 provides a detailed account of the methodological aspects, especially in relation to structural equation modeling

(SEM), adopted in this study and highlights the findings of the pilot study and the approach taken for the main study. Chapter 5 illustrates the findings, as well as discussions based on them. The key aspects covered in this chapter are demographic statistics, the sampling procedure and the development of a reliable and valid measurement and structural model. This is followed by discussions on the findings in order to identify the similarities and distinctiveness of this study with previous studies. Finally, chapter 6 provides a summary of the entire thesis with a special focus on the critical aspects like limitations and opportunities for further research based on the findings, implications and limitations of the study.

1.8 SUMMARY: This chapter gives an overall view of the main conceptual elements in this study and the inter-relationships between them. The importance of ecotourism in sustainable tourism has been identified and explained. In the backdrop of the growing importance of ecotourism, the motivations and needs, as well as difficulties of ecotourists in their ecotourism experiences have been explained. It appears that knowledge sharing and socialisation are important facets of their needs. The needs and difficulties of ecotourists identified are primarily related to the issue of lack of new technologies as a communication channel for exchange of information and knowledge between ecotourists. It is in the context of this lack of new technologies as a communication channel that social media is introduced into the study. The role of social media in tourism and its potential role in benefiting ecotourists have been explained. In the context of the role of social media, the SET is introduced to examine the values in online communities, which lead to ecotourists' satisfaction in socialisation and their intentions to share information and knowledge.

In the backdrop of this conceptual discussion, the problem statement of the study, the purpose and objectives, as well as theoretical contributions in relation to the SET and practical contributions have been discussed. Finally, the organisation of the chapters in the thesis is provided under the 'structure of the thesis' section.

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CHAPTER 2 LITERATURE REVIEW

2.1 Introduction:

This chapter provides a detailed and critical review of the literature related to the main elements of this study, which are ecotourism and ecotourist's typologies and definitions; ecotourists' need to share information and knowledge; ecotourists' motivations of learning, socialisation and nature-seeking and the medium of communication they use for sharing knowledge. This is followed by discussions on social media, definitions and types, features, online communities in social media and value in online communities, use of social media in the tourism industry and its use in sustainable tourism and ecotourism, as well as its potential use by ecotourists. Finally the use of the SET in the context of this study is discussed.

2.2 Ecotourism and Ecotourists

Ecotourism is a phenomenon which emerges from the sustainable tourism discourse (Barkin, 1996; Oslo Statement on Ecotourism, 2007). The term was first coined by Mexican ecotourism expert Hector Ceballos-Lascurain and became popular in the early 90s in North America (Juganaru, Juganaru, & Anghel, 2008). Ecotourism, which occurs within the domain of nature-based areas and ecological sustainability is a vital element of it, which is manifested through tourists' understanding and respect for the environment through interpretation, learning and responsible behaviour (Fennel, 1999; Gale & Hill, 2009; Sharpley, 2006). Ecotourism can also be manifested in terms of a nature-based tourism activity that

initiates the rehabilitation of degraded natural areas due to irresponsible human activity (Wearing & Neil, 2009). Ecotourism in these cases contributes to ecological conservation and the well-being of locals of the area (Wearing & Neil, 2009). The International Ecotourism Society (TIES) defined ecotourism as "responsible travel to nature areas that conserves the welfare of local people" (The International Ecotourism Society [TIES], 1990). Another widely accepted definition of ecotourism is "travelling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring, and enjoying the scenery and its wild plants and animals, as well as many existing cultural manifestations (both past and present) found in these areas" (Ceballos-Lascurain, 1987, p.14; Donohoe & Needham, 2006). The year 2002 was declared as the International Year for Ecotourism (IYE) by the United Nations, given the potential for the growth and increasing awareness for ecotourism worldwide.

Ecotourism consists of the main features, which are biodiversity conservation, education and interpretation of nature-based attractions and contribution to environmental values rather than only economics (Wu et al., 2010). Some of the essential aspects of ecotourism are environmental responsibility, local economic vitality, cultural diversity and experiential richness (Dodds & Joppe, 2001). Environmental responsibility refers to the conservation and enrichment of the natural environment for its long – term sustainability and ecological balance (Dodds & Joppe, 2001).

2.2.1 Ecotourism: Growth Activities, Trends and Venues

Ecotourism has undergone commendable growth since 2002, the International Year for Ecotourism by the United Nations (Oslo Statement on Ecotourism, 2007; Vientiane Declaration on Ecotourism in Developing Countries, 2009). Some of the major aspects of ecotourism are conservation, education, and sustainability (Weaver & Lawton, 2007). Ecotourism, since the early 90s, has grown at a rate of 20-34% annually against the 10-15% predicted in terms of demand, according to the UNWTO (Sharpley, 2006; The International Ecotourism Society [TIES] Global Ecotourism Factsheet, 2006). By 2007, ecotourism generated about $77 billion globally ("Ecotourism is Booming", 2007). As of 2010, ecotourism constituted 5-10% of the global travel market and the global ecotourism market is expected to increase at 5% annually by 2024 (Lu & Stepchenkova, 2012; Sharpley, 2006.

Some of the main tourist activities associated with ecotourism is bird watching, whale/dolphin watching, wildlife safaris, observation of flora species and visitations to museums and interpretation centres attached to nature-based areas, based on wildlife and other natural aspects (Diamantis, 2004). Moreover, adventure activities like jungle trekking, hiking, forest canopy walks, biking, and kayaking are also part of the often practiced activities by ecotourists (Diamantis, 2004). In terms of the settings in which ecotourism takes place, some of the common areas are protected areas, like national parks and wildlife sanctuaries, rural areas with wilderness and other natural attractions, as well as rural and semi-urban areas rich in ethnic and cultural resources. The protected areas are either privately-owned or publicly protected areas, as well as indigenous territories. The majority of these settings are

found to exist in the developing world spanning across the global regions of South and South East Asia, Africa and Latin America (Weaver & Lawton, 2007). In addition to this, privately-owned land in the context of Australia is a noticeable trend (Butler, 2004). Some emerging trends since the last decade reveal that modified areas, which involve both public and private land as natural areas with biodiversity richness, are also been explored as potential spots for ecotourism (Dodds & Joppe, 2003; Okech, 2009; Weaver & Lawton, 2007).

Ecotourism in traditional areas primarily involves protected areas, wilderness zones and lands belonging to indigenous communities. Ecotourism in protected areas can involve public protected areas and privately-owned areas. Public protected areas are the areas protected by local or national governments of countries, like nature reserves, wilderness areas, National parks, wildlife sanctuaries and habitat/species management areas (Lawton, 2001, p.288). Publicly protected areas are the most extensively used venues for ecotourism worldwide (Lawton, 2001, p.288). Privately-owned protected areas are non- government owned, which includes formal parks, biological stations, hybrid reserves, farmer-owned forest patches, personal retreat reserves, non-government organization (NGO) reserves, as well as 'ecotourism reserves'(Langholz & Brandon, 2001, p.303).

'Wilderness' refers to those areas which are not identical to what is known as 'wilderness areas' and involves remotely located large areas of the earth with minimum human intervention (Hammit & Symonds, 2001, p.327). Examples of wilderness are the Antarctica, Arctic, Siberia, Amazon basin, central Asia and interior Australia, as well as urban interface areas in some parts of the world, which

are smaller in size but offer reclusiveness in relatively undisturbed settings (Hammit & Symonds, 2001, p.327). Indigenous territories, on the other hand, are lands under the control of indigenous communities, either by virtue of the laws of the sovereign state in which lands are located or by virtue of something called 'aboriginal title' obtained by many years of collective use (Hinch, 2001, p. 354). The case of Little Red River Cree First Nation in Canada is a successful example of an ecotourism project in indigenous lands, given the wide range of motivations for indigenous groups of the place (Hinch, 2001, p. 347).

Modified spaces could be agricultural lands, urban and peri-urban areas, artificial reefs, service corridors and devastated landscapes (Lawton & Weaver, 2001). The rationale behind this potential of modified areas as ecotourism spots lies in the facts that firstly, many visitors and tourists from other places may not be able to access remote wilderness spots far outside urban areas. Secondly, these natural areas provide the opportunity for many species of fauna to make use of the 'altered environments'. Thirdly, through providing a better scope for viewing wildlife and nature and, in turn, raising ecological awareness among tourists visiting urban areas and environmental educational benefits (Lawton & Weaver, 2001; Weaver & Lawton, 2007).

Ecotourism in agricultural lands could be cropland, grazing lands and areas of shifting cultivation. Examples of croplands are orchards, temporary meadows, while grazing lands and areas of shifting cultivation are characterized by permanent pastures and agricultural lands, where cultivation shifts results in growth of forests fit for ecotourism (Lawton & Weaver, 2001, p. 316). Ecotourism in urban and peri-

urban areas refers to nature-based recreational and educational opportunities provided by original and created nature-based spots, in and around urban areas (Gibson et al., 2003; Okech, 2009). These could be urban parks, urban forests, geological attractions, cemeteries, golf courses, sewage lagoons, landfill and waste disposal sites, as well as Zoos and botanical gardens.

Ecotourism in urban and peri-urban areas involves visiting natural areas in and around urban areas for enriching experiences of tourists on nature and ecology, adventure, society and culture, which contributes to sustainable development and alternative recreational opportunities within an urban tourism destination (Gibson et al., 2003). It is imperative to mention that urban and peri-urban areas are more conducive for the development of ecotourism, as they play an important part in educating tourists about natural environment and biodiversity (Kastelein, 2004). Moreover, urban and peri-urban areas are often the gateways through which the majority of the tourist movements take place, when accessing a country's different tourism attractions. This offers an opportunity to a great number of tourists for experiencing the unique ecology available in the green tracts of these urban and semi-urban areas which, in turn, potentially leads to enhanced tourism revenues for the cities (Kastelein, 2004). Urban centers like Toronto, Edinburgh, Singapore, Hong Kong, Taipei and Kuala Lumpur are examples of cities which have focused on urban ecotourism as a part of their promotion of urban tourism experiences to international tourists (Dodds & Joppe, 2001; Higham & Luck, 2002; Tsipidis, 2004; Wu et al., 2010).

2.2.2 Who are Ecotourists?

Ecotourism, like any form of mass tourism, involves consumption or 'green consumerism' (Sharpley, 2006). Therefore, consumers of ecotourism are one of the vital aspects of ecotourism in any part of the world. Ecotourists can be defined as "anyone travelling with the primary motivation of viewing, enjoying and experiencing nature in a relatively undisturbed and uncontaminated natural area and undertaking atleast one ecotourism experience during their trip can be considered as an ecotourist" (Tao, Eagles & Smith, 2004, p.152). Ecotourists are often defined in terms of their trip intentions, travel motivations and degree of involvement in the core aspects of ecotourism; sustainable behaviour, difficulty levels of adventure and thrill activities, social interaction and educational motivations (Weaver & Lawton, 2007). Ecotourists give priority to ecological and environmental aspects (experiential value) and seek alternative tourism activities in natural areas and an authentic nature-based experience (Wight, 2001; Weaver & Lawton, 2007). Ecotourists are usually younger than other segments of tourists and tend to have higher levels of education and, as a result, acquire and share information on key aspects of ecotourism attractions, particularly related to environmental values (Gibson et al., 2003; Higham & Luck, 2002; Okech, 2009; Weaver & Lawton, 2007).

2.2.2.1 Typology of Ecotourists

Laarmen and Durst (1987) and Weaver and Lawton (2007) referred to the concepts of harder path ecotourists and softer path ecotourists. Hard path ecotourists are individuals or groups of people who seek longer experiences of wilderness, travel in

small groups, minimum conventional services and can be specialists/ experts in the field of ecology, and who have a strong sense of conservation and restoration of the environment. Soft path ecotourists refers to those who seek conventional tourism services, longer trips; bigger groups of travellers seek lesser levels of difficulty in ecotourism experiences but have some degree of sense for pro-environmental values, as well as for the conservation of the environment. McKercher (2001, p.570) also emphasized on a scale of ecotourists based on their commitment towards environmental aspects and the importance of the experience of ecotourism activities in trip intentions. McKercher (2001, p.571) explained that hard ecotourists, as those who look for authentic and quality environmental experiences that can involve risks and challenges, are knowledgeable and seek more knowledge while soft, 'generalist' or 'casual' ecotourists look for recreational and thrill experiences; they tend to have less environmental knowledge and the ecotourism experiences they seek are a part of one of the many activities they engage in while on a trip (McKercher, 2001, p.571). Kurstler (1991) posited the concept of ecotourists in the form of 'do-it yourself ecotourists', 'ecotourists on tours, school groups' and 'scientific ecotourists'. This reflects a wide range of ecotourists, based on the nature of travel and travel intentions. Lindberg (1991) referred to types of ecotourists reminiscent of the types suggested by Larmen and Durst (1987) and Weaver and Lawton (2007); as 'hard-core ecotourists', 'dedicated ecotourists', 'mainstream nature tourists' and 'casual nature tourists'. 'Hard-core ecotourists' refer to scientific researchers whose purpose of travel is primarily for education, 'dedicated ecotourists' are those who travel to natural areas to learn about the environment and culture of local people, 'mainstream

nature tourists' visit only well known wildness destinations and finally 'casual nature tourists' are those who, by chance, come into contact with nature while on a trip (Lindberg, 1991).

Ryan, Hughes and Chirgwin (2000) and Weiler and Richins (1995) typified ecotourists based on their levels of interaction with the environment, as well as levels of challenges that they undertook in experiencing wilderness. Lemelin and Smale (2007) put forward 5 ecotourist archetypes, which are ambivalent (ambiguous), 'utilitarian benefit-seeking', 'general pro-fauna', 'specialist pro-fauna' and 'deep wildlife'. Blamey and Braithwaite (1997) and Pizam and Calantone (1987) typified ecotourists based on values, such as personal values and social values, which represent ideals for one's own life and relate to the ideals of one's community and the world respectively. Ryan and Sterling (2001) categorized ecotourists as day visitors', 'hedonists', 'recreational generalists', 'four wheel drive enthusiasts', and 'information seekers', based on their trip activities, interests in nature and wilderness, gender and nature of recreation. Among these the 'day visitors', hedonists', and 'recreational generalists' can be compared to soft ecotourists, while 'four wheel drive enthusiasts', and 'information seekers' to hard ecotourists, as posited by Larmen and Durst (1987) and Weaver and Lawton (2007).

Chan and Baum (2007) and Sharpley (2007) considered travellers as ecotourists, based on the attitudes and experiences they are seeking. Firstly, interest in the environment (responsible behaviour towards ecology, conservation as well as culture of the destination). Secondly, obtaining education to enrich their knowledge about the local environment and cultures of the destination and finally, socialisation

(interacting with fellow ecotourists, ecotourism staff and workforce, as well as local community members at the destination). Marques, Reiz and Menezes (2010) came up with terms for different ecotourists as "self-centred visitors", "urban visitors", "Sociable naturalists", "occasional naturalists" and "excursionist". While "self-centred visitors", "urban visitors", "Sociable naturalists" have strong commitments to the environment, "occasional naturalists", as well as "Sociable naturalists" look for activities. "Excursionists" are found to have no specific intentions related to ecotourism.

Therefore, from the above discussions of the different types of eco-tourists, it is apparent that there is a wide range of terms related to the nature and forms of ecotourists with varying degrees of inclination towards the core aspects of ecotourism intentions, environmental, educational, adventure and social. Hence, in this study, the term eco-tourist will have a holistic meaning, encompassing a wide range of ecotourists with a differing range of motivations and inclinations towards the core aspects of ecotourism.

2.2. 3 Ecotourists' Need to Share Knowledge

Communication and social interactions with peer-ecotourists has been found as a major satisfier for ecotourists in the process of experiencing ecotourism (Harlow & Pomfret, 2002; Lu & Stepchenkova, 2012). Moreover, ecotourists' gratification of ecotourism does not necessarily emerge through experiencing it, but also by having the opportunity to be a participant in the process of promoting environmentally sustainable tourism to peer-ecotourists (Wearing & Neil, 2009). This

communication and promotion takes place in the form of ecotourists' sharing, recommending information and knowledge in relation to ecotourism attractions and nature-based recreational experiences to others (Hartley & Harrison, 2009). This sharing activity is considered has highly important, which turns into a kind of a social influence that enriches the learning process of the ecotourism experience (Chan & Baum, 2007; Harlow & Pomfret, 2002; Marques et al., 2010). The need for ecotourists to share can arise from static information, like trail-side interpretive signs available at nature attractions, which briefly satisfies their knowledge needs but often results in dissatisfying ecotourism experiences, as they fail to retain such information in their minds (Hughes & Morrison-Saunders, 2002). This necessitates the availability of platforms for ecotourists to share such knowledge in relation to their ecotourism experiences, which will help them to retain this knowledge and provide them a more long-term satisfaction. However, the primary reason for which ecotourists consider the need of knowledge sharing important in their ecotourism experience arises from their motivations of learning and education and ability to socialise with peer ecotourists.

2.2.4 Ecotourists Motivations

Ecotourists' ecotourism experience involves firstly, learning through interpretation and education on the environmental and social aspects of nature-based destinations, social interactions with peer-ecotourists, and seeking nature and wilderness driven by ecotourists' environmental values and concern for environment in terms of conservation and sustainability through ecologically responsible behaviour and volunteering (Sharpley, 2006).

Ecotourists tend to have different motivations for seeking ecotourism experiences. Aspects like self fulfilment thrill and excitement can be factors generating interest for ecotourism among ecotourists (Hartley & Harrison, 2009). Learning has been found as one of the essential aspects of ecotourists in their visitation intention (Nowaczek & Smale, 2010). Learning through experiences of ecotourism activities, knowledge seeking about the ecological aspects and environmental values can be effective and enhance their satisfaction levels (Stein, Denny & Pennisi, 2003). Learning about wildlife, nature, natives and cultures are some of the main learning activities that ecotourists seek (Wight, 2001). The learning desires of ecotourists distinguish them from mainstream tourists and are among the main drivers of demand for ecotourism products, as offered by the ecotourism operators and ecotourism attraction management bodies (Beaumont, 2011; Wight, 2001). Moreover, factors like change from everyday life in pursuit of seeking nature can also be important in ecotourists' trip intentions (Mehmetoglu, 2007). Ecotourists are driven by the desire to experience nature, which is one of the main drivers of demand for ecotourism products by the ecotourism operators (Beaumont, 2011). Seeking less crowded locations, remote, wilderness areas and opportunities for viewing plants and animals, makes ecotourists different from mainstream tourists (Wight, 2001). Another important aspect for ecotourists' motivations to travel is the social value derived from ecotourism activities, like birdwatching (Eubanks Jr, Stoll, & Ditton, 2004). Ecotourists' participation in ecotours can often be driven by a strong intent of socialising (Wight, 2001). For some hardcore ecotourists, like research ecotourists, some of the main factors that significantly affect their

intentions of seeking ecotourism experiences are personal development and academic enhancement. These are achieved through their experiencing of something completely new and taking part in a rare opportunity, like ecotourism activities of forest trekking and reef diving, as well as a high level of pro-environmental behaviour (Galley & Cliffton, 2004). Besides, ecotourists are also driven by their levels of awareness about ecology, involvement in environmental practices, as well as experiential aspects of nature-based trips (Lee & Moscardo, 2005). Favourable environmental attitudes emerging from satisfying experiences ecotourism activities, as well as awareness on environmental aspects and values significantly influence their intentions for future experiences of ecotourism destination visitations (Lee & Moscardo, 2005). The motivations in relation to learning and education (knowledge seeking), socialisation and nature-seeking, which lead to the knowledge sharing needs of ecotourists, are now discussed in detail.

2.2.5 Learning and Educational

Learning and pedagogical needs of ecotourists are a vital aspect of the consumption process of ecotourists. Acquiring education and knowledge on the environmental (natural resources and attractions) of the ecotourism destination is one of the main aspects that can influence ecotourism experiences (Chan & Baum, 2007). Higham & Luck (2002) observed the benefits of education in 3 cases of urban ecotourism in New Zealand, where education through interpretation by urban ecotours enabled ecotourist's comprehensive environmental learning opportunities, especially on

conservation issues. However, Nowaczek and Smale (2010) in their study on the ecotourist predisposition scale (EPS) found that education and learning, as one of the six dimensions in the New Ecological Paradigm (NEP) scale, was rated quite low by ecotourists. This occurred due to the misconception of the actual meaning of education among the ecotourists surveyed in the study. Their inability to visualize the delicate difference between education as formal education, and education in the sense of experiential learning of the natural environment while on an ecotourism trip, was perceived to be the reason for the low ranking of the learning component (Nowaczek & Smale, 2010). The likelihood of this is quite obvious since Beaumont (2011), in a study on ecotourists' behaviour, found learning experiences as one of the prime elements Eco tourists demand while on an ecotour. Therefore, Eco tourists have strong pedagogical requirements in terms of learning and acquiring knowledge about nature while they are on anature trips, which can be fulfilled through interpretation (Wearing & Neil, 2009, p.202).

Interpretation of the environment at nature-based sites is a means of communication for visitors to enrich their knowledge and understanding about the different elements in the ecology of their natural surroundings, as well as the conservation and sustainability issues attached (Hughes & Morrison-Saunders, 2005). Interpretation may be in the form of texts as in signs, information boards at wilderness sites, as well as interpersonal modes which involve humans as ecotour guides who explain about the elements of the ecology, which is often multi-sensory and involves comprehensive social interaction (Hughes & Morrison-Saunders, 2005; Hill, Woodland & Gough, 2007; Powell & Ham, 2008).

Ecotourists generally seek a high quality of content in relation to environmental interpretation, something often underestimated by ecotour operators (Eagles, 2001). Interpretation in wilderness attractions is necessary more due to the fact that the ecotourist segment encompasses a wide range of individuals who may not be experts in ecology, like ecologists or anthropologists. Therefore, efficient interpretations that provide a sufficient volume of knowledge for the average ecotourist are vital (Hughes & Morrison-Saunders, 2005).

Knowledge is an essential aspect of education through interpretation. It is one of the key aspects Eco tourists look for before and during their ecotourism trips, which ranges from the green practices at the destinations, environmental compatibility of the whole trip process, benefits to local communities, as well as history. Availability and dissemination of accurate and effectively communicated knowledge on ecotourism is also important for Eco tourists (Eagles, 2001). The cognitive process of knowledge flow among ecotourists is negatively affected if proper content is not available about environmental and biodiversity elements, resulting in dissatisfaction with their experience of ecotourism. Dodds and Joppe (2001) and Okech (2010) stressed on the importance of the content by citing the example of the urban ecotourism map for Toronto and cities in Kenya for benefits, like awareness of tourists about the ecological aspects of nature areas of these cities, recognition of local businesses, as well as promotion of urban ecotourism worldwide. Hill et al., (2007) observed in a study on a Ropewalk at the Crocodylus Rainforest Village in Australia that ecotourists were increasingly satisfied with their environmental experiences due to the use of biodiversity information sheets and were also more

satisfied with their perceived learning than those who did not use the sheets. The study also found that ecotourists who used the biodiversity information sheets scored higher in the biodiversity quiz than those without them (Hill et al., 2007). Moreover, in overall those ecotourists using the sheets gained a more wholesome experience through their high approval for learning historical aspects of the rainforests as a quality ecotourism experience, and they acknowledged the importance of human-nature interactions as vital for ecological functioning (Hill et al., 2007). In other words, the use of information sheets facilitated the biodiversity interpretation, in order to play a significant role in ecological pedagogy as well as a tourism educator (Hill et al., 2007). Moreover, ecotourists with proper biodiversity knowledge are found to have higher satisfaction levels than those with no such information (Hill & Gough, 2009).

The aspects of knowledge are not only applicable to interpretation, but also to ecotourists involvement with ecotourism. This refers to the significance of ecotourism for an individual (Krider, Arguello, Campbell & Mora, 2010). Involvement can often be a precursor to ecotourists information search. Higher levels of ecotourism involvement leads to information requirements for purchase decisions, trip planning, volume of trips, as well as 'opinion leadership' (Kridder et al., 2010). Therefore, knowledge gained through experience in ecotourism leads to mental stimulation of ecotourists (Chan & Baum, 2007). Besides knowledge on ecological awareness and ecotourism experiences, ecotourists also seek knowledge on trips, which consists of trip cost, the duration of the trip, type of accommodation,

transportation, climate conditions, cultural conditions, as well as risks and challenges involved in ecotours (Eagles, 2001).

2.2.6 Socialising satisfaction for ecotourists in ecotourism experiences

The opportunities for social interactions with likeminded individuals, family members and friends available while experiencing the ecotourism activities, is another vital part of ecotourists' motivation and satisfaction of ecotourism experiences (Chan & Baum, 2007; Holden & Sparrowhawk, 2002, Kim, Kim, Park & Guo, 2008). Weaver (2002) found that the social element in terms of meeting likeminded individuals is reasonably high for ecotourists during their ecotourism experiences. Holden and Sparrowhawk (2002) observed in the results of their study that trekkers to Annapurna, Nepal enjoyed the social interactions with fellow-trekkers considerably. They were found to be significantly driven by the social need to have pleasure in socialising with friends and also making new friends through the socialisation with fellow-trekkers in the trekking tour groups (Holden & Sparrowhawk, 2002). Chan and Baum (2007) found that ecotourists' satisfying socialisation experiences with peer ecotourists was a vital part of their social-psychological push factors/'social attractions', that motivated them to visit ecolodges in Sukau, East Malaysia. Lu and Stepchenkova (2012) in their study on experiences of ecotourists' reported online in the context of ecolodges in Costa Rica found that socialisation in the form of communication with peer-ecotourists, who are often found to have similar interests, was the only gratifying aspect in the ecolodge settings, as it enriched the quality of the experience and enhanced satisfaction.

Therefore, ecotourists' experience is most comprehensive where social and educational aspects become the mainstay of the overall ecotourism experience.

The quality of ecotourists' experience of nature-based areas can be affected by social influences like travelling with friends, or the relationships among ecotourist group members that develops into a social bond (Harlow & Pomfret, 2007; Moscardo, 2008). Ecotourists have been found to experience pleasure and satisfaction in being part of a ecotourists' group's collective action and collective commitment towards the living environment, as well as in the social interactions involved, resulting in a 'sense of community' (Harlow & Pomfret, 2007; p.199). Social aspects are also manifested through the hedonic and interactive processes in their ecotourism experience, which involve excitement, thrill and enjoyment of wildlife, natural environment, and nature-based activities, as well as meeting other people who are fellow ecotourists and experiencing these activities with them (Chan & Baum, 2007). Socialisation is also initiated by communities, like voluntary environmental organizations or birding communities who during their ecotourism activities develop a bondage among themselves by sharing fun and enjoyment, interaction through knowledge sharing and conversations (Eubanks Jr, Stoll, & Ditton, 2004).

Softer ecotourists seek nature trips which provide socialisation opportunities, through which they are able to experience appealing social interactions with peer eco-tourists, ecotourism staff and local people in addition to a quality natural environment for stimulating and improving their health (Cini, Leone & Passafaro, 2010). Kim et al., (2008) observed that one of the respondents' clusters in their study, which was softer ecotourists, tended to take a lot of pleasure in socialising

with their friends and relatives, or with peer ecotourists who were members of the same association, during a cave tour to the Hwansun Caves, Samchuk City, South Korea.

McFarlane (1996) found that socialisation in the form of participation with friends and individuals of nature-based recreational organizations, as well as family members was a crucial factor for influencing specialized nature-based recreational activities, like birding among individuals. Socialisation was found to be more imperative in the specialization process in relation to the participation and knowledge acquisition of birdwatching activities (McFarlane, 1996). Ecotourists' engagement in specialized nature-based recreational activities leads to the creation of a community of likeminded individuals, who socialise by sharing "similar attitudes, beliefs, and ideologies, engage in similar behaviour, and have a sense of group identification" (MacFarlane, 1996, p. 37). This socialisation in turn leads to the creation of a structure of set principles, which are highly imperative to the specialists' community; this imperativeness necessitates the community members to continuously communicate with each other in order to keep the said structure intact (McFarlane, 1996). Similar findings were reflected in the study of Lee, Graefa and Li(2007), where it was observed that social aspects are critical in recreational paddling. The paddling groups, which involved a considerable level of socialisation, were most common since they involved group members who were friends, confirming that specialised recreational individuals required significant levels of interaction with likeminded individuals with similar values and views (Lee et al., 2007). Similar observations were made by Moore, Scott and Moore (2008) and

Kuentzel and Heberlein (2006), where socialisation, relationships and cooperative interactions formed a critical part of specialised nature-based recreationalists' experiences. For many ecotourists, being participants in specialised nature-based recreational activities like birdwatching and water-based recreational experiences like paddling and boating, the social aspects in terms of socialisation between peer ecotourists are reasonably imperative (Eubanks Jr, Stoll, & Ditton, 2004).

Ryan, Hughes and Chirgwin (2000) found that ecotourists' satisfaction with an ecotourism experience was based (apart from their interactions with the attraction and the intensity of the birdwatching experience) on the socialisation opportunities they got in terms of sharing different aspects, interaction with family members and others which, at the same time, appeared educational in nature. Social interactions of ecotourists can often lead to their desires of personal development (Harlow & Pomfret, 2007). Personal development desires drive one into gaining spiritual benefits from the natural environment, sensitivity towards the environment, as well as conservation attitudes (Harlow & Pomfret, 2007). In other words, it can be also be referred to as self-image enhancement experienced by ecotourists through getting environmental learning opportunities outside their homes, developing knowledge and social awareness as the affirmative outcomes of experiencing and participating in ecotourism (Harlow & Pomfret, 2007). Personal development specifically applies to research ecotourists who are found to have their travel motivations influenced by it (Galley & Clifton, 2004). Personal development for research ecotourists is driven by their desire to experience something that they never experienced before and that, too as a rare opportunity, is not available to the masses (Galley & Clifton, 2004).

2.2.7 Seeking Nature

Environmental values, driven by pro-environmental behaviour among ecotourists, have been identified as one of the main intentions of participating in ecotourism activities. Higham & Luck (2002) identified 3 cases of urban ecotourism in New Zealand, where the potential of natural environment restoration in urban areas was being met through ecotourists' pro-environmental activities, as in all the 3 cases populations of floral and faunal species were allowed to regenerate. Harlow & Pompfret (2007) found that one of the main driving forces for ecotourists to visit nature-based areas was for their keen interest in experiencing the environment, as well as their willingness to contribute to the conservation of natural elements, like flora and fauna. Zografos & Allcroft (2007) identified environmental values as one of the main concern among a wide group of ecotourists. Most ecotourists, irrespective of their demographic and trip characteristics, considered 'biodiversity preservation' as the most critical element of nature seeking activities in their ecotourism experience. Tao, Eagle & Smith (2004) found strong pro-environmental attitudes among self-defined ecotourists and general ecotourists visiting ecotourism sites in terms of their nature-seeking motivations. Cini, Leone & Passafaro (2010) found that holiday motivations of ecotourists were driven by ecocentric viewpoints, which reflected profound commitment for the intrinsic value of the environment and the importance of human-nature interactions. Chan & Baum (2007) identified viewing wildlife in wilderness settings and preservation of such settings as one of the main aspects of ecotourism experiences of ecotourist visiting Sabah in Malaysia.

The clean and undisturbed ecological state of Sabah and the related affective experience were one of the main aspects ecotourists appeared to seek. Lee and Moscardo (2005) found profoundly responsible environmental attitudes and behaviours among ecotourists at their pre-visit and post-visit stages of the visit to Kingfisher Bay Resort and Village (KBRV) in Australia. The study also found that participation in environmentally responsible activities at the resort rendered towards positive environmental attitudes (Lee & Moscardo, 2005).

Nowaczek and Smale (2010) developed an Ecotourist Predisposition Scale (2010), based on the six principal dimensions of ecotourism. They found the 'ethics' dimension rated as the highest in terms of importance by ecotourists. This dimension resonates environmental values, in that it entails awareness and respect for elements in the ecology of nature–based areas, the sustainability issues related in terms of conservation of these ecological elements, as well as responsible environmental behaviour. Galley and Clifton (2004) posited from their study on research ecotourists that responsible environmental behaviour was the prime focus of volunteer (research) ecotourists when seeking nature and biodiversity. They consider environmental and educational values of prime importance and showed a high degree of awareness for the fundamental principles of ecotourism.

Therefore, from the studies above, it is clearly evident that nature-seeking motivations of ecotourists of different segments are based on environmental values and pro-environmental behaviours. It is also evident that the theoretical foundations of ecotourism in terms of environmental importance, as posited by the TIES and UNWTO, are well supported by empirical evidence. The prime importance of

environmental values and pro-environmental behaviours in ecotourists' nature-seeking motivations creates the need for ecological knowledge, which they fulfil through socialisation and knowledge seeking (learning and educational) opportunities in ecotourism trips.

2.2.8 Ecotourists' Motivations and Mass/general tourists' motivations

Motivations for ecotourists are also influenced by other factors, which clearly distinguish them from mass/mainstream and other tourists. In terms of their income levels, they tend to be more affluent than non-ecotourists. This results in ecotourists having significant distinguishable expenditure characteristics when compared to mainstream tourists visiting natural areas (Wight, 2001). Moreover, the length of stay for ecotourists in natural and wilderness settings tends to be much longer than for mainstream tourists (Eagles, 2001). In addition, the higher levels of education of ecotourists, when compared to mainstream tourists, makes them demanding of in-depth learning of scientific knowledge through information and instructions on the natural attractions they visit (Wearing & Neil, 2009). Aspects like the type of accommodation, tour group size, and tour costs in the context of ecotourists are different from mainstream tourists (Eagles, 2001).

Mass or mainstream tourists visiting natural areas do not possess the same motivations as ecotourists. Their motivations for travel to natural and biodiversity areas are strongly driven by recreational opportunities with little or no interest for learning and knowledge-seeking about nature and biodiversity aspects. Mainstream tourists can be affected by very different factors, like antecedent states of their travel

motivations, which basically refer to the frame of mind tourists have in terms of positive or negative feelings like excitement or anxiety, while making decisions on visiting destinations (Chen & McCain, 2011). Other aspects, like food image and food satisfaction can also be some of the key factors in influencing as well as in affecting their behaviourial intentions through the quality of visitation (Chi, Abkarim & Gursoy, 2010). For mainstream tourists who are looking for well-being holidays, factors like health and physical activity, relaxation and escape turn out to be motivators for visiting destinations (Konu & Laukannen, 2009). Similarly, for tourists visiting spa destinations factors like perceived behavioural control, past experience and spiritual wellness lead to visit intentions. Besides, factors like the overall image of destinations, cultural distance and geographical distance can also play an important role in tourists' behavioural intentions of visitation (Bilei & Kim, 2009; Ng, Lee & Soutar, 2007).

Therefore it is evident that ecotourist motivations for seeking ecotourism experiences are distinct from other categories of tourists. Mainstream tourists are more inclined towards fulfilling needs of encouragement and relaxation, while ecotourists are driven by self-development and accomplishment through learning and personal experience of biodiversity and nature (Wearing & Neil, 2009, p.199). In other words, self-actualisation needs are significant in the case of ecotourists, unlike in the case for most mainstream tourists (Wearing & Neil, 2009).

2.2.9 Issues in Ecotourists medium of communication in sharing knowledge

Ecotourism attraction authorities and ecotour operators, through their promotional efforts, often offer interpretation content and tools which are often below the satisfaction levels of ecotourists leading to an absence of a gratifying pedagogical element (Wearing & Neil, 2009). Moreover, the accurate and detailed information necessary for interpretation is often found to be obtained with difficulty and ecotourism guides are not always correct and up-to-date (Eagles, 2001; Wearing & Neil, 2009). This is essential, since ecotourists are also found to be vulnerable to inadequate and incorrect information that may be provided by ecotour guides leading to dissatisfying ecotourism experiences (Ryan & Sterling, 2001; Wearing & Neil, 2009). Lai and Shaffer (2005) found that ecolodges, while marketing their ecotourism experiences and products through the Internet, did not provide certain information related to sustainability aspects, which is perceived as highly desirable by ecotourists. Examples are involvement of the local community in ecotourism planning, preventing the negative impacts of tourism on society and culture and the preservation of cultural traditions. More importantly, the study found some of the most vital aspects of ecotourism; the learning and educational factor, in terms of provision of knowledge on environment, ecology conservation and pro-environmental behaviours, is largely neglected in Internet marketing efforts of the ecolodges (Lai & Shaffer, 2005). In addition, it is also not just the issue of providing adequate and accurate information to ecotourists, but to also to provide knowledge in such a way that it helps ecotourists to retain information and knowledge, satisfying their long-term learning needs (Hughes & Morrison-Saunders, 2002). Therefore, planners and managers of ecotourism attraction management bodies and

ecotour operators need to make sure that they provide sufficient information in relation to the whole ecotourism experience, in order to offer the desired levels of satisfaction (Eagles, 2001).

When it comes to ecotourists' needs for sharing and acquiring comprehensive knowledge related to ecotourism, they are found to use multiple media sources (Wearing & Neil, 2009). Meric and Hunt (1998), in a study on ecotourists' motivational and demographic characteristics, found that word-of-mouth is one of the top five sources for ecotourism information. Weaver (2002) also found word-of-mouth as the most important source of information for ecotourists, as well as a strong tendency of sharing their experiences with others. This is indicative of the fact that sharing and acquiring ecotourism-related information is essential for ecotourists and word-of mouth is an important media source for it. Surprisingly, this study found Internet as having a very low importance as an information source, which is attributed to the fact that the survey was conducted in 1999 when internet use was relatively low compared to this study (Weaver, 2002). Another reason for the low importance of internet could possibly be the presence of more static internet sites in these times, as compared to the two-way interactive sites involving user-generated content (UGC) of the present. This is very important, given the fact that word-of-mouth is considered the most significant information source by Weaver (2002), and which the present day internet technologies are widely found to offer in the form e-WOM with the help of UGC. Wearing and Neil (2009, p.186) mention special-interest magazines, direct mail and Internet as the prospective types of media to reach ecotourists, through required information or by being used by ecotourists to

acquire the necessary information. However, given the emergence of advanced internet technological applications like social media, its potentiality as another tool for ecotourists to acquire knowledge is lacking in the study by Wearing and Neil (2009). This comes as a surprise, since the study recognizes "inadequate information service technologies" as identified by Wight (2002) to bring difficulties in carrying out well-informed marketing of ecotourism. Ryan and Sterling (2001), in their study, identified a lack of information for ecotourists that can lead them to a frustrating experience, which can be overcome by their own search of knowledge through conversation outside books and libraries. This creates a need for ecotourists to share knowledge in relation to ecotourism and their ecotourism experiences. However, the study did not specify on whether conversation means interactions between ecotourism attraction management officials and ecotourists, or simply between ecotourists. Moreover, the potential role of the internet in providing them a platform for conversation is also not fully identified in this study, given the fact that internet had already emerged as a major source of information and a platform for conversation.

Based on the above discussions on the ecotourists needs to share knowledge, the following difficulties are identified that stand in the way of ecotourists' intention to share information and knowledge, and socialize.

- Knowledge and awareness about environmental, social and economic benefits of ecotourism is necessary for ecotourists (Anastasijevic et al, 2009; Gibson et al., 2003; Tsipidis, 2004). Awareness in terms of the possibility of nature-based travel to ecotourism attractions raises the options for travel in general, and

extends ecotourism opportunities to ecotourists in particular (Gibson et al., 2003). Boon, Burridge & Flucker (2010) identified that a lack of proper information dissemination to tourists through ineffective environmental interpretation can be an issue for the awareness of sustainability aspects in ecotourism. Tourists are normally conscious of the direct impacts caused by the irresponsible behaviour of fellow tourists, but the long-term depreciating effects of tourism at an ecotourism destination are not often within the frame of their understanding (Boom, Burridge & Flucker, 2010). Therefore, an effective means of knowledge dissemination that will provide a broader ecotourists' understanding of the more susceptible tourism impacts is desired.

- A lack of environmental learning in ecotourism promotion worldwide and a lack of sharing knowledge opportunities results in a lack of quality ecotourism interpretation and hence, lower satisfaction levels of ecotourists (Hill & Goudon, 2009; Weaver & Lawton, 2007; Wu et al., 2010). The use of a diverse range of media is therefore necessary, which not only involves textual information, but also audio-visuals in order to gain an idea of the experiential aspects of ecotourism (Hughes & Morrison-Saunders, 2005). Audio-visuals are more effective in terms of environmental education through their interpretation (Hughes & Morrison-Saunders, 2005).

- Ecotourists face difficulties, like a lack of effective communication channels for sharing and acquiring knowledge. Besides, DMOs don’t provide much information on ecotourism due to less financial gains (Okech, 2009). Weaver & Lawton (2007) observed that one of the pressing issues in ecotourism is the way

how ecotourism information is disseminated to ecotourists through marketing and promotional aspects. The challenges faced by ecotourists in relation to knowledge are posed by service providers in ecotourism who, firstly, fail to efficiently communicate to ecotourists about environmental learning opportunities and secondly, do not provide information about sustainability practices and norms to be followed during ecotourism operations (Lai & Shaffer, 2005; Wearing, Cynn, Ponting & Mcdonald,2002; Weaver & Lawton, 2007).

- More socialising opportunities among ecotourists are required (Gibson et al., 2003). This is in connection with the socialisation among ecotourists, where interaction with peer ecotourists becomes an essential part of the ecotourism experience not just during the visit but also post-visit. Moreover, networking is also necessary in terms of exchange of content, both textual and audio-visual, between potential ecotourists and those who have already visited such destinations. With the high given importance for ecotourists to socialise, opportunities for them to continue socialising beyond the ecotrips are therefore essential.

- A need for increased access to new technologies in urban ecotourism that would facilitate mobility and information exchange (Gibson et al., 2003). New technologies, for example mobile technologies and new internet technologies like social media, can address the functional needs of ecotourists in terms of sharing information and experiences (Wang & Fesenmaier, 2004).

Therefore, as evident from the previous discussion, the needs for socializing and information sharing demands a platform for ecotourists that will enable them to fulfil these needs. As evident from the ecotourism literature, knowledge available to tourists in the real world is inadequate and ineffective, and virtual/online sources like the Internet have not been explored extensively as a platform for communication, socialisation and knowledge sharing. This provides the necessity to explore the potential of new ICT applications, such as social media, to facilitate the process for ecotourists. Social media that is based on the technological foundations of Web 2.0 can play a significant role in addressing these knowledge sharing needs of ecotourists, as well as in addressing the related difficulties. This is possible, as social media involves interactive applications, which have been instrumental in making a wide ranging set of travel-based information and knowledge available to tourists (Buhalis & Law, 2008; Lai & Shaffer, 2005). Social media has the potential to address the issues arising from ecotourism, as social media sites can lead to experiential knowledge sharing, meeting actual information needs, shared value and identity and better networking opportunities (Ali & Frew, 2010; Sreenivasan et al., 2012; Touray & Jung, 2010). Online word of mouth information can also play a significant role in influencing tourists' travel intentions (Fakharyan, Jalilvand, Elyasi & Mohammadi, 2012).

2.3. Social Media; Concept and Definitions

The internet as a communication and information technology has for quite some time been the enabler of "equal access to information about products, services and

distribution" (Lew, 2007; O'Reilly, 2005). Social media has been one of the most influential extensions of the internet technology that initiates to create, collaborate and share information (Lew, 2007; O'Reilly, 2005). According to Kaplan and Haenlein (2010) social media is "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content". Web2.0 is made of a social software that initiates interpersonal and community-based interactions and knowledge sharing (Lew, 2007; O'Reilly, 2005). Social media can be moreover defined as the various electronic tools available to help accelerating and improving our ability to connect, communicate and collaborate (Lue, Marr & Kassotakis, 2010).

Social media that employs the web2.0 technology which, according to O' Reily (2005), is about communities and social networks, builds contextual relationships and facilitates knowledge sharing, is about people and the way they collaborate. Social media could also be explained as a virtual media, encompassing the following key aspects "participation", "openness", "conversation", "community", and "connectedness"(O'Reilly, 2005). UGC further vitalizes the online social interaction process between consumers of online content (Cox, Burgess, Sellitto, Buultjens, 2009).

2.3.1 Social Media Types

Social media is made up of web participation tools like wikis, blogs, podcasting and social networking sites (Chan & Guillet, 2011; Maddux, Liu & Johnson, 2008). Wiki is a social media tool or technology (Twu, 2009), rooted in social and cultural

aspects. Wiki, in simple words, is a website where multiple people can collaborate to create a work by easily adding to or editing the content of the site (Lue et al., 2010). Wiki is a socially interactive and "socially oriented, software based web pages that enable free cross platform editing and redistribution of original content (Ruth & Houghton,2009: Twu, 2009). As per Ruth & Houghton (2009), wiki based pedagogy can bring benefits like opportunities to develop competency, an open framework for interdisciplinary knowledge and understanding, adapting and accepting competition and cooperation in knowledge sharing (Ruth & Houghton, 2009).

A 'blog' is a shorter form of the term 'weblog' and is "an online chronological collection of personal commentary and links" (Wang, 2008; p.1). This can also facilitate quality student learning experiences through collaboration, motivation and effective learning (Wang, 2008).

2.3.2 Social Networking Sites; Concept and Definitions

Social networks can be defined as websites that allow people to share information and to search for others for the purpose of giving information, receiving information, or forming beneficial relationships (Klososky, 2011). In a more technical sense, a social network can be defined as "a social structure made of nodes, generally individuals or organizations, which are connected by one or more specific types of interdependency" (Kelly, 2009). Social networks are platforms, also enabled by User-Generated Content (UGC),which facilitate individuals to share content, pictures and audio-visual materials with others individuals and groups. Social networking is an activity for virtual groups and communities, inviting members with

similar interests to interact, share, collaborate on knowledge, opinion, and viewpoints in a collective and cooperative manner (Klososky, 2011).

Social networking sites create a participative and interactive environment, which accommodates active contribution and production, as well as synthesis of new content and ideas (Hazari, North & Moreland, 2009; Twu, 2009). Social media and social networking sites both lead to the concept of 'collective intelligence', where individuals build on each other's knowledge through the formation of 'participatory communities' (Klososky, 2011). Due to the close inter-relation between social media and social networking sites, these terms will be used interchangeably in the paper.

Some of the most impactful social networking sites in the recent times have been Facebook and Twitter (McCarthy, Stock & Verma, 2010; Withlam, 2011). Facebook, in particular, has been one of the most influential and popular channels of online social interactions in the recent times. Facebook enables the formation of online communities of likeminded people and is a platform where members of a community can meet and network among themselves by means of sharing photos, videos and text information (Gunter, 2010, p.5). Facebook was started in 2004 by Mark Zuckerberg, a computer science major and two of his friends. In 2007, with the additions of some applications by software developers, the Facebook platform was launched. By 2007, Facebook had 58 million active users, 55000 networks, 14,000,000 photos uploaded and the main countries with most users were the US, Canada, UK, Australia, Turkey, Sweden, Norway, South Africa, France and Hong Kong (Feiler, 2008). As of early 2014, Facebook had 1.28 billion active monthly users and, in terms of mobile technologies, there are 1.01 billion mobile active

monthly users (Facebook, 2014). Some of the terms associated with Facebook are social utility and virality (Feiler, 2008, p 5.). Facebook is considered as social utility since it offers an efficient channel for communication, obtaining, disseminating, as well as sharing information. The term virality is associated with Facebook as it enables the spread of information at intensity comparable to that of a disease spreading virus.

2.3.3 Key Elements of Social Media

Some of the prominent terms emerging from the discussion above on the features of Social media and social networking sites are sharing, collaboration, cooperation and collectivism. Sharing refers to a mutual exchange of information, audio-visual content, and pictures through sites like Facebook, Twitter and others between users (Kelly, 2009). Exchange of such information, audio-visual content and pictures could be opinions, developments, events and incidents or updates on personal, political, business, academic and many other aspects (Fuchs, 2006; Kelly, 2009; Leaning, 2009). Cooperation refers to the formation of virtual communities in social networking sites, their mutual sharing, as well as production of digital content in an asymmetrical and non-hierarchical fashion (Benkler, 2006; Fuchs, 2006). Collaboration refers to individuals contributing to the development of contents in social media sites in a voluntary manner (Benkler, 2006; Kelly, 2009). Another feature of social media is called collectivism. Collectivism refers to a group action taken in terms of critical measures and decisions to ensure a proper and smooth development of content through the contribution and collaboration of individuals (Benkler, 2006; Kelly, 2009). Social networking sites also play a collective role by

inviting like-minded individuals to share and collaborate on content of common interest (Kelly, 2009; Peters, 2011; Song, 2009). Therefore, social media sites that consist of the features of sharing, cooperation, collaboration and collectivism, have offered a new avenue for symmetrical interpersonal communication among members of virtual communities (Kelly, 2009; Leaning, 2009; Peters, 2001; Song, 2009). This online information and knowledge sharing, as well as collaboration, can also be referred to as a virtual word–of –mouth information, which is unlike offline word-of-mouth information as it spreads beyond the boundaries of known individuals i.e. beyond friends and relatives (Xiang & Gretzel, 2010). Socialisation in social media is another major element, apart from the four main essentials discussed apart. Social media tools like blogs, instant messaging and social networking sites provide a convenient process for socialisation (Wang et al., 2012). Members of social media sites get socialised through fast transmitting communication, which enables them to acquire skills and knowledge on tasks efficiently (Wang et al., 2012). The socialisation opportunities possible in social media enable knowledge sharing and learning, as individuals find friends and peers as socialising agents, who share such knowledge and provide learning opportunities (Wang et al., 2012).

2.3.4 Online Communities

Social media use is often expressed in terms of virtual/online communities, comprising of individuals having dialogues in relation to specific contexts (Guzzo, Andrea, Ferri & Grifoni, 2013). Online communities can be referred to as digitally

mediated social spaces, where groups of people engage in intense communication on their common areas of interest and develop sustained relationships with each other (Bagozzi & Dholakia, 2002). Faraj, Jarvenpaa & Majchrzak (2011, p.1224) referred to online communities as "open collectives of dispersed individuals with members who are not necessarily known or identifiable and who share common interests, and these communities attend to both their individual and their collective welfare". Kozinets (1999, p. 253) explained online communities as "online groups of people who either share norms of behaviour or certain defining practices, who actively enforce certain moral standards, who intentionally attempt to found a community, or who simply co-exist in close proximity to one another". Online communities are hence networks in the digital world, where users organise and interact intensely to create a social structure (Bagozzi & Dholakia, 2002). Sproull (2004, p.733) defined online communities as "a large, voluntary collectivity whose primarily goal is member or social welfare, whose members share a common interest, experience, or conviction and who interact with one another primarily over the Net". The lifeblood of online communities is social interaction between its members in a form of individual to individual, or group-based, and also based either on a discrete area of common interest or a wider area covering various aspects (Bagozzi & Dholakia, 2002). This involves a dialectical and intellectual process of content exchange between its members, developing into a communal structure of shared values and solidarity (Bagozzi & Dholakia, 2002; Kozinets, 1999). Online communities are therefore potentially dynamic platforms of effective and collaborative social exchange, leading to a repository of diverse and enriched collective knowledge

(Kozinets, 1999). Online communities emerge not merely based on the development of internet technologies like social media, but based on the social need of individuals to build communities with sustainable relationships and strong bondages (Seraj, 2012). It is the satisfactory communal experience which individuals obtain in the increasing intensity of communication existing in mediated spaces, like online communities in social media that motivates them to participate in such online communities (Bagozzi & Dholakia, 2002).

2.3.4.1 Value in Online Communities (VOC)

Value in online communities has been referred to as the value existent in the intense social interactions between members of a community on social media sites, who, in turn, are consumers of a certain service that ultimately leads to their satisfaction, positive word-of-mouth and enhanced online interactions (Seraj, 2012). The value referred here is not economic in nature but it is a 'capital of knowledge', formed as a repository through the collective efforts and participation of all online community members (Bagozzi & Dholakia, 2002). According to Sanchez-Fernandez and Iniesta-Bonilo (2007) the value here can also be referred to as an 'epistemic' value, which is "concerned with a desire for knowledge, whether this is motivated by intellectual curiosity or the seeking of novelty" (Sanchez-Fernandez & Iniesta-Bonilo, 2007, p. 438). It is the "collective intelligence" brought about through the collaborative social interactions by members that help building an online community (Lee, Olson & Trimi, 2012). For instance, Linux and Wikipedia, collaborative social media sites as explained earlier, are examples where online community value creation has occurred through a voluntary exchange of online social interactions,

leading to collective intelligence and knowledge (Lee et al., 2012). The value in an online community is a reflection of social production through social communication (Zwick, Bonsu & Darmody, 2008). VOC is often driven by the shared needs of a community and critical interactive skills of members, through which the community meets shared needs which, in turn, lead to the generation of enhanced loyalty among its members towards the community (Armstrong & Hagel, 1996). The underlying vital aspect of VOC lies in the idea of "communing in a shared passion", where experiential social interaction among members of networked online communities is produced by a combination of network technologies and a shared culture of communal relationships (Kozinets, 1999; p. 261). Social media enabled online communities related to non-consumerist/non-branded contexts, like ecological scientists, are also found to be platforms where value is created through online dialogue with peer scientists, researchers and a whole scientific community (Osterrieder, 2013). Due to this value of social interaction in online communities, scientists can quickly communicate their research findings, collaborate with peers and educate different interested parties by facilitating them to accumulate knowledge about their research through social media (Osterrieder, 2013).

2.3.4.1.1Cooperation

The value implicated in online community involves cooperative and collective actions of online community members. Social media sites initiate mutually beneficial spaces through intense cooperation and collectivist interactions among online community members without the need for monetary or other commercial incentives, culminating in intense and satisfactory socialisation and sustainable

online relationships that encourage members to share and co-create more content of common interest among them (Fuchs, 2012). For instance, Rokka and Moisander (2009) found that online communities in social media, involving eco-conscious travelers, enable such travelers to assemble online to participate in ecological dialogues and share related knowledge, leading to a kind of, digitally speaking, cooperative production. Such social media enabled online communities are shared online spaces based on a common interest (ecologically conscious tourism), where transformative ecologically conscious dialogue takes place between members, leading to awareness on issues of ecological sustainability and ecological citizenship (Fuchs et al., 2009; Rokka & Moisander, 2009). It is this cooperative behaviour of community members in engaging in intense online social exchanges and co-creation in the absence of set rules of norms as in economic exchanges that leads to building a strong online community value. In many cases, members' cooperative motives are driven by the shared values and interest of online communities and lead them to voluntarily moderate and organise content for the best interest of the respective community members (Seraj, 2012). This arises out of the members' cooperative motives, driven by the shared values and interest of online communities. It therefore creates a mutual reliance among members in which co-creation and interaction take place and contributes to their intellectual uplifting, social bondage and cultural enrichment. Online community members enhance value of the community through their cooperative behaviour by means of improving the quality and worthiness of the content exchanged, as well as by enhancing the intellectual aspects and the sustainability of social interactions (Seraj, 2012). Cooperation is an ethical

phenomenon central to socialisation, as it defines the social existence of humans and therefore it potentially strengthens the sustainability of interactivity among members of online communities and the values associated with it (Fuchs, Bichler & Raffl, 2009). Cooperation lays the foundation for sustainable online social platforms, where knowledge and technology converge leads to the creation of community values collectively by community members, which enhances their well-being and benefits in a communal sense (Fuchs, 2010). On the other hand, cooperation in terms of online communication between members of an online community leads to a kind of social orientation that brings long-term individual benefits to each member (Kozinets, 1999). The cooperative actions of online community members are also associated with their communal cultural norms and procedures, based on the areas of common interest among the members of an online community in social media, the cultural identities of the members, as well as the language they converse in about the issues and concepts related develop into a strong cultural interrelationship among the members of an online community (Kozinets, 1999; Seraj, 2012). Hence, it is this mutually shared purpose that drives the practices and procedures of an online community.

2.3.4.1.2 Reputation

The value in an online community is also strongly associated with the content shared by experts in an area which brings respect and recognition for them, as such content is considered as highly valuable by online community members (Seraj, 2012). Sometimes, members of an online community also emerge as experts without being professionals in the area of interest by means of acquiring sufficient knowledge over

a long period of time and by educating less informed members based on their knowledge (Seraj, 2012). These contributing members in an online community, professionals or non-professionals, are found to share highly authentic and reliable content, which enhances their credibility as members. This is followed by other members recognizing and respecting them through their mass approval and applause by means of online social interactions (Seraj, 2012). This process brings reputational benefits to the contributing members and such reputational benefits, being enhanced by continuous affirmative feedback and approval from other members, in turn, motivate them to enhance their contribution of valuable content over a long period of time. This reputational benefits enhances their status and also has a profound influence on other members (Bagozzi & Dholakia, 2002). Due to these benefits of contributors in online communities, co-creation of content of all forms, textual, audio-visual and pictorial, is taking place through posting of contents, commenting and providing opinions on the content posted, leading to the intellectual element in online social interactions and a creation of collective knowledge-based assets (Seraj & Toker, 2012).

2.3.4.1.3 Trust

The participation by experts/knowledge contributors makes the process of co-creation of content through social interactions in an online community trustworthy. The reputational aspects associated with expert contributors, sharing credible and often acknowledged content emanating from their real experiences related to their area of interest, lead to an accumulation of a trusted knowledge repository and the essence of trust is established in the overall online community environment (Seraj,

2012). This trust is due to the shared space in an online community and helps in emancipating them from the interference of markets and signifies a shift of power towards them (Gordon, 2012). Through this process, the concept of "wisdom of friend" in social networking is enhanced and reflects the social value (Seraj, 2012; p.216).

2.3.4.1.4 Altruism

Therefore, the social value created in trust leads members of online communities with their shared norms and practices to voluntarily participate in interactions and content co-creation without any expectations, but for affective and communal reasons (Seraj 2012; Kozinets, 1999). Social media sites exclusively meant for ecotourism, where ecotourists assemble online to share knowledge and connect with each other, are examples of such shared online spaces based on a common interest (ecotourism), which are driven by shared norms and practices. Such altruistic behaviour creates an ethical duty for all members to keep engaging in social interactions and co-creation, enhancing satisfaction in doing so and, in turn, strengthening online relationships (Muniz & O' Guinn,2001). Members sharing their reliable accumulated knowledge and knowledge emanating from their real experiences related to their area of interest increases their credibility and are often acknowledged by the fellow online community, in turn enhancing their reputation (Seraj, 2012). Rokka and Moisander (2009) observed that ecologically conscious travelers exhibited altruistic motives by engaging in a critical online dialogue on dealing with problems of destinations' ecological and cultural destruction and ways to sustain these cultural and ecological conditions of destinations.

2.3.4.1.5 Community Identification

The intensity of interactivity in online communities provides the bonding among its members. The strong ties among them lead to a profound sense of belonging that also helps them to establish their individual, as well as their communal identities (Kozinets, 2002; Seraj, 2012). In other words, it is the sense of "consciousness of kin" that gets strongly entrenched through intense social interactions among members of online communities, leading to a strong communal connection (Bagozzi & Dholakia, 2002). This strong communal connection shapes the nature of social interactions in which every member engages and enhances their interest to collaborate more with fellow community members through social interactions, in turn resulting in the attaining of communal goals and the motivation for every member to continue re-visiting the online community (Bagozzi & Dholakia, 2002; Kozinets, 1999; Seraj, 2012). This process helps every member of an online to community establish a strong sense of community identification, leading to the creation of social value as well as cultural value in the very online community (Seraj, 2012). The efficacy of an online community is subject to the value created by means of its members' ability to strongly identify with the very online community itself, through the many mentioned communal activities (Qu & Lee, 2011). Hsu, Chiang and Huang (2012; p.75) described community identification in an online community as “a sense that people come to view themselves as a member of the online community and feel emotionally connected with other participants in the online community”.

Therefore, VOC manifested through cooperative actions, reputational benefits, trust, altruistic motives and community identification, as evident in the intense social interactions between members of an online community, potentially leads to enhanced satisfaction levels in terms of the socialisation process of online community members, as well as stronger and more sustainable relationships (Kozinets, 1999; Sanchez-Fernandez & Iniesta-Bonilo, 2007; Seraj, 2012). Given that the strong and sustainable relationships between members of an online community are often maintained by knowledge sharing activities among them, satisfying socialisation amid them through the value created collectively in online communities, can enhance the whole of the process. Furthermore, the value created through satisfactory levels of social interactions results in enhanced knowledge collaboration, which plays a critical role in sustaining online communities as it addresses the individual, as well as the universal need of the community (Faraj et al., 2011). Hence, in the context of ecotourists, social media sites could potentially be platforms where ecotourists assemble online to share knowledge and connect with each other are examples of such shared online spaces based on a common interest (ecotourism), driven by shared norms and practices.

2.3.5 Socialising Satisfaction in Social Media

Socialisation is a process which enables individuals to become part of a group and relate cohesively and effectively with its members for a mutual cause (Kesebir, Uttal & Gardener, 2010). It is "a dynamic and constructive process embedded in the

practices of social interactions" (Kesebir, Uttal & Gardener, 2010; p. 97). According to Nonaka and Tekuchi (1995; p. 62), socialisation can be defined "as a process of sharing process experiences and thereby creating tacit knowledge such as shared mental models and technical skills". Moreover, the environment in which socialisation takes place is often a major determinant in the effectiveness of the process (Kesebir et al., 2010). New technologies, like social media, have enhanced the means by which individuals can have intense and satisfying social interactions with others and have largely met their needs of socialisation (Kesebir et al., 2010). It has been mentioned previously that in online/social media-based communities, socialisation can be expressed in terms of knowledge exchange relationships and communications (Ahuja & Galvin, 2003). Socialisation in a virtual community, like social media sites, involves an interactionist approach that enables all members, old members and newcomers, to develop a sense of community through a continuous exchange of content and communication (Ahuja & Galvin, 2003). It is the peer-based interpersonal communication, or positive interactions between individuals through social media, contributing to the collective benefit of a group (Wang et al., 2012). It is this social interaction that unites an online community and therefore satisfaction with the social interactions that members of a social media communities experience can be vital for the whole of the socialisation process (Ahuja & Galvin, 2003; Shiau & Luo, 2012). Satisfaction in the relationships of social interactions between members of online communities can potentially lead to sustained relationships and foster exchange of ideas and knowledge (Ma & Agarwal, 2007).

Satisfaction has been often defined as an attitude concept in a consumer behaviour context and is found to have cognitive and affective components (Clarke, 2001). These components have been set up to exist in the form of actions and behavioural patterns of individuals and to be expressed in the shape of emotional elements such as happiness, enjoyment, anger or fear, as well as in words, perception or thinking (Clarke, 2001). In a purchasing context, it has been observed that satisfaction of consumers with the whole purchasing process of services/products leads to their re-purchase intentions, either directly or moderated by other factors (Tseng & Wang, 2013). In an online purchasing context, satisfaction is a psychological/emotional process, which occurs when an online transaction experience exceeds initial transaction experience expectations and affects the intention of repurchase as the outcome of the process (Hsu, Chang, Chu & Lee, 2014). However, it has also been observed that social interaction between consumers in the form building friendships and sharing knowledge in a collaborative manner alongwith satisfaction adds more trust towards re-purchase intentions of customers (Tseng & Wang, 2013). This provides the rationale behind this study to focus on the satisfaction aspects of social interactions of ecotourists via social media, which has the potential to meet the knowledge needs of users i.e. ecotourists (Lim, Al- Aali, Heinrichs & Lim, 2013). In information system studies and research, satisfaction in the form of a measure or a construct is considered as a vital aspect which can potentially lead to outcomes like intention or continuance intention (Verhagen, Feldberg, Hooff, Meents & Merikivi, 2011). In other words, the satisfaction with information systems is an 'end-user satisfaction' and is often considered as an affective measure, i.e. a strong form of

attitude (Shiau & Luo, 2012). In the context of virtual communities like social media sites, member satisfaction in terms of a socialisation atmosphere (member relationships) is a critical factor in encouraging individual members to engage more in virtual communities, resulting in sustainable and stronger relationships of knowledge exchange (Chen & Kern, 2010).

Satisfaction as an attitudinal construct has been found to be used in various contexts of online transactions and exchanges (Verhagen et al., 2011; Kwun, 2011; Hsu et al., 2014; Shiau & Luo, 2012; Gebauer, Fuller & Pezzei, 2013; Chen, Chen & Farn, 2010; Chen, Yen & Hwang, 2012; Ma & Agarwal, 2007). Verhagen et al., (2011) found experiential value consisting of intrinsic (escapism and entertainment value) and extrinsic (economic and ease of use) ones, and as a major determinant of user's satisfaction with virtual world transactions/purchasing. Kwun (2011) looked at satisfaction as a mediator between foodservice attributes and perceived value towards consumer attitude and found that the mediating effects of satisfactions differed considerably between male and female respondents. Satisfaction was found to play a perfect mediating role between perceived value and consumer attitudes in cases of both, male and female respondents (Kwun, 2011). Hsu et al., (2014) found that satisfaction with websites and satisfaction with sellers has strong influences on repurchase intentions of online buyers, confirming the strong mediating role of satisfaction between trust in websites, perceived quality of websites, as well as trust in sellers, and perceived quality sellers with repurchase intentions. Shiau & Luo (2012) found that consumer online satisfaction had a strong effect on intention for online groups to buy and therefore consumer online satisfaction played an effective

role as a mediator between the SET factors of reciprocity, trust and intention to online group buying. In this case, satisfaction could not mediate all the SET factors as well as vendor creativity, which was posited as another factor influencing intention to online group buying via satisfaction. Chen et al., (2012) had shown similar findings regarding satisfaction, also having strong mediating effects on purchase continuance intention of online buyer's alongwith e-word of mouth. Chen et al., (2010), using the SET, found that the relationship between information quality, service quality, social climate and community citizenship behaviour is strongly mediated by satisfaction and, as a result, satisfaction had a strong influence on community citizenship behaviour. Similar findings were reflected by Finn, Wang and Frank (2009), as satisfaction appeared as a major function and also a mediator towards behavioural intentions (intention to recommend) in an online transaction context. These studies affirm and ascertain the positive effect of satisfaction as an attitudinal factor on behavioural intention as the desirable outcome. However, these studies are all held in the context of online buying, re- purchasing and transactional aspects. The effect of satisfaction as an attitude on behavioural intention in the context of knowledge sharing has been rarely studied. Moreover, the application of satisfaction as an attitudinal and mediating factor leading to knowledge contributing intention in a number of knowledge sharing studies based on the SET factors, is clearly inevident (Liang et al., 2008; Lin, 2007; Lee et al., 2011; Chiu et al., 2006; Chang & Chuang, 2011; Park, Gu, Leung & Konana, 2014; Pi, Chou & Liao, 2013; Lai & Chen, 2014). However, Ma and Agarwal (2007) studied the mediating effect of satisfaction on the relationship between perceived identity verification and

knowledge contribution. Though this study did introduce satisfaction as a mediator in a knowledge sharing context, satisfaction was not the only mediator in the conceptual model which involved the investigation of the relationship between independent factors under the use of community artifacts, supporting identity communication and knowledge contribution. Perceived identity verification and satisfaction were the two mediating factors between the independent factors of use of community artefacts supporting identity communication and knowledge contribution (Ma & Agarwal, 2007). More importantly, this study was not testing the relationship between the SET factors and knowledge sharing intentions. It was also based on examining the relationship between the factors, representing each members's self identity aspects emanating from the features of technology (community IT artifacts supporting identity communication) with perceived identity verification followed by its relationship with knowledge contribution, mediated by satisfaction in two online communities (Ma & Agarwal, 2007). However, all these studies have not made any attempt to examine the relationships between the VOC and knowledge sharing intentions mediated only by satisfaction in socialisation via social media, given that VOC can potentially lead to satisfaction and sustained knowledge exchange relationships (Seraj, 2012) .

2.3.6 Knowledge sharing Intentions

Knowledge sharing in online communities in social media involves a process of interpersonal knowledge exchange between participating members, who could be contributors or seekers of such knowledge at a certain point of time (Chang & Chuang, 2011; Phang, Kankaahalli & Sabherwal, 2008). In other words, it is a

process of collaboration of knowledge involving "sharing, transfer, accumulation, transformation, and cocreation of knowledge" (Faraj, Jarvenpaa & Majchrzak, 2011; p.1224). Hence, individuals contribute knowledge, provide more knowledge, as well as integrate and enrich it by accumulating knowledge from others and elevate its value to the optimum level in an online community (Faraj et al., 2011). Knowledge sharing and exchange is generally considered central to the sustenance of online communities as the exchange process brings both, individual and collective benefits to the online community members (Faraj et al., 2011; Phang et al., 2008).

As it is clearly evident that social media enables effective knowledge sharing and collective knowledge, literature on knowledge sharing in online communities, which are a part of social media sites, has been found to be wide-ranging in terms of factors influencing knowledge sharing and the nature of online communities in which knowledge sharing takes place. Lai and Chen (2014) identified 3 types of personal, technological and contextual factors in knowledge sharing intentions. Some of the prominent factors identified under personal are reciprocity, reputation, altruism/ prosocial value orientations, while some of the contextual factors were trust, identification of community, social interaction ties, normative influence and sharing culture (Lai & Chen, 2014). Some of the factors related to technology influencing knowledge sharing were community artifacts and perceived usability (Lai & Chen, 2014). Lai and Chen (2014) examined intrinsic (enjoyment and self-efficacy), extrinsic factors (reputation and reciprocity) and inter-community factors (perceived moderator's enthusiasm, offline activities and enjoy ability), which were basically

personal, technological and contextual factors in the context of posters and lurkers. The study found varying behaviour of posters and lurkers in terms of the extrinsic, intrinsic and inter-community factors. Lin (2007) and Marret and Joshi (2009) similarly examined the extrinsic factors (expected organisational rewards/reputation and reciprocal benefits) and intrinsic factors (knowledge self-efficacy and enjoyment in helping others), which are too personal and contextual factors, in order to look at their relationship with knowledge sharing intentions and found significant relationships between them. Both, intrinsic and extrinsic motivations, encourage online community members to exchange knowledge voluntarily (Lai & Chen, 2014).

Kim, Zheng and Gupta (2011) investigated the factors of social identity, which are blogging community involvement/reciprocity, online kindness /altruism, online social skills/self-efficacy and online creativity. Most of these factors may be categorised under personal and contextual factors and all of them were found to have a significant effect on online knowledge contribution (Kim et al., 2011). Qu and Lee (2011), also using the social identify theory found the contextual factors of community participation and community identification as a mediator, having a positive and significant relationship with knowledge sharing, community promotion and behavioural changes. Muthusamy and White (2005), based on the SET, examined the personal and contextual factors reciprocal commitment, ability-trust, benevolence-based trust, integrity-based trust and mutual power or influence towards interfirm learning, and found all these factors having a strong influence on interfirm learning.

Liang, Liu and Wu (2008), Pi, Chou and Liao (2013),Chiu, Hsu and Wang (2006), Chang and Chuang (2011), Lee, Lee and Sanford (2011) and Ma and Yuen (2011) also focused on personal and contextual factors like altruism, reciprocity, social rewards, reputation, identification, trustworthiness, social interaction, shared language and vision to analyse their effect on knowledge sharing intentions. These factors were found to have a significant positive effect on knowledge sharing in most of the studies. Lin, Hung and Chen (2009), Hsu, Ju, Yen and Chang (2007), Chen and Hung (2010), Wasko and Faraj (2005) and Tseng and Huo (2010), in the context of virtual and online professional communities, similarly used personal, interpersonal and contextual factors like reciprocity, trust, self-efficacy, altruism/enjoying helping others and community identity, in order to examine and validate their models involving knowledge sharing intentions. Most of these studies found positive influential relationships between these factors and knowledge sharing intentions. Jadin, Gnambs and Batinic (2013) found a strong influential and positive relationship between trendsetting, opinion leadership and prosocial value with knowledge sharing intentions in the context of the online community of wikipedia. On the other hand, Park, Gu, Leung and Konana (2014) and Ma and Agarwal (2007) examined the technological factors of community artifacts and perceived usability and found a positive relationship between these factors and knowledge sharing in online communities. In the context of this study, the dimensions identified under value in online communities are cooperation, reputation, trust, altruism and community identification, which are personal and contextual factors leading to knowledge sharing. Hence, this study posits to take these factors that can potentially

lead to satisfaction in socialization and knowledge sharing intentions into consideration.

2.4 Social Media and Tourism; Use in Tourism Industry

Social media, which encompass UGC (User Generated Content)–enabled web applications, have intensified the role and significance of electronic practices in tourism (Buhalis & Law, 2008; Gretzel & Yoo, 2008). In tourism, being an information intensive industry, social media has played an important role in information search/source of information and communication for tourists and the tourism industry, marketing and promotion for DMOs (Xiang & Gretzel, 2010).The presence and impact of emerging social media technology in tourism is manifested through concepts such as Tourism 2.0 or Travel 2 0 (William & Martell, 2008; Carroll, 2008). In the travel and tourism industry, the use of social media and social networking has increased significantly, as they offer more cost-effective and efficient ways of business for tourism enterprises (Green, 2007). Tourism 2.0 or Travel 2.0 can be defined as "Tourism 2.0 is the business revolution in the tourism and leisure industry caused by the move to the tourist ecosystem as platform, and an attempt to understand the rules for success on that new platform." (William & Martell, 2008; p.10).

Applications of social media in tourism, from the perspective of tourists, have been in the areas of traveller's purchase decision-making, trip planning, besides information acquiring, sharing and exchange with relation to various tourism service related aspects like hotels, holiday opportunities, travel packages, travel

guides, and transportation (Nusair, Erdem, Okumus & Bilgihan, 2012). The presence of UGC in social media has enabled electronic word-of-mouth information (eWOM) by enabling tourist to tourist exchange of information about travel services and thus, bringing more consumer democracy into hospitality and tourism (Dwivedi, Shibu & Venkatesh 2007; Nusair et al., 2012).

From the supplier point of view on social media; social media is now being increasingly recognised as a marketing and promotional tool beneficial for service recovery purposes, as well as providing quality customer care and effective personalised services to customers, tourism organisations and enterprises (Baniyai & Potwarka, 2012). Social media has turned out to be a critical source of strategic information for tourism organisations.

Social networking sites like Facebook, Twitter, Myspace, Flickr and Trip Advisor have been increasingly used in the tourism industry and by tourists in particular. Facebook has been observed to play a crucial role in fostering innovation in the hospitality sector of the tourism business, in terms of its various functions like convertibility of room reservations, improved customer relationship management, maintaining brand image, enhancing the volume of customers visitation of hotels' website, time spent, as well as improved hotel human resource operations (Wilthiam,2011). The Trip application, a social travel application on Facebook, enables travellers who are users of Facebook to share plans of travel, travel experiences and network with others who have visited certain destinations or will be visiting (Nusair et al., 2012). Twitter has also been an effective social network in the tourism industry, especially from an organizational point of view since it enables

"tracking and directing the customer's attention to travel related products and services" (Nusair et al., 2012; p.210). Flickr has enabled an increasing number of tourists to share trip experiences through the positing of photos, while Trip Advisor is a travel related social networking site that has also emerged as a famous information site, since it enables collaboration among travellers in the form of posting, modifying and altering information about their trip experiences. It mostly features reviews and comments of travellers, which are also provide potential marketing and strategic information for the tourism businesses.

2.4.1 Literature on Social Media use from the perspective of Tourists

2.4.4.1 Tourists use of Social media for Knowledge and experience sharing and trip planning and travel decision-making

From the perspective of social media use by travellers, previous research has also been in the areas of practical application of social media use by travellers in areas such as tourist decision-making on purchases of travel products, visitation aspects like trip planning, service experience, as well as obtaining, sharing and the exchange of travel related information, photos as well as videos (Ayeh, Leung, Au & Law, 2012; Chung & Buhalis, 2008; Sreenivasan et al., 2012; Xiang & Gretzel, 2010). Besides these areas, trust in using social media by travellers, motivations and benefits of participating in online communities enabled by social media, as well as the role of social media content created by travellers in visiting intentions of other travellers, have also been some of the areas of research as evident from previous studies (Bosangit, McCabe & Hibbert 2009; Schmalleger & Carson, 2007; Scott & Orlikowski, 2012; Paris, Lee & Seery 2010; Parra-Lopez et al., 2011; Nusair et al.,

2012; Volo, 2010; Wang & Fesenmaier , 2004). Xiang and Gretzel (2010) and Ayeh et al., (2012) focused on the role of social media in enabling travellers decision-making aspects in relation to purchase, as well as travel planning. The studies found that knowledge content, exchanged in the form of text (reviews and comments), pictures and videos, plays an important role in travel decision-making and trip planning purposes of an increasing number of travellers. Travellers generate travel content by posting about their travel experiences in social media sites, which are used by other travellers as eWOM information sources, which helps them in their travel decisions and trip planning matters. This traveller generated content provides the potential for effective marketing and strategic business decision-making for tourism business organizations and DMOs (Ayeh et al., 2012). Therefore, it is apparent that information sharing and exchange by travellers through social media has enabled an online consumption activity, facilitating them in a significant way.

It has been observed from previous studies that the reasons for social media use and usage satisfaction for tourists are aspects like system quality, information search, observing others posts and comments, apart from information and knowledge sharing which is one of the major causes (Pulvirenti & Jung, 2011). Moreover, previous studies on the influencing reasons in relation to tourists' interaction in social media have looked at functional, social, psychological, socio-psychological, as well as hedonic aspects (Chung & Buhalis, 2008; Parra-Lopez et al., 2011; Xiang & Gretzel, 2010). Functional aspects are related to information gathering, exchange and sharing for decision-making purposes, trip planning and related reasons. Hedonic aspects are about fun and entertainment purposes of users experienced in

participating in online communities (Chung & Buhalis, 2008). Psychological benefits are those which can be gained through the feeling of belonging to a community, feeling of identity establishment and affiliation towards a community by individuals (Parra-Lopez et al., 2011). Finally, social aspects refer to the interaction with other members, building relationships, exchanging information, ideas and opinions (Chung & Buhalis, 2008; Parra-Lopez et al., 2011). In other words, it is a process of socialisation through an informal exchange of communication and also through providing help and support (Wang & Fesenmaier, 2004; Parra-Lopez et al., 2011). However, in terms of social aspects, previous studies did not look elaborately into social media applications in terms of intense socialisation and the degree of satisfaction in such socialisations, given the fact that social media offers a commendable platform for social interactions. Moreover, these studies also did not specifically look into details of the aspects of knowledge sharing via social media, given its potential as significant a knowledge sharing platform. This study identifies socialisation and knowledge sharing as imperative in the context of ecotourists and hence, focuses specifically on satisfaction in socialisation via social media, as well as knowledge sharing via social media by ecotourists.

2.4.4.2 Socialisation benefits of social media for tourists

Socialisation in online communities and social media is expressed in terms of the process of knowledge sharing interactions (Ahuja & Galvin, 2003). Social interactions act as a unifying factor between social media community members, who are the socialising agents. In the absence of social interactions, community members in social media sites do not become socialising agents and, as a result, a community

can cease to exist (Ahuja & Galvin, 2003; Wang et al., 2012). In terms of socialisation activities of tourists in online communities, Wang and Fesenmaier (2004) found in their study that online community members will spend much of the time with socialisation activities. Efficacy was found to be the reason why members contributed towards online communities, validating the fact that social aspects play a significant role in them (Wang & Fesenmaier, 2004). Sreenivasan et al., (2012) found in their study on social media that socializing is one of the important topics, as members showed voluntary behaviour in assisting peers by sharing their experiences and providing advice. This process of socialisation leads to a 'collective knowledge' and a 'sense of belonging' among online community members (Sreenivasan et al., 2012). Schmalleger and Carson (2008) found the importance of self expression, social interactions with likeminded people and desire to share as some of the main motivations for people to participate in blogs. Detailed information, networking opportunities, as well as opportunities to save time and cost in acquiring information are some of the main aspects members of blogs seek (Schmalleger & Carson, 2008).

2.4.4.3 Social Media use in Sustainable Tourism and Ecotourism

Before the use of social media in sustainable tourism and ecotourism in particular is explained, it is essential to look into the role and use of information technology in general, since social media is an ICT application that emerged in the mid-2000s. It is therefore essential to look how ICT, since the beginning of its use in tourism, has played a role in sustainable tourism and ecotourism in particular. Information and communication technologies have been instrumental in transforming the modern travel and tourism industry (Buhalis & Deimezi, 2003; Buhalis & Law, 2008).

Information and communication technologies in tourism have brought about the digitalization of all processes and "value chains in the tourism, travel, and hospitality and catering industries" (Buhalis & Deimezi, 2003). In the domain of ecotourism, utility of internet has been harnessed in the past. Internet has enabled disintermediation of the distribution value chain by providing ecotourism enterprises with a direct access to markets and promotion of their products (Harris & Vogel, 2007). Moreover, it has also enabled the creation of awareness on indigenous conservation efforts and sustainable utilization of natural and cultural resources (Harris & Vogel, 2007). Some of the examples of the presence of ecotourism in the internet are ecotourism explorer by TIES, Planeta.com and ecoclub.com.

However, the use of internet technologies in ecotourism operations as a developed network of communication is not evident (Lu & Stepchenkova, 2012). Moreover, the internet technologies used and utilized significantly in the domain of ecotourism previously did not encompass social media technologies and social networking sites like Facebook, Twitter, and others (Harris & Vogel, 2007). Such technologies primarily belong to the generation of web1.0 and enable only a one-way communication (Harris & Vogel, 2007). Past literatures on the use of information and communication technology (ICT) in the field of ecotourism are very few, except for the studies of Lai and Shaffer (2005) and Donohoe and Needham (2008), which focused on the use and adoption of internet technologies in ecotourism, paying attention to the marketing capabilities offered by the internet, based on ecotourism tenets and sustainability criteria. In addition to this, Lu and Stepchenkova (2012) focused on the attributes that influence ecotourists in their satisfaction of their

ecolodge stay, based on the content available in the Trip Advisor enabled by user-generated content (UGC). In addition to this, literatures on the role of ICT in sustainable tourism have also been very few (Touray & Jung, 2010). However, Gretzel, Go, Lee and Jamal, (2009), Touray and Jung (2010), Sigala and Marinidis (2010), and Ali and Frew (2010) have thrown light on the role of ICT in sustainable development in tourism encompassing critical issues like local community participation, heritage tourism, community-oriented democratic destination planning, environmental issues and community-based enterprises. Ali and Frew (2010) identified different areas of scope for information technology facilitating sustainable tourism, ranging from management of knowledge, tourist satisfaction, interpretation of nature-based attractions, utilization of renewable energy sources and local community participation. In their study it was found that the use of ICT in tourist satisfaction was ranked very highly at the second spot by DMOs among all potential uses of ICT in sustainable tourism. However, interpretation was ranked very lowly by the DMOs as an area of potential use of ICT in sustainable tourism, eventhough it is one of the main criterions of satisfaction for tourism in ecotourism, a major area of sustainable tourism (Ali & Frew, 2010). The study identified lack of knowledge and understanding of the usefulness of ICT by DMOs, which led to a low recognition of interpretation alongwith many other key aspects of sustainable tourism (Ali & Frew, 2010). The study further observed that there have not been extensive empirical studies on the use of ICT in sustainable tourism in terms of its overall goal (Ali & Frew, 2010). Gretzel et al., (2009) focused on the use of community informatics in heritage tourism development. The study highlighted the

uses of virtual community networks and digital storytelling by a rural community in relation to heritage tourism. Touray and Jung (2010) focused on the stakeholders' perception of usefulness of ICT in the sustainable tourism development in Manchester, United Kingdom. The study found the usefulness of emerging ICTs in maximizing positive impacts of tourism as perceived by stakeholders, as well as barriers to implementation of ICT in sustainable tourism. However, none of these studies focused specifically on ecotourism aspects and the use of ICT by ecotourists for their educational, socializing and networking benefits. Moreover, none of them focused on the role of social media as one of the emerging technologies to contribute towards sustainable tourism and ecotourism in particular. However, Guzzo et al., (2013) posited a framework in relation to promotion and development of sustainable tourism via social media, which can enable the sharing of information enhancing awareness on sustainable issues, enhancing a sense of belonging, socialisation between tourists, value addition and stimulation of development and innovation in terms of sustainable tourism development. However, since this paper is a conceptual paper, there is no clearly evident empirical work on the role of social media in enabling socialising satisfaction online and knowledge sharing in the context of sustainable tourism and ecotourism.

2.4.4.4 Ecotourists Use of Social Media

In the context of ecotourists, social media can facilitate online communities by addressing their needs in terms of sharing and exchange of knowledge on environmental aspects, education and learning aspects, as well as socializing and networking among ecotourists. However, prior studies on social media in tourism

have very little focus of its use in ecotourism. The potential of the uses of social media in sustainable tourism, which includes ecotourism as one of its major forms as mentioned earlier, is an under-researched area (Ali & Frew, 2010; Touray & Jung, 2010). It has been mentioned previously that ecotourists tend to be young individuals with reasonable levels of education. Hence, they are expected to make use of social media for their benefits to a levelheaded extent, since younger individuals are found to reap more benefits from participation in social media (Chung & Buhalis, 2008; Lu & Stepchenkova, 2012). Based on the potential of social media in terms of ecotourists use discussed so far, the endeavour of this study is to understand the role of social media in enabling ecotourists better understanding of ecotourism destinations, and assisting them in their intentions to visit them. Online communities in social media have benefitted environmentally conscious global travelers to collectively establish ecological citizenship by means of collaborative and dialectical online conversation (Rokka & Mosander, 2009). Critical issues in relation to ecological sustainability, tourism consumption and environmentally compatible practices have been found to emerge as a main theme of dialectical discourse online among environmentally conscious global travelers, resulting in enhanced awareness on the imperativeness of the sustainable well-being of local communities, culture and ecosystems (Rokka & Mosander, 2009).

It is believed that social media, which utilizes User Generated Content (UGC)-enabled tools, can replace many traditional forms of feedback systems and render ecotourists an effective platform for knowledge dissemination and trip research (Charters, 2009). Ecotourists can be benefited by social media as an effective

platform for information dissemination, trip research and exchange (through interaction, collaboration and sharing) of environmental and ecotourism-related information and knowledge amongst them (Charters, 2009; Gibson et al., 2003). Social media, though its different forms like online social networks, online forums and blogs, audio-visual content and photosharing sites, can enable a two-way dialogue among travellers for ecotourism experiences (Charters, 2009). It has the potential to initiate collective knowledge, meet actual information needs in relation to environmental values, and share ecotourism experiences that enhance socialisation opportunities among ecotourists visiting nature-based attractions in urban areas (Ali & Frew, 2010; Sreenivasan et al., 2012; Touray & Jung, 2010). UGC in social media is a critical element that can facilitate ecotourists who, being relatively young and reasonably educated, tend to be heavy internet users and can therefore best utilise it for their trip activities (Lu & Stepchenkova, 2012). Moreover, the development of wireless technologies like Worldwide Interoperability for Microwave Access (WiMAX) and mobile technologies has enabled the internet to reach destinations of low digital access (Buhalis & Pistidda, 2008; Buhalis & Law, 2008). Both, mobile technologies and WiMAX, have offered cost-saving avenues for accessing internet and harnessing its new technologies, like social media, for effective destination management systems and destination planning (Buhalis & Law, 2008; Sigala & Marinidis, 2010).

Therefore, based on the recognition of abilities of social media in facilitating interactions and dialogue, this study proposes that social media sites can facilitate a process of intense social interaction among ecotourists which, in turn, can lead to an

exchange of knowledge on ecotourism. This can encompass sharing and exchange of textual, audio-visual and pictorial content among ecotourists. The socialising abilities of social media can enable ecotourists to socialise online, other than offline socialisation, which is one of their preferred activities while meeting each face to face during ecotourism experiences. This leads to a process of exchange of interactions that mutually benefits all those participating in social media. Based on this premise, this study brings into the context the SET, which has the ability to predict the social interactions and exchanges that lead to a strengthened socialisation process which, in turn, leads to the intention to share more knowledge on ecotourism among ecotourists.

2.6 SUMMARY

This chapter gave a critical review of ecotourists' needs of information and knowledge sharing that emanates from their motivations of learning and socialisation. It further identified the medium of communication ecotourists use in relation to sharing information and knowledge, as well as socialisation and the difficulties faced by them in doing so. The research gaps in terms of their knowledge sharing needs were clearly identified. It was also identified that social media, that involves a two-way communication, can address the difficulties in relation to information and knowledge sharing. Social media types and features were discussed as well it use in tourism industry and tourists. This was followed by the understanding of the social media use in sustainable tourism and ecotourists in relation to knowledge sharing and socialisation.

CHAPTER 3 CONCEPTUAL FRAMEWORK

3.1 Introduction

This chapter includes the explanation on the methodology of this study that encompasses a) a discussion on the theory of social exchange and its basis in the structuring of conceptual model b) proposition of hypotheses and the relationships between constructs c) the proposed research model.

As mentioned in the previous chapter, SET has the ability to analyse on the social interactions in enhanced and satisfactory socialisation process eventually leading to the intention to share more knowledge on ecotourism by ecotourists. Based on this premise, this chapter provides a detailed accont of the theory of social exchange and its appropriate role in becoming the basis of the building of the proposed theoretical model of this study.

3.2. Social Exchange Theory

3.2.1 What is social exchange theory?

The social exchange theory (SET) is fundamentally a socio-psychological theory that emerged in the 1950s (Zafirovski, 2005). It is underpinned in the concepts of modern economics and is often employed to examine social behaviour of humans in terms of social interactions and relationships (Shiau & Luo, 2012). The SET posits that social actions are driven by an exchange of social resources, expressed in terms of social approval or esteem (Cameron & Webster, 2011). Social exchange emerges

from the argument that individuals, who contribute sufficient social resources to others, receive the same and those who receive many social resources from others, contribute the same based on their obligation; this leads to a long-term cooperative interaction, resulting in a strengthening of relationships between individuals (Cameron & Webster, 2011; Homans, 1958, p.606).

One of the most important predictive abilities of the SET is in relation to the understanding of the eagerness to contribution in the form of information, opinions, and recommendations, as well as knowledge by the parties involved in the social interaction that results in social rewards for those contributing (Blau, 1964; Cameron & Webster, 2011). It also has the ability to assess the social connections and social communication exchanges between individuals that, in turn, form social bondages in the way of associations and communications (Blau, 1964; Dwyer et al., 2007). This is possible through the social rewards involved in social interactions which are intangible and emotional in nature like opportunity, prestige, conformity, or acceptance, instead of being only monetary (Homans, 1956; Abdul-Ghani, Hyde &Marshall, 2011). Therefore, as per the SET, the exchange of goods in social interactions between individuals is non-economic in nature and often involves societal resources as rewards, like information, recommendations, support, admiration, appreciation and the feeling of hedonism in getting connected with others (Blau, 1964; Cameron & Webster, 2011). Moreover, unlike economic exchanges, the assurance of the above rewards in social exchange is not available automatically due to the absence of formal agreements in social interactions (Gefen & Ridings, 2002). The rewards are therefore solely dependent on the mutual and

collective actions evident in the social interactions between individuals that pledge to obligate one individual to give back to the other (Blau, 1964; Gefen & Ridings, 2002). This is the most vital aspect of social relationships and interactions in the SET (Blau, 1964; Gefen & Ridings, 2002). Besides, it also involves certain investments made in terms of efforts put into a relationship in terms of time, awareness on a particular subject matter, and putting forward a desirable behaviour for social relationships and interactions to be mutually successful for either parties (Wang & Noe, 2010).

The SET predicts the fulfilment or discontent of individuals in communication relationships with others (Blau, 1964). This occurs on the basis of firstly, the perception of rewards leading to fulfilment of expectations or exceeding expectations and secondly, the perception of rewards not fulfilling expectations that individuals were seeking and they don't currently have from relationships (Thibaut & Kelly, 1959). Another aspect of the SET predicts not a just fulfilment or discontent of individuals from relationships, but also the alternatives available to them in terms of relations that may exceed a positive outcome from a particular relationship. This may lead to the ending of continuing or improving an existing relationship (Thibaut & Kelly, 1959).

3.2.2 Characteristics/Factors of Social Interactions under SET

Social interactions, as per the SET, are led by certain characteristics that force individuals to be morally committed to give back when they get a great deal from others and expect to get back a lot from others in return to the great deal that an

individual gives to them (Cameron & Webster, 2011; Abdul-Ghani et al., 2001; Homans, 1964). Some of the prominent characteristics are cooperation, reputation, altruism, trust, social norms, community identification, power, and justice (Blau, 1964; Abdul-Ghani et al., 2001; Hsu & Lin, 2008; Hsu & Lu, 2004; Lin & Huang, 2010; Shiau & Luo, 2012; Nambisan & Baron, 2010).

3.2.2.1 Cooperation

One of the vital elements of the SET is reciprocity, as interactions between individuals are based on reciprocal stimuli and such interactions will not last if the reciprocal stimuli is absent (Pan & Crotis, 2012; Zafirovski, 2005). The SET introspects into the process that maintains and sustains reciprocity in social interactions yielding fulfilment for individuals participating in such interactions (Muthuswamy & White, 2005). Based on this understanding, the theory posits that the process of socialisation through human interactions depends on the extent of mutual benefits each individual derives from such a process (Pan & Crotis, 2012). Reciprocity is an essential element in the cases of a knowledge sharing process, since it is the very benefit that initiates individuals to move towards exchange of knowledge (Chiu, Hsu & Wang, 2006; Hsu & Lin, 2008).

However, in social exchange, reciprocity is not always instantaneous. Compliance to cooperate voluntarily is a major antecedent for reciprocity. Cooperation refers to the belief among individuals that makes them reciprocate voluntarily with others. This is fundamental to social exchange, as there are no rules or regulations that guarantee equal social interactions in it, unlike in economic exchanges. Reciprocation does not

occur instantly, as there are no rewards (Geffen & Ridings, 2002). The cooperative motives of individuals in social interaction drive them towards reciprocation, leading to equal social exchanges. In social exchanges, if one party does not have a strong feeling of voluntary cooperative motives of the others with whom they are interacting, they are less likely to contribute and participate (Blau, 1964; Geffen & Ridings, 2002). This enhances the moral obligation for individuals to give back, increasing the level of input in the interaction and through allocating more resources as a benefit for those providing relatively more inputs into an interaction (Muthusamy & White, 2005). Cooperation that enables mutual reciprocal interaction results in providing a sensible social exchange between individuals in terms of sense of responsibility for the individuals involved in the interaction process enhances collectivism, a high degree of information and knowledge exchange, as well as an acquisition of new skills and expertise (Muthusamy & White, 2005). Therefore, this study will consider cooperation as a social exchange norm unlike most previous studies, which considered reciprocity as a vital norm of exchange while using the SET.

3.2.2.2. Reputation

Reputation refers the reputational benefits derived from self-image enhancement in social interaction (Nambisan & Baron, 2010). As per Shiau and Luo (2012), reputation is "the degree to which a person believes that social interaction potentially enhances personal reputation". This often occurs in a social interaction when one individual, who possesses essential knowledge, shares it with others that results in establishment and enhancement of his/her self-image as someone wise and

knowledgeable (Shiau & Luo, 2012). Also leads to the enrichment of the ones who receive such knowledge (Shiau & Luo, 2012). Therefore, in the case of knowledge sharing, reputation has often been found as a major influencing factor for the individuals involved in the social interaction of knowledge exchange. This is indicative of the fact that reputation is inherently a social phenomenon (Nambisan & Baron, 2010; Shiau & Luo, 2012).

3.2.2.3. Altruism, Social Norms and Community Identification

Altruism refers to the intention of individuals to enhance the wellbeing of others with no expectation of any personal benefit. It is referred to as a discretionary individual behaviour not necessarily rewarded (Hsu & Lin, 2008). It can also be a rule in the SET that individuals seek to assist others even at an absolute cost to themselves (Cropanzano & Mitchell, 2005). Social norms, on the other hand, emerge from social influence perspectives. Social norms can be referred to as the extent to which an individual feels that he/she is well endorsed by others in a group about his/her presence and participation in it (Hsu & Lin, 2008). It is a concept where individuals are inclined towards conforming to norms existent in the group they belong to, that has an impact on the entire group behaviour (Hsu & Lu, 2004). Social norms can be an informational influence and normative influence (Hsu & Lin, 2008; Hsu & Lu, 2004). Informational influence refers to someone who receives information from others, is able to enhance his/her knowledge and expertise in a subject area, and also considers the information received from others as true and a real reflection of the reality (Hsu & Lin, 2008; Hsu & Lu, 2004). Normative influence refers to an individual conforming to behave in a way acceptable and as

per the expectations of others in the group to which he/she belongs, in order to acquire rewards and evade punishment (Hsu & Lin, 2008; Hsu & Lu, 2004). Another aspect under social influence factors is community identification, which refers to the role an individual perceives to play in the community he/she belongs to and a role that defines his/her identity in the group (Hsu & Lin, 2004). This is a kind of social connection, which stands as a core value that provides vitality to a community or group (Qu & Lee, 2011). It is also a process through which individuals feel as grouped with a set of other individuals and are able to communicate with others, which enables knowledge sharing (Chang & Chuang, 2011).

3.2.2.4 Trust and Power

Trust is one of the most important components of the SET. Trust can be defined as "the willingness of a party to be vulnerable to the actions of another party, based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control the other party" (Mayer, Davis & Shoorman, 1995, p. 712). Trust plays a critical role in information and knowledge sharing and developing new relationships and it is also perceived to be representing costs involved in information sharing and exchange (Dwyer, Hiltz & Paserini, 2007). It is also acts as a pre-requisite when one exposes his/her self-identity as the ability to reduce the risks involved in unfolding one's personal information (Dwyer et al., 2007). Trust also is based on the assumption that one of the parties involved in social interaction or exchange of information and knowledge will not take an undue advantage of the other party with an intention to harm

(Muthusamy & White, 2005). Trust is considered vital in the context of modern society, since it increasingly involves interactions between individuals who are often strangers (Abdul-Ghani et al., 2011).

Power, in the context of the SET, is a very important component. It refers to the ability of one individual to persuade others to participate in social interactions and rewarding them for responding to persuasion by the individual (Blau, 1964; Homans, 1961). This occurs when an individual, by virtue of providing knowledge highly in demand to others as well as not available through other sources, enjoys power over others (Blau, 1964). In other words, others who seek unavailable but highly necessary information and knowledge are highly dependent on this individual since he/she has the power of being the only one to provide such information and knowledge (Muthusamy & White, 2005). From a social perspective, power can be explained as pressures between individuals and communities in the process of social relations and interactions on the basis of rewards (Blau, 1964, p. 115). However, this power relation occurs when the relationship between individuals is asymmetric or not balanced, i.e. a relationship between individuals in which one individual holds a higher social or hierarchical position exerts a greater control over the other(s) (Muthusamy & White, 2005; Stanton & Stam, 2003). Relationships between individuals in which none of the individuals can have greater control over the other due to similar social or hierarchical position of both, do not develop into power relationships (Muthusamy & White, 2005; Stanton & Stam, 2003). Power relationships therefore occur mostly in organizational or in social contexts where

hierarchical structures are strongly present, while in non-hierarchical context or in interpersonal social contexts which are non-hierarchical in nature, power relationships do not tend to exist (Muthusamy & White, 2005; Stanton & Stam, 2003).

3.2.3. Use of SET in studies related to online exchange processes

Other studies using the SET have been in the context of online group buying (Shiau & Luo, 2012), consumer-to-consumer online auction site (Abdul-Ghani et al., 2011), trust and privacy concerns of consumers in e-commerce (Luo, 2002), customer relationship management team responsiveness, and user evaluation of customer relationship management (Geffen & Ridings, 2002), relational outcomes of multi-communicating (Cameron & Webster, 2011) social power (Molm, Peter & Takahashi, 1999), networks (Brass, Galaskiewicz, Greve & Tsai, 2004), organizational justice (Konovsky, 2000) and leadership (Liden, Sparrowe & Wayne, 1997). Shiau and Luo (2012) in their study on online group buying satisfaction and intention, using the SET, found that factors of trust and reciprocity have a significant effect on satisfaction in online group buying. However, the study found that reputation is not significantly influencing satisfaction of online group buying. Geffen and Ridings (2002) focussed on cooperative intentions as a SET norm in their study on team responsiveness and user evaluation of online customer relationship management. The study identified cooperation in the form of cooperative intention as a central aspect of the SET, that leads to reciprocation and without which interactions in social exchange could be problematic, since social interactions do not involve reciprocal rewards or rules or regulations that govern the interactions in

economic exchanges. The study found that implementation teams' cooperation motives led to correctness of CRM configuration and in turn, to user approval (Geffen and Ridings, 2002).

3.2.4 SET and Value in Online communities

In the context of social interactions in online communities, the societal, cultural and intellectual aspects of such exchanges, the SET has been rarely used. It is based on the aspects that the dimensions of value of online communities, which are cooperative actions, altruistic motives, trustworthiness, reputation and community identification, emanate as critical aspects. Moreover, the aspects of collectivity, socialisation and outcomes, like intention continuance in the context of knowledge sharing, have not been researched by studies (Muthusamy & White, 2005). Furthermore, the dimensions of value in online communities, cooperation, reputation, altruism, and trust and community identification are also the characteristics or beliefs under which the SET can facilitate social interactions. Therefore, this study posits that the SET has the ability to examine the effects of VOC, as represented by the factors of cooperation, reputation, altruism, trust and community identification on socialising satisfaction and, in turn, knowledge sharing. Liang et al., (2008), Muthusamy and White (2005), Lee et al., (2011), Phang et al., (2009) and Liu, Liang, Sambhamurthy, Rajagopalan and Wu (2011) used the SET in the context of knowledge sharing intentions, but these studies did not explore the strength of value in online communities, which is a vital determinant of satisfaction and intention to share more knowledge (Sanchez-Fernandez & Iniesta-Bonilo, 2007; Seraj, 2012). Hence, this study also attempts to extend the SET in the context of

online knowledge sharing, by incorporating value in online communities in the process of examining knowledge sharing intentions.

3.2.5 Satisfaction in Socialisation and Knowledge Sharing Intention in the context of Social Exchange theory

Most studies in the context of knowledge sharing focused on the direct relationship between SET factors and knowledge sharing. Muthusamy and White (2005) Liang et al., (2008), Lee et al., (2011), Phang et al., (2009) and Liu et al., (2011) used the SET to examine knowledge sharing in online communities. Moreover, Lai and Chen (2014), Chen and Hung (2010), Hsu et al., (2007), Wasko and Faraj(2005), Chiu et al., (2006), Chang and Chuang (2011), Ma and Yuen (2011) Lee et al., (2011) Qu and Lee (2011) Kim et al., (2011) , Park et al., (2014) Lin, Hung and Chen (2009), Jadin et al., (2013) and Hsu and Lin (2008) examined and validated models involving various personal and contextual factors and knowledge sharing. In all these, the relationship between the personal and contextual factors and knowledge sharing were direct and were not mediated by any factor. However, Phang et al., (2008) examined the factors of sociability and usability between personal and contextual factors and knowledge sharing and found that both these mediating factors had a significant positive relationship with knowledge sharing. Pi et al., (2013) and Lin (2007) examined the factor of attitude towards knowledge sharing as a factor between personal and contextual factors and intention to share knowledge, and found attitude as also having a positive and significant relationship with knowledge sharing. Ma and Agarwal (2007) examined satisfaction of inidviduals

with being members of an online community as a factor between a technological factor of community artifacts and knowledge contribution and found that satisfaction with being a member of an online community had a significant relationship with knowledge contribution. Therefore, all these studies found strong mediating factors of attitude and satisfaction towards knowledge sharing. However, in the case of studies on online knowledge sharing using the SET, the use of mediating factors is almost inevident. However, studies have used them employing the SET in a context of online buying and community citizenship. Shiau and Luo (2012) used the SET in the context of satisfaction in online group buying and group buying intentions of buyers online. The SET factors of reciprocity, reputation and reputation were used alongwith vendor's creativity along with the theory of Reasoned Action (TRA) to examine the relationship between satisfaction in online group buying and intentions to online group buying. Moreover, Chen et al., (2010), from the perspective of the SET, examine the relationships between information quality, service quality and social climate with satisfaction with the community and community citizenship behaviour. Both these studies were not in the context of online knowledge sharing. This is indicative of the fact that the SET could be employed to examine relationships between different personal and contextual factors and behavioural intention, mediated by the factor of satisfaction. Therefore, this study using the new Internet applications like social media SET attempts to incorporate satisfaction in socialization for ecotourists as the mediating factor between VOC (representing the SET factors of cooperation, reputation, altruism, and trust and community identification) and intention to share knowledge via social media. Though, Ma and

Agarwal (2007) have already examined satisfaction as being a member of an online community as the mediator in the context of knowledge sharing in online communities, technological factors were examined in the context of that study in terms of their relationship with knowledge sharing via satisfaction. This study instead focuses on the relationship of the personal and contextual factors of cooperation, reputation, altruism, trust and community identification, represented in VOC, with intention to share knowledge mediated by satisfaction in socialization for ecotourists in the context of the SET as the underlying conceptual basis.

3.2.6 Use of SET in Tourism research

In the context of tourism, the SET has been used in analyzing benefits evaluated by tourists, as obtained in return for the services they supply (Ap, 1992, p670). The theory has also been used as a framework to explain local residents' attitude towards impacts from tourism and tourism development (Wang & Fister, 2007; Ward & Berno, 2011). However, in the context of online communication in tourism, particularly in relation to social media, there has been a lack of literature that has explicitly used the SET. However, Pan & Crotis (2012) have mentioned the significance of the SET in the context of social media in tourism. They suggested four categories of users which are i) watchers ii) sharers iii) commentators iv) producers. Watchers acquire information but do not reciprocate or contribute, sharers contribute information for the benefit of others' knowledge, while commentators and producers review, rate, as well as comment and create content for self-recognition and identity respectively (Pan & Crotis, 2012). Pan and Crotis (2012) looked into social exchange in social media from the perspective of tourism

organizations and suggested that all these four groups need to be considered as to how social exchange processes take place as a part of future research possibilities. It has been observed that in the US, Sharers consist of 61.2 per cent of the total social media users while watchers consist of 79.8 per cent. This goes on to show that information and knowledge sharing is a significant activity in social media use in countries in the world where internet usage is one of the highest (Pan & Crotis, 2012). Other studies conducted in a context of travel-based online communities have used the cost-benefit analysis, but have not explicitly used the SET. Parra-Lopez et al., (2011) found in their study that the motivation for tourists to participate in online communities in social media is primarily for functional benefits, like information acquisition followed by socio-psychological and hedonic benefits. Chung & Buhalis (2008) as similar to Parra-Lopez et al., (2011) found that functional benefits, as well as social and psychological benefits were critical motivational aspects for members to participate in online communities. None of these studies used the factors under the SET to analyse the motivations for tourists to participate in online communities and social media.

3.2.7 Use of SET in the context of this study

The main use of the SET in this study is therefore to predict the relationship between value in online communities (based on the benefiting factors that it comprises which are cooperation, reputation, altruism, trust, and community identification) on ecotourists satisfaction in socialisation and knowledge exchanges via social media. It

has been mentioned earlier that socialisation and knowledge sharing are some of the most important requirements of ecotourists.

Therefore, in this study, the SET posits that the value in online communities, consisting of the dimensions of cooperation, reputation, altruism, trust, and community identification, can lead to ecotourists' satisfaction in socialisation through social media. Cooperation is a belief that acts a vital elements leading to reciprocity, but has been rarely studied, while reciprocity has been used in a number of previous studies on online interactions. This study involves social interaction in social media which is an UGC generated two-way communication channels, having the potential to initiate knowledge sharing by ecotourists. This social interaction through social media is possible when cooperative motives of individuals come into action that lead to reciprocity and mutual benefits for ecotourists. Reputation is another SET characteristic which has been used in an online knowledge contribution context. Moreover, ecotourists have also been found to have self-esteem enhancement needs of recommending and sharing about ecotourism and ecotourism destinations, related information and knowledge with other ecotourists as a vital part of their socialisation process (Galley & Clifton, 2004; Harlow & Pomfret, 2007). Therefore, the incorporation of reputation is found appropriate in the context of this study.

Altruism has been found to be non-existent in studies using the SET in the context of knowledge. However, as mentioned earlier, ecotourists tend to socialize with peer

ecotourists through WOM interaction without any expectation (Weaver, 2002). This is an altruistic trait which emerges in the form of their desire to socialize. Based on this rationale, altruism will be incorporated in this study as an SET characteristic.

Trust has been mentioned as an important component in the SET. Most studies on online knowledge sharing using SET have considered trust as an important criterion to analyse their online interactive behaviour (Liang et al., 2008; Muthusamy & White, 2005; Wang & Noe, 2010). Trust in this study will therefore be incorporated from the perspective of ecotourist in terms of the extent he/she finds other ecotourist in the social media platform trustworthy in the socialising process in social media.

Community identification will be incorporated in this study as it refers to an individual's role in an online community and his identity established by means of the role he/she plays in that community. In the context of this study, community identification will be looked at from the perspective of ecotourists as social media community who plays his/her role through social interactions and relationship development with peer ecotourists and sharing much needed knowledge on ecotourism with them and, in the process, establishing an identity for herself/himself.

Social norms (normative influence and informational influence) and power will not be incorporated into this study. This is due to the reason that VOC conceptually has not been found to include power relations, as well as normative influences on

community members (Seraj, 2012) This is because firstly, informational influence refers to the perspective of a knowledge receiver who enhances his/her expertise on a subject area through receiving information from others. Since this study focuses on the sharing and contribution, informational influence will not be considered. Secondly, normative influence refers to the conformity of online community members to the expectations of others without which there will be punishment for those not sharing or not sharing back. In practice, such behaviour is not observed among members of social media communities and hence it is highly unlikely to contribute towards VOC.

Power is not considered for this study, eventhough the SET literature considers it as one of the concept's important component (Blau, 1964). The rationale behind its exclusion is based on the fact that power relationships are not evident in balanced/non-asymmetric relationships, where one individual exerts the same or equal influence on the other during social interactions. Asymmetric social interactions take place where there are hierarchical structures like in organizations or inter-organisations, where one party exerts a greater influence on others based on his/her hierarchical position. Therefore, it is also unlikely that power relations will contribute towards VOC, since such communities are shared spaces where members collectively create content. Moreover, online communties provide anonymity to its members where power or status aspects associated with an individual gets nullified.

Therefore, SET will be employed to examine whether VOC representing cooperation, reputation, altruism, trust and community identification can lead to satisfaction in socialisation for ecotourists, as well as lead to their intentions to share ecotourism related knowledge as evident from the findings of previous studies (Baron and Nambisan, 2010; Liang et al., 2008; Muthusamy & White, 2005; Shiau & Luo, 2012). Moreover, the SET will also be used in terms of determining where satisfaction can have greater influence on knowledge sharing not observed in previous studies using the theory.

3.3 Proposition of Hypotheses

Based on the theoretical premise of the SET, this study posits the following hypotheses that can enable in investigating the effect of the aspect of VOC (reflected by the factors of cooperation, reputation, altruism, trust and community identification) in terms of its impact on satisfaction in socialisation and in turn, knowledge sharing via social media. Importance of ecotourists' needs of information and knowledge sharing and socialisation was emphasized. The potential role of social media in enabling value in communities, socialisation satisfaction as well as sharing, exchange, collaboration of knowledge through interactions among members of travel online communities was looked into.

VOC emanate from the cooperative actions of community members exhibited through the shared spaces. Cooperation refers to the belief of one party that motivates him/her to reciprocate voluntarily with the other party/parties who have

engaged in valuable social interactions. This in turn motivates the contributors to voluntarily contribute/share more which leads to a process of sustained interactions (Geffen & Ridings, 2002). In the context of online interactions, cooperation can occur in a process in which voluntary contributions and exchange of content through social interactions between individuals with a common goal that leads to reciprocal and mutually advantageous associations between them (Pellegrini, 2007). In other words, it is a process of co-creation between individuals strongly evident in virtual communities where individuals associate with each other to mutually share and create information and knowledge beyond market exchange (Kaminski, 2009). This process helps people to accomplish both group and individual goals and involves a social value in online communities (Seraj, 2012). The social value refers to the socialisation and social ties formed due to the social interactions in terms of sharing and creating information and knowledge in the form of pictorial, textual and audio-visual content (Seraj, 2012 The mutual advantages and reciprocal interactions enabled through cooperation becomes a strong manifestation of VOC in a collective way (Seraj, 2012). The cooperative actions of online community members which involve improvisation of the quality and worthiness of the content exchanged voluntarily between them help building of VOC.

VOC is also reflected in the reputational benefits experienced by contributors in an online community that renders them respect and recognition and motivates them to contribute more and add intellectual value to the online community (Seraj, 2012). Reputation has been found to be a crucial factor in online social interactions that influences attitudes of individuals towards use of online platforms (Nambisan &

Baron, 2010; Shiau & Luo, 2012). Reputation involves enhancement of self-image of members of social media community who contribute to others as a part of their social interactions with them (Nambisan & Baron, 2010). These contributors are encouraged to sustain their contributions by the personal rewards of reputation building (Chang & Chuang, 2011; Hsu & Lin, 2008). This is possible through their recognition in an online community as an expert provider of valuable content (text, audio-visual, photos) in a specific subject area (Parra- Lopez et al., 2011). In other words, social recognition derived through contribution in social media provides self-esteem enhancing rewards for the contributors (Nambisan & Baron, 2010). Previous studies by Hsu and Lin (2008), Shiau & Luo (2012) Chang and Chuang (2011); Nambisan and Baron (2010) have highlighted the importance of reputation as a benefit in social interactions and motivator in enhanced online participation. Reputation is therefore is an integral part of VOC that can lead to satisfying experiences and hence more use of online platforms for social interactions (Seraj, 2012; Shiau & Lau, 2012). Previous studies have also shown the positive influence of reputation on satisfaction (Helm, 2011; Shiau & Lau, 2012). Ecotourists find recommending, contributing valuable ecotourism-related knowledge as a part of enhancing their self-esteem (Hartley & Harrison, 2009). The enhancement of ecotourists' self-image can lead to gratifying social interactions in social media.

Altruistic motives and behaviours is another critical reflect of VOC. Altruism emerge from the need of individuals to help others without expecting anything to accomplish a common aspiration (Chang & Chaung, 2011; Hsu & Lin, 2008). Altruism has been perceived as one of the main personal advantages that one derives

from contributing to online communities (Chang & Chaung, 2011). In the context of social media, individuals contribute through their effective social interactions with anonymous recipients with the contemplation that it will enhance welfare of others at large irrespective of whether anyone is paying adequate attention to such sharing or not (Parra-Lopez et al., 2011). Such behaviours emanate from the obligation to help others in exchange of the benefits they received from the contributions of others in the past (Parra-Lopez et al., 2011). The interactions that take place in social media build social relations among users which in turn influence their need to contribute out of altruistic traits (Chang & Chaung, 2011; Parra-Lopez et al., 2011). The altruistic behaviour of members of social media community significantly reflects the cultural value in online communities given that it becomes the norms of the community members while engaging in intense social interactions and relationship with others (Seraj, 2012; Rokka & Moisander, 2009). For ecotourists, communication and social interactions with other ecotourists are major satisfiers in their process of experiencing ecotourism (Harlow & Pomfret, 2002; Hartley & Harrison, 2009). Therefore altruism can be considered a critical component of VOC that can enhance the satisfaction of ecotourists in having social interactions with other ecotourists in social media.

Trust is yet another important component of VOC. This is because, it entails the level of reliability and responsibility each member leading to credible communication between them and in turn an important component of VOC. Trust in online community members is one of most important factors that affect individuals in their participation in online communities (Chang & Chaung, 2011; Dwyer et al.,

2007). It refers to the confidence individuals have in others in participating in social interactions with them (Shiau & Luo, 2012). According to Chang and Chuang (2011, p.10), "when relationships are high with regard to trust, people are more willing to engage in social exchange and cooperative interaction". It is a critical component of value, norms and principles in an online community that increases participation (Chiu et al., 2006). Trust in the context of social media refers to the sense of faith in social interactions as well as in those who contribute in authentic and effective content with those who have contributed authentic content through effective social interactions in the past with them (Parra-Lopez et al., 2011; Wang & Fesemaier, 2004). This sense of faith also involves trusting others in terms of exposing their personal information in the online social interactions process and hence becomes a major constituent of intellectual and social value in an online community (Dwyer et al., 2007; Seraj, 2012).

Finally, the sense of belonging in a community that leads to the identification in a community is another vital part of VOC. As mentioned earlier, community identification refers to the extent an individual's relates to himself/herself as a part of an online communal identity by means of the role he/she plays in that community (Hsu & Lin, 2008). The vitality of communities in social media is determined by the extent to which its members are able to significantly identify themselves with it (Qu & Lee, 2011). It is the sense of belonging or affiliation of members towards the online community they belong (Hsu & Lin, 2008). In travel-based online communities, members' sense of association is based upon a range of positive member activities they can engage in; these activities can be social interactions and

developing relationships with other travellers (Qu & Lee, 2011). Members feel the willingness to actively promote effective communication by engaging in affective social interactions (Qu & Lee, 2011). So this sense of attachment and belonging those members of a social media community derive through social interactions, and relationships with others members can initiate and enhance favourable communal attitudes towards the community (Chiu et al., 2011). The creation of such attitude of sense of belonging is a vital aspect observed in VOC.

Therefore, it is clearly evident that the factors of cooperation, reputation, altruism, and trust and community identification are strongly embedded in VOC. In other words, it can be posited that VOC encompasses cooperation, reputation, altruism, trust and community identification as its critical components and such factors hence become dimensions of VOC. Based on this premise, the following hypothesis could be proposed

H1: VOC is a higher order construct consisting of five dimensions: cooperation, reputation, trust, and altruism and community identification.

The VOC evident through cooperation, reputation, trust, and altruism and community identification has the potential to enhance satisfaction in the socialisation process of online community members (Seraj, 2012). Many online communities are found to be enriched with a kind of value emanating from the pro-social, cultural and particularly intellectual discourses between its members which in turn, have been found to strongly and positively influence the levels of satisfaction of those who participate in such communities (Sanchez-Fernandez & Iniesta-Bonilo, 2007).

Moreover, social interactions in online communities based on cooperative, altruistic motives as well as reputational, trustworthiness and community identification often involve context exchange in the form of textual, audio-visual or pictorial element (Kozinets, 1999; Sanchez-Fernandez & Iniesta-Bonilo, 2007; Seraj, 2012). Such elements can render entertainment, visual pleasure, and intense interactions resulting in a kind of value that is experiential as well as intellectual in nature (Sanchez-Fernandez & Iniesta-Bonilo, 2007). Such value has been found to positively affect satisfaction of online community members (Kozinets, 1999; Sanchez-Fernandez & Iniesta-Bonilo, 2007; Verhagen et al., 2011). Therefore this study posits that VOC can enable reasonable levels of satisfaction in terms of community members participation and socialisation.

H2: VOC positively influences satisfaction in socialization in online communities of social media.

Online communities in social media have been found to involve epistemic value that is driven by intellectual pursuit through social interactions and resulting in inculcation of knowledge (Sanchez-Fernandez & Iniesta-Bonilo, 2007). Such value evident in online social interactions includes the elements of cooperation, reputation, altruism, and trust and community identification. Such elements have been found in numerous occasions to have significantly and positively affect knowledge sharing (Muthusamy & White, 2005; Liang et al., 2008; Lee et al., 2011; Phang et al., 2009; Liu et al., 2011). VOC has positively contributed towards enhanced participation and more time spent online for community members. Such extended time spent online is often found to be expressed in the form of engaging in increasing level of knowledge

sharing among each other by online community members (Ma & Agarwal, 2007; Seraj, 2012). Therefore this study posits that VOC will significantly affect knowledge sharing intentions of online community members in the context of ecotourists.

H3: VOC positively influences intention to share knowledge in online communities of social media

Socialisation is a very essential aspect in the discourse of online communities. Socialisation in the context of online communities and social media is expressed in terms of the process of knowledge sharing interactions (Ahuja & Galvin, 2003). Interactions between members of a community in social media are the means by which socialisation takes place. Interactions form bonds between social media community members who are the socialising agents; without interactions social media community members do not become socialising agents and as a result social media communities will cease to exist (Ahuja & Galvin, 2003; Wang et al., 2012). In information systems studies, satisfaction can be referred to as end-user satisfaction with the attributes of information systems (IS) and the utilities provided through IS (Shiau & Luo, 2012). Satisfaction is often the positive attitude shown by members of online communities towards the use of the online platform in their interactions (Shiau & Luo, 2012). Also the volume of knowledge members of social media community contribute also depends on the level of satisfaction they derive from being able to socialise in the community (Liang et al., 2008). Therefore satisfaction has been found to have a significant influence on knowledge and also a

significant mediating effect between variables. Knowledge sharing on the other hand is one of the main activities in social media. It refers to the extent to which an individual shares content with others (Liang et al., 2008). It also refers to the intention of members of social media community to actively interact, contribute as well as learn from other members (Lin, 2007). As mentioned earlier, satisfaction in socialisation determines the extent of information and knowledge to be shared in social media. Therefore this study posits the hypothesis:

H4: Ecotourists satisfaction with socialisation via social media can positively influence their intention to contribute information and knowledge and act as an effective mediator

3.3 Proposed Research Model

Based on the above discussion, a proposed research model is provided in figure 3.1. The social exchange theory (SET) factors of cooperation, reputation, altruism, trust, and community identification have been provided as dimensions of the second order construct of VOC. This is followed by the main constructs of satisfaction with socialisation via social media and intention to contribute ecotourism information and knowledge. The SET is employed to predict the hypothetical relationships of H1, H2, H3, and H4.

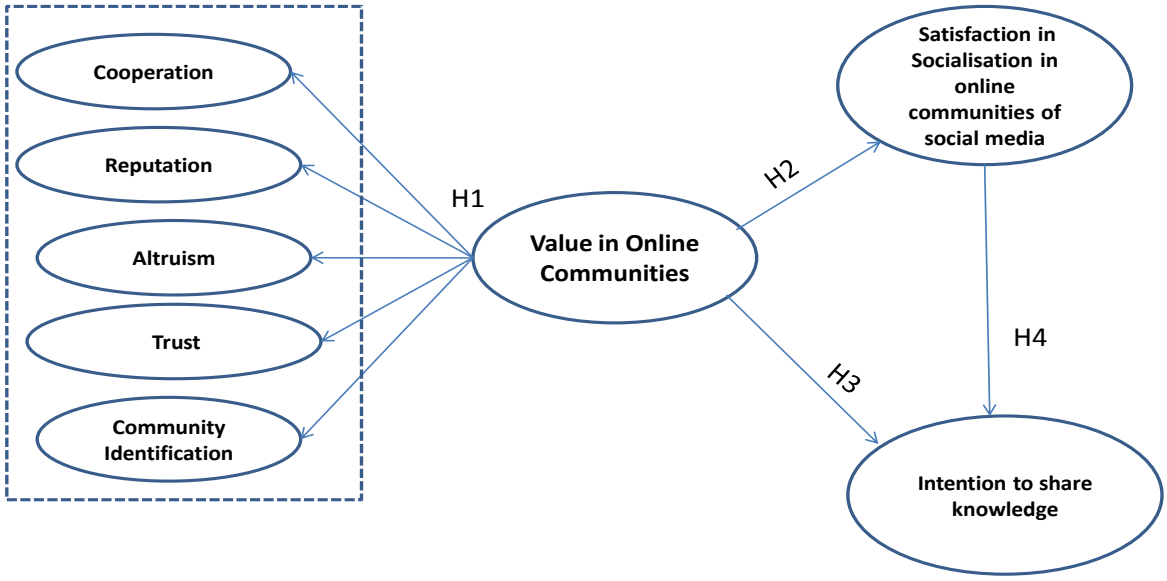

Fig 3.1 Proposed Research Model

3.4 SUMMARY

This chapter introduced the SET which has been found to examine social interactions and relationships as per previous literature. The SET, as well as the factors in the theory, were discussed in details. This chapter also explains the 4 hypothetical relationships of VOC which encompass factors identified under the social exchange theory; cooperation, reputation, altruism, trust, and community identification, and satisfaction with socialisation via social media and intention to contribute ecotourism knowledge. Based on the explanations of the hypothetical relationships, a proposed research model has been put forward.

CHAPTER 4 METHODOLOGY

4.1 Introduction

This chapter includes the explanation on the methodology of this study that encompasses a) research design b) instrument and measurement development c) the sampling design and the methods to be employed to collect data from the respondents d) pilot study e) the data analysis method that are going to be employed to examine the data from the main study to test the proposed research model and hypothetical relationships emerging from proposed model.

4.2 Research Design

The methodology of a research study is one of its most critical aspects as it helps to assess the implications of the study empirically and affects the process of the study as well. The methodological approach taken in this study is quantitative based on analysing numerical data and therefore is also a positivist approach at the same time. This approach involves testing the developed hypotheses forming a conceptual framework as explained in chapter 3. The hypotheses tested involves positive relationship between VOC, which has the SET factors of cooperation, reputation, trust, altruism and community identification as its dimensions and ecotourists satisfaction in socialisation via social media as well as the positive relationship relationship posited between ecotourists satisfaction in socialisation via social media and ecotourists' intention to share knowledge via social media. SEM is used to test these relationships as they are causal in nature. Moreover, SEM is used as it has

been used as a commendable statistical technique in previous studies in socio-psychological and behavioural contexts. Previous studies testing the relationships between SET factors and socialisation as an attitude as well as knowledge sharing in the online context have all successfully found SEM useful (Chiu, Hsu & Wang, 2006; Hsu & Lu, 2004; Hsu & Lin,2008; Shiau & Luo, 2012). In tourism research, a number of studies have made the use of SEM to test the conceptual models (Nunkoo, Ramkissoon &Gursoy, 2013).

4.3 Instrument and Measurement Development

This study involves a structured questionnaire as the instrument to collect data from the target respondents. The questionnaire was developed based on certain considerations. The first consideration is the elements the questionnaire will measure. This could be knowledge, intentions or behaviour (Rattaray & Jones, 2005). The second consideration is the scale to be used. In this study the Likert seven- point scale has been used to provide the flexibility to the respondents to provide a wide range of opinion (Rattaray & Jones, 2005). The next aspect considered is the ways to generate the items for the questionnaire. This has been done keeping in mind the relevance of the items as well as other elements like wording issues, response format, type of questions and questionnaire layout (Rattaray & Jones, 2005). The relevance of the items is based on the constructs in the model and past literature that relate to the constructs in the study.

As mentioned earlier, the questionnaires are developed based on the previous literature. Items used in relation to the dimensions of VOC ; cooperation, reputation, altruism, trust and community identification as well as satisfaction of ecotourists in socialisation through social media and intention to share ecotourism-related knowledge, were based on studies on information systems as well as previous studies on use of social media in tourism. The items in relation to cooperation were developed from the studies of Geffen and Ridings (2002). The items in relation to reputation were developed from the studies of Chang & Chuang (2011), Nambisan and Baron (2010), Hsu and Lin (2008), Chiu et al., (2006) and Shiau and Luo (2012). The items in relation to altruism were developed from the studies of Hsu & Lin (2008), Chang and Chuang (2011) and Parra-Lopez et al., (2011). The items in relation to trust were developed from the studies of Dwyer et al., (2007), Chiu et al., (2006) and Chang and Chuang (2011). The items in relation to community identification were developed from the studies of Qu and Lee (2011), Chang and Chuang (2011) and Hsu and Lin (2008). The items in relation to satisfaction of ecotourists in socialisation through social media were developed from the studies of Wang et al., (2012) and Shiau and Luo (2012). Finally the items in relation to intention to share knowledge were developed from the studies of Lee, Lee and Sanford (2011), Qu and Lee (2011), Shiau and Luo (2012) as well as Parra-Lopez et al., (2011). All these items in relation to all the constructs derived from the previous studies as mentioned above were modified to fit into the context and settings of ecotourism and ecotourists. Moreover, the reliability test resuts as evident in

previous studies were looked into and their conceptual relevance with the context of this study was also strongly considered.

The items in relation to the operationalisation of the constructs are provided below in Table 4.1. These items will be measured on the basis of 7- point Likert scale. 1 refers to strongly disagree, 2 refers to disagree, 3 refers to somewhat disagree, 4 refers to neither agree or disagree, 5 refers to somewhat agree, 6 refers to agree and 7 refers to strongly agree. The seven point Likert – type scale was adopted based on its wide use in previous studies in information systems by Lin (2007), Muthusamy and White (2005), Chiu et al., (2006), Lin and Huang (2010), Dwyer et al.,(2007), Chang and Chuang (2011) and Hsu and Lu (2004). The preference of the 7-point Likert's scale to lower scales like the 5-point Likert's scale used in previous studies is on the rationale that scales with higher categories of response can result in a higher volume of information and higher degree of preciseness in terms of their measurement (Alwin, 1997).

Table 4.1 Measurement Items

Constructs and Items	
1) VOC(Dimensions under VOC)	
i) Cooperation	**Sources**
Other ecotourists have the motive to voluntarily respond to my contribution of knowledge	Geffen and Ridings (2002)
I believe in voluntarily contributing knowledge to others on social media	Geffen and Ridings (2002)
Voluntary contribution of knowledge on social media between me and others leads to mutual advantages for all	Geffen and Ridings (2002)

I believe, other ecotourists will contribute useful knowledge back to me when necessary on social media	Geffen and Ridings (2002)
When I interact with others on social media, I find others expressing interest to interact	Geffen and Ridings (2002)
When I interact with others on social media, I find others expressing interest to share knowledge	Geffen and Ridings (2002)
ii)Reputation	**Sources**
Participating in interaction with other ecotourists on social media enhances my reputation	(Chang & Chuang, 2011; Nambisan & Baron, 2010)
Participating in interaction with other ecotourists on social media earns me rewards	(Chang & Chuang, 2011; Hsu & Lin, 2008)
Contributing ecotourism-related knowledge on social media helps build my reputation	(Chiu et al. 2006; Shiau & Luo, 2012)
Providing pictorial and/or audio-visual content on ecotourism attractions on social media improves my reputation	(Chiu et al. 2006; Shiau & Luo, 2012)
Contributing ecotourism-related knowledge on social media can bring more prestige to me than those who do not	(Shiau & Luo, 2012)
By having the opportunity to provide effective ecotourism-related knowledge on social media, I can strengthen my credibility in social media.	(Nambisan & Baron, 2010)
iii)Altruism	**Sources**
I like to help other ecotourists on the social media	(Chang & Chuang, 2011)
I am keen to help other ecotourists on social media to solve their problems	(Chang & Chuang, 2011)
I always disseminate pictorial and/or audio-visual content on different ecotourism attractions to other ecotourists in social media sites	(Chang & Chuang, 2011)
Commenting on social media can help other ecotourists with similar problems that I have	(Parra-Lopez et al., 2011)
Since I have experiences of about ecotourism trips and destinations that may be of interest to others, I like to help	(Parra-Lopez et al., 2011)

others by sharing it with them on social media	
iv)Trust	**Sources**
I trust ecotourists on social media are willing to receive knowledge	(Dwyer et al., 2007)
I trust ecotourists on social media will not misuse my personal information	(Dwyer et al., 2007)
I believe ecotourists who participate in social media are trustworthy	(Chang & Chuang, 2011)
I believe ecotourists who use social media will always keep the promises they make to one another	(Chang & Chuang, 2011; Chiu et al. 2006)
I believe ecotourists who use social media behave in a consistent manner	(Chang & Chuang, 2011)
I believe ecotourists who use social media are truthful in dealing with one another	(Chiu et al., 2006)
v)Community Identification	**Sources**
I feel strong ties to other ecotourists in social media sites	(Qu & Lee, 2011)
I feel a sense of belonging with other ecotourists in interacting with them on social media sites	(Chang & Chuang, 2011)
I have a feeling of togetherness with other ecotourists in sharing knowledge with others on social media sites	(Chang & Chuang, 2011)
I have a sense of pride in being a member of ecotourism-based groups on social media sites	(Chang & Chuang, 2011; Hsu & Lin, 2008)
Participating in social media would enhance my chance to meet ecotourists who have common interests	(Hsu & Lin, 2008)
Social media sites help to share social lives and information with other ecotourists	(Hsu & Lin, 2008)
2) Satisfaction for Ecotourists in Socialisation Through Social Media	**Sources**
I feel happy to socialise by interacting with ecotourists in ecotourism-based groups in social media sites	(Wang et al., 2012)

I feel satisfied to socialise by asking advices and recommendations from other ecotourists in ecotourism-based groups on social media sites	(Wang et al., 2012)
I feel satisfied by the encouragement from other ecotourists to interact with them on social media sites	(Wang et al., 2012)
I feel satisfied with my overall socialisation experience with other ecotourists in ecotourism-based groups on social media sites	(Shiau & Luo, 2012)
I feel contented in socialising with other ecotourists on social media by sharing pictorial and/or audio-visual content on different ecotourism attractions in Kuala Lumpur	(Shiau & Luo, 2012)
3) Intention To Share Knowledge	**Sources**
I am willing to share ecotourism-related knowledge to others through social media.	(Lee etal., 2011)
I will share pictorial and/or audio-visual content on ecotourism attractions with other ecotourists in social media sites	(Qu & Lee, 2011)
My intention to share ecotourism-related knowledge to others through social media is very high	(Shiau & Luo, 2012)
I will return to the social media site through which I share ecotourism-related knowledge to others	(Hsu & Lin, 2008)
I intend to enhance my contribution to ecotourism-related knowledge to others through social media in the future	(Shiau & Luo, 2012)
In the future, I will encourage other ecotourists not using social media to contribute ecotourism-related knowledge to others in social media sites	(Parra-Lopez et al., 2011)

The questionnaire involves firstly three filtering questions, followed by questions on the three constructs of VOC (with the dimensions of cooperation, reputation, altruism, trust, and community identification), satisfaction of ecotourists in

socialisation through social media and intention to share ecotourism-related knowledge. This is followed by questions related to their personal information. The last part consists of some additional questions in order to get an overall understanding of the respondents' behaviour in relation to ecotourism and social media.

As mentioned above, the questionnaires have 3 filtering questions at the beginning. The first two filtering questions are meant for determining whether the respondents fall in the category of ecotourists, hard or soft, or not. These filtering questions are based on the definitions of hard ecotourists and soft ecotourists in the previous studies of McKercher (2001) as well as Larmen and Durst (1987) and Weaver and Lawton (2007). The third filtering question was developed for this study to determine whether the respondents (ecotourists) use social media for socialising and exchange of ecotourism-related information and knowledge based on their ecotourism experiences. The questions on personal information are in relation to gender, educational qualifications, age-group, and status of employment. In addition to this, in the final part, questions in relation to their number of visits to the ecotourism sites from where the data will be collected (i.e. ecotourism sites in Kuala Lumpur), types of ecotourism activities they take part in, their top sources of ecotourism-related information and knowledge as well as their use of social media sites and years of use of such social media sites, were included in the questionnaire. The rationale behind the inclusion of these additional questions is for obtaining a

holistic understanding of the behaviour of the respondents in relation to ecotourism and social media.

4.3.1 Expert Review of Questionnaire

Expert review on questionnaire and the items used to measure the constructs was conducted consisting of researchers in the area on information systems in tourism as well as some ecotourists. It is evident from previous studies of Shiau and Luo (2012), Chiu et al., (2006) and Hsu and Lu (2004) that an expert review is imperative for validating the questionnaire to be used prior to using it for collection of data. In addition to this, research students and academics in the area of both information systems and ecotourism were consulted for a pre-test of the questionnaire based on their views on items used for each constructs, semantics, length and format of the questionnaire (Chiu et al., 2006; Hsu & Lin, 2008; Shiau & Luo, 2012). Based on the above discussions, also provided is the construct operational definitions and number of items measured in Table 4.2.

Table 4.2 Construct Operational Definitions and Number of Items Measured

Constructs	Operational Definitions	No. of Items	Sources
1) VOC	Value in online communities can be referred to as the value in the intense social interactions between members of a community in social media sites based on a certain area of interest that ultimately lead to their satisfaction, positive word-of-mouth and enhanced online interactions (Seraj, 2012). The	31	

	underlying dimensions of VOC are cooperation, reputation, altruism, trust and community identification		
i) Cooperation The belief in one party that motivates him/her to reciprocate voluntarily with the other party/parties who have contributed valuable knowledge and information		6	Geffen and Ridings (2002)
ii) Reputation self-esteem enhancement of ecotourists who contribute to others through their social interactions with them in social media		6	(Chang & Chuang, 2011; Nambisan & Baron, 2010)
iii) Altruism The desire of ecotourists to have social interactions with others and contribute useful information without an expectation of returns		7	Chang & Chuang, 2011)
iv) Trust The extent to which ecotourists find the platform of social media trustworthy to socialise as well as share his/her personal information to others as a part of socialising		6	Dwyer, Hiltz & Passerini, (2007), Chiu et al., 2006
V) Community Identification Ecotourists who play his/her role in a social media by interacting with peer ecotourists and sharing much needed knowledge on ecotourism and in the process establishing an identity for herself/himself.		6	(Qu & Lee, 2011; Hsu & Lin, 2008; Hsu & Lu, 2004)
2) Satisfaction for Ecotourists in Socialisation Through Social Media	The extent of gratification for ecotourists in socialisation in social media by means of interactions with peer ecotourists.	6	(Wang et al. 2012; Shiau & Luo, 2012)
3) Intention To Share/ Knowledge	The intentions of ecotourists to share ecotourism ecotourism-related information and knowledge in social media	6	(Lee, Lee & Sanford, 2011; Shiau & Luo, 2012)

4.4. Data Collection

4.4.1 Settings

Kuala Lumpur is the capital of Malaysia and an Asian urban destination known for its modern and old urban architectures, nightlife, shopping and entertainment. Besides these main attractions, it is also known as the most important business and commercial centre of the country making it one of the most bustling places in South East Asia. But it also offers a large number of natural wonders located inside and around the city. Ample opportunities for eco-tourism development in Kuala Lumpur occur due to forest reserves at Bukit Nanas (11 hectares), Bukit Sungai Putih (7.41 hectares) and Bukit Sungai Besi (42.11 hectares), ridges at Bukit Gasing and Bukit Dinding together with other undeveloped hilly areas of Kampong Sungai Penchala (Dewan Bandaraya Kuala Lumpur [DBKL], 2007). These forest reserves have rendered abundant nature spots around Kuala Lumpur and are found to have extended close to the city and even sometimes within the city. The Bukit Nanas Forest Reserve and the Forest Research Institute of Malaysia (part of Bukit Lagong Forest Reserve) are examples of nature pockets within as well as close to the city. Bukit Nanas Forest Reserve is the only remaining tropical rainforest in the heart of the city of Kuala Lumpur (Tourism Malaysia, 2012). Besides, the Batu caves known for its limestone formations and the Perdana lake Gardens are nature sports known for caving activities, viewing nocturnal fauna and avian species (Price, 2013). These destinations therefore are some of the ideal spots for exploring the prospects of ecotourism in Asia given the range of high quality nature-based attractions they abound. Ecotourists seeking authentic nature-based experiences in urban settings

will find these destinations apposite for their visitations. Therefore from the above discussion, it is apparent that Kuala Lumpur offers a suitable example for ecotourism in modified spaces since the nature spots in the densely urban and per-urban areas of Kuala Lumpur offer a lot of potential for growth of ecotourism in Malaysia.

The rationale of the study selecting Kuala Lumpur as the setting for the research is as follows. As evident from the literature on ecotourism, urban and peri-urban areas are examples of modified spaces where ecotourism can take place. So Kuala Lumpur which offers ample opportunities for nature tourism can be an ideal place to look at given the fact that most of the previous studies on ecotourism have looked into traditional ecotourism setting not inclusive of modified spaces. Secondly, the growing importance and identification of Kuala Lumpur as an ecotourism destination in modified settings as evident from the World Ecotourism Conference in 2010 as well as previous academic research, makes it suitable as a settings for this study (Wu et al., 2010). Besides, Malaysia has been identified to emerge as a leading ecotourism destination and is one of the major contributing destinations towards an expected growth of ecotourism globally at a rate 4.3% by 2017 (eturbonews.com, 2011). The Malaysian government considers ecotourism as one of the major areas of the current tourism growth and development in the country and has taken major strategies for the development and promotion of sustainable ecotourism (Bhuiyan, Siwar, Ismail & Islam, 2011). Infact, Malaysia won the Best Ecotourism Destination Award at The Travel Weekly (Asia) Industry Award in 2008 (Tourism Malaysia,

2008). Therefore, Kuala Lumpur being the capital is expected to provide interesting insights on the behaviour of ecotourists in the context of social media use. Thirdly, Kuala Lumpur being an example of ecotourism attraction in urban modified space; it has the capacity to attract a wide range of ecotourists with varying motivations and needs (Wight, 2001).

4.4.2 Sampling Design

The respondents for the study are ecotourists falling in the category of both hard ecotourists and soft ecotourists. Since urban tourism destinations like Kuala Lumpur are visited by a wide range of tourists, it can be expected that ecotourists visiting ecotourism destinations in modified urban spaces can significantly vary in terms of their needs and motivations. However, as mentioned earlier for both kinds of ecotourists, hard and soft, environmental values, awareness and experiential knowledge on ecological and ecotourism aspects as well as networking and socialising aspects are important. Therefore, both hard and soft ecotourists visiting ecotourism attractions in Kuala Lumpur were the target participants in this study. These target respondents were contacted in person where the ecotourism attractions in and around Kuala Lumpur are located. Moreover, those ecotourists who use social media and already a visitor at ecotourism attractions at Kuala Lumpur were surveyed. As mentioned earlier, there are quite a number of ecotourism attractions in Kuala Lumpur. The Bukit Nanas Forest Reserve is at the base of the Kuala Lumpur tower that attract tourists especially who prefer to take the route through the forest reserve to reach the base of the tower. The Perdana Lake garden which is an urban park consists of the four attractions, the Orchid gardens, the Deer park, the

Butterfly and the popular Kuala Lumpur Bird Park. It is one of the prime urban attractions in Kuala Lumpur that attract tourists from all over the world (Kuala Lumpur Tourism Association [KLTA], 2012). The Forest Research Institute of Malaysia lies on the northern periphery of Kuala Lumpur city and attracts visitors as its provides unique ecotourism experience through its various nature-based recreational activities, ecological features as well as educational opportunities for learning about flora and fauna. Finally the Dark Caves which is a part of the Batu Cave hills is also a prime urban natural attraction also lying on the northern periphery of Kuala Lumpur city.

4.4.3 Sample Size

The sample size estimation is based on the set of factors that work in the case of structural equation modelling (SEM). It is suggested that depending on the number of items used, the sample size is to be determined. In other words, a 10:1 ratio is suggested for collecting data in case of multivariate analysis (Hair jr., Black, Babin & Anderson, 2010, 2010). In this case, since there are 42 items, the number of sample should be atleast 420. Therefore a sample size of 600 was targeted for the main part of this study as it was considered apt since it was above the requirement of 420 and was likely to provide more reliable results.

4.5 Pilot Study

The pilot study was carried out to determine the suitability of the research instrument in terms of the correctness of the items, vocabulary and understandability

from the perspective of the respondents. A target sample size of 200 was used to conduct the pilot study which was adequate to run an exploratory factor analysis and carry out reliability tests. The items in the questionnaire were measured on the basis of 7- point Likert scale. 1 refers to strongly disagree, 2 refers to disagree, 3 refers to somewhat disagree, 4 refers to Neither agree nor disagree, 5 refers to somewhat agree, 6 refers to agree and 7 refers to strongly agree. The first section of the questionnaires contained 3 filtering questions. The first two filtering questions are meant for determining the category of ecotourists, hard or soft ecotourists. The third filtering question was for determining whether the respondents (ecotourists) use social media in relation to their ecotourism trip and experiences in Kuala Lumpur. This was followed by the main section that consisted of questions representing each construct of the conceptual model. The first one involved the dimensions under VOC which are cooperation, reputation, altruism, and trust and community identification. This was followed by ecotourists satisfaction in socialisation via social media and intention to share knowledge. The final section consisted of questions on in relation to gender, educational qualifications, age-group, and status of employment. In addition to this, there were questions in relation to their number of visits to the ecotourism sites from where the data will be collected (i.e. ecotourism sites in Kuala Lumpur), types of ecotourism activities they take part in, their top sources of ecotourism-related knowledge as well as their use of social media sites and years of use of such social media sites, were included in the questionnaire.

4.5.1 Data Collection Settings

Data for the pilot study was collected at 3 nature-based attractions in and around Kuala Lumpur; KL Bird Park, Forest Research Institute of Malaysia(FRIM) in Kepong and at Dark Caves in Batu Caves. The time period of the data collection was between 5th July, 2013 and 25th July, 2013. The data was therefore collected at the sites with the help of a structured questionnaire as the instrument. The average time taken for the questionnaires to be completed was 20-25 mins. 210 questionnaires were distributed and 200 completed questionnaires were returned. As an incentive, souvenirs were distributed to the respondents.

4.5.2 Screening and Missing Values

The pilot data was screened for analysis. No major issues were reported in terms of the questions and in terms of the understanding by the respondents. There was no inconsistency in the rating of the questions by the respondents in terms of high positive or negative rating. In terms of missing data, there were no issues observed since all questionnaires were found to be returned fully completed. In terms of outliers, there were few cases with outliers. But based on the suggestions of Hair et al., (2010), the cases could be representative of a critical section of the sample population and as a result were retained. In terms of normality test of the data, Skewness and Kurtosis cut-off points were looked into i.e. <3 and <8 with respect to Skewness and Kurtosis (Kline, 2005).

As evident from Table 4.3, the items under the constructs were normality distributed as Skewness values were all less than 3 and the Kurtosis values were all less than 8. Therefore the data reflected an acceptable normal distribution. In terms of means values of all the items under the VOC dimensions of cooperation, reputation, altruism, trust, community identification as well as ecotourists satisfaction in socialisation via social media and intention to share knowledge, it was indicative of the fact that the respondents rated them positively.

Table 4.3 Normality and Descriptive Statistics

Variable (*N=42*)				
Cooperation	**Mean**	**Std. Deviation**	**Skewness**	**Kurtosis**
OEVR	5.39	.762	-.242	.221
VCKO	5.65	.825	-.408	.241
VCMA	5.57	.733	-.747	3.017
OEUK	5.63	.817	-.828	2.199
OEII	5.63	.916	-.375	.410
OEIK	5.68	.894	-.698	.892
Depend	5.69	.877	-.827	3.260
Reputation	**Mean**	**Std. Deviation**	**Skewness**	**Kurtosis**
PIER	5.63	.784	-1.088	2.610
Rewards	5.39	.929	-.968	2.993
EKR	5.60	.993	-1.044	2.924
PAVR	5.70	1.012	-.748	1.383
Prestige	5.73	.934	-1.308	3.369
Credibility	5.54	.873	-.696	2.237
Authority	5.57	.964	-1.593	5.545
Altruism	**Mean**	**Std. Deviation**	**Skewness**	**Kurtosis**
HOE	5.44	.670	-.606	2.060
HESP	5.80	.709	-2.172	4.214
DPAV	5.61	.933	-1.220	4.786
CESP	5.93	.930	-1.422	4.774
ETD	5.81	.886	-1.030	2.828
Trust	**Mean**	**Std. Deviation**	**Skewness**	**Kurtosis**
ESMK	5.48	.918	-1.321	3.931
ESSMPI	5.22	1.032	-1.163	2.855
Trustworthy	5.31	1.091	-.924	1.441
Promises	5.44	1.180	-1.010	1.660
ESMCM	5.47	1.232	-1.414	2.579
ESMT	5.31	1.095	-.942	1.965
Community Identification	**Mean**	**Std. Deviation**	**Skewness**	**Kurtosis**

STOE	5.57	.780	-1.308	2.728
SOB	5.42	.876	-1.021	2.928
FTE	5.42	.704	-.105	1.235
SOP	5.69	.834	-1.109	2.688
PSMEE	5.65	.901	-.749	1.745
SMSLI	5.63	.974	-.900	1.644
Ecotourists Satisfaction in Socialisation via Social Media	**Mean**	**Std. Deviation**	**Skewness**	**Kurtosis**
HSIE	5.62	.692	-.971	2.054
SARE	5.57	.830	-.705	2.052
SEE	5.72	.925	-1.029	3.040
SOSE	5.78	.947	-1.162	4.080
SSPAV	5.59	1.076	-1.553	3.665
Intention to Share Knowledge	**Mean**	**Std. Deviation**	**Skewness**	**Kurtosis**
IWSEK	5.12	1.285	-.591	-.150
IWSPAV	4.81	1.319	-.397	-.162
MIEKH	5.17	1.337	-.548	-.234
IWRSM	4.95	1.140	-.322	-.178
IIEK	5.28	1.296	-.632	-.265
FIEE	5.45	1.287	-.574	-.576

4.5.3 Demographic Statistics

In terms of the profile of ecotourists and demographic aspects, 58% (116) were females and 42% (84) were males out of the total respondents and in terms of age, 37.5%(75) were in the age-group of 25-34,28%(56) were in the age-group of 18-24, while 20.5% (41) and 20(10%) were in the age-group of 35-44 and 45-54. In terms of involvement in ecotourism, 27.5% (55) were hard-core ecotourists and 73.5% (145) were soft-core ecotourists and all of them were found to use social media in relation to their visitations to ecotourism attractions in and around Kuala Lumpur. Most of the respondents were found to be unmarried 62 %(124), while 35.5 %(71) and 2.5 %(5) of the respondents were married and fell in others category

respectively. With regards to the educational qualifications of the respondents, majority had Bachelors degree levels qualifications 57 %(114), while 22.5 %(45) and 10.5 %(21) had diploma/higher diploma and Masters level qualifications respectively. In terms of employment, majority of the respondents were found to be employed i.e. 82% (164) and 18% (36) were unemployed. In terms of their visitations to ecotourism attractions in Kuala Lumpur, 79% (158) are second time visitors, while 17.5 %(35) and 3.5 %(7) have visited twice and more than twice respectively. In terms of ecotourism activities, the most preferred activity was nature-viewing followed by jungle trekking and biking, caving and bird watching. With regards to the source of knowledge on ecotourism in Kuala Lumpur, the respondents found websites of ecotourism attractions in Kuala Lumpur the most useful followed by social media sites while offline word-of-mouth and travel books and brochures were of much less use as sources of knowledge on ecotourism in Kuala Lumpur. In terms of social media sites, Facebook and Trip Advisor were the mostly used sites by the respondents in relation to their ecotourism activities and experiences in Kuala Lumpur.

Table 4.4 Demographic Profile

Items	**Frequencies**	**Percentage**
Soft Ecotourists	145	72.5
Hard Ecotourists	55	27.5
Social Media Users	200	100
Gender	**Frequencies**	**Percentage**
Male	84	42
Female	116	58
Marital Status	**Frequencies**	**Percentage**
Unmarried	71	35.5
Married	124	62
Others	5	2.5
Age	**Frequencies**	**Percentage**
Less than 18	5	2.5
18-24	56	28

25-34	75	37.5
35-44	41	20.5
45-54	20	10.5
55 or Above	3	1.5
Education	**Frequencies**	**Percentage**
Less than High School	2	1.0
High School	18	9.0
Diploma/Higher Diploma	45	22.5
Bachelors Degree	114	57
Post Graduate/Masters Degree	21	10.5
Travel to the attraction in KL	**Frequencies**	**Percentage**
Once(excluding current visit)	158	79
Twice	35	17.5
More than twice	7	3.5
Employment	**Frequencies**	**Percentage**
Employed	164	82
Unemployed	36	18

Table 4.5 Other Aspects of Demographic Profile of Respondents

Items		
Ecotourism Activities	**Frequencies**	**Percentage (%)***
Birdwatching	105	52.5
Nature-viewing	128	64
Jungle Trekking/Biking	109	54.5
Caving	110	55
Canopy Walk	81	40.5
Source of Ecotourism Knowledge in Kuala Lumpur	**Frequencies**	**Percentage (%)***
Word-of-mouth	15	7.5
Travel Books/brochures/guide	62	31
Website of ecotourism attractions	166	83
Social Media sites	126	63
Social Media Sites Used	**Frequencies**	**Percentage (%)***
Facebook	189	94.5
Twitter	108	54
Trip Advisor	141	69.4
Virtual Tourist	111	55.5
YouTube	67	33.5
Flickr	19	9.5

*** The frequency does not sum up to 100% because of multiple responses.**

4.5.4. Exploratory Factor Analysis for Pilot Study

The EFA was carried out to check the reliability (cronbach alpha values) and the relevance of the measurement items in terms of the contracts. In terms of the variance, all the factors generated 68.4% of the total variance. Reputation explained 46.53% of the variance, cooperation generated 5.3%, trust generated 5.14% followed by intention to share knowledge generated 3.77% of the variance followed by ecotourists satisfaction in socialisation via social media (3.03%), community identification (2.50%) and altruism(2.08%). The factors were found to be fairly reliable and distinguishable as the value of Kaiser-Meyer-Olkin (KMO) was 0.95 (Field, 2009). Bartlett's test of Sphericity was also found to be at a significant level $p < .000$ and $\chi^2 = 6364.007$ and df = 861. In terms of reliability statistics, the Cronbach alpha values were all above 0.7. Items found with mostly values <0.5 are normally recommended to be removed. However, all the items under altruism were all (<0.5) but were retained as the communality values of the items were all ≥ 0.5 and also due to the fact that item loadings with values ≥.40 can be considered significant for a sample size of 200 (Hair jr et al., 2010).With regards to the communality all others items, all of them had a value of above 0.5 providing adequate explanation for the factors.

Table 4.6 EFA Results for Pilot Study

Variable (*N=200*)	Factor Loadings	Eigen-value	Var. (%)	Reliability Coefficient	Communality
Cooperation		2.25	5.3%	.889	
OEVR	.458				.537
VCKO	.805				.702

VCMA	.681				.638
OEUK	.602				.589
OEII	.525				.739
OEIK	.717				.724
Depend	.521				.589
Reputation		19.54	46.53	.924	
PIER	.708				.694
Rewards	.736				.645
EKR	.760				.718
PAVR	.647				.678
Prestige	.675				.694
Credibility	.831				.725
Authority	.850				.735
Altruism		.877	2.08	.849	
HOE	.447				.608
HESP	.465				.613
CESP	.454				.628
ETD	.458				.680
Trust		2.16	5.14	.928	
ESSMPI	.804				.724
Trustworthy	.814				.755
Promises	.833				.781
ESMCM	.874				.806
ESMT	.863				.842
Community Identification		1.05	2.50	.917	
STOE	.603				.748
SOB	.654				.757
FTE	.823				.792
SOP	.623				.720
PSMEE	.823				.686
SMSLI	.549				.697
Ecotourists Satisfaction in Socialisation through Social Media		1.27	3.03	.808	
HSIE	.771				.622
SARE	.737				.650
SEE	.801				.679
SOSE	.728				.623
SSPAV	.536				.567
Intention to share knowledge		1.58	3.77	.898	
IWSEK	.584				.683
IWSPAV	.545				.648

MIEKH	.579	.690
IWRSM	.762	.751
IIEK	.688	.706
FIEE	.682	.642

However, the eigenvalues of the factor of altruism were below the value of 1. An eigenvalue of 1 reflects an adequate level of variation (Field, 2009). However, Jolliffe (1986) posited a cut-off eigenvalue of >0.70 for factors to be retained (Field, 2009; Jolliffe, 1986). Besides the Cronbach alpha value of the factor, altruism, was above 0.7 and the communality values of the items under these factors were above 0.6. As a result, the factors of altruism have been retained.

4.6 Main Study

Based on the assessment of the measurement items at the EFA for the pilot study, the research instrument was finalised for further in the survey for the main study. No item was removed from the research instrument anticipating that the main study having a larger sample size could have different implications for the items.

The survey for the main study was conducted in the period between 5th September, 2013 and 5th January, 2014. The sites where the data for the main survey were collected were 3 nature-based attractions in and around Kuala Lumpur; KL Bird Park, Forest Research Institute of Malaysia (FRIM) in Kepong, the Dark Caves in Batu Caves and the Bukit Nanas Forest Reserve. Most of these sites were also the sites for data collection during the pilot study. The Bukit Nanas Forest Reserve was not included during the pilot study survey period between 5th July, 2013 and 25th

July, 2013 as it was closed for maintenance. Therefore the Bukit Nanas Forest Reserve was included in survey for the main study since this site is among the four main nature-based attraction sites in Kuala Lumpur identified in this study. The research instrument (questionnaire) was distributed to the respondents at the entry/exit points to the nature-based attractions as well as within the attractions wherever possible. 600 questionnaires were distributed and 590 were returned. Out of the 590, 40 were removed as they were found incomplete.

4.6.1 Data Analysis Methods for Main Study

At the beginning, data screening was conducted to remove and refine the data in terms of outliers and missing data. After this process, a sample size of 543 was used for analysis for the main study. Normality tests were then conducted. After which the EFA was conducted followed by CFA.

4.6.2 Data Screening

The process of data screening is one process to be carried out prior to running statistical analysis. For data screening, accuracy of the data files will be determined. Moreover, the missing data will also be controlled (Hair jr., et al., 2010, p.659). However, there were no cases of missing data found. Followed by this, are outliers which also need to be controlled. Outliers can be univariate or multivariate. Univariate outliers refer to scores in a single item which are rare or separated from the mean value and multivariate outliers refer to atypical cases of combination of values on more than one item (Hair jr., et al., 2010, p.612). There were 7 cases of

outliers found which were removed. Finally, the univariate and multivariate normality is to be examined to ensure that data is conforming to a normal distribution. This study uses the maximum likelihood estimation method under structural equation modelling. This requires the data to be normally distributed. The study focussed on the univariate distribution of the data to check the normal distribution of the data based on the cut-off point of Skewness of <3 and <.8 (Kline, 2005).

4.6.3 Exploratory Factor Analysis for Main Study

Exploratory Factor Analysis (EFA) is commonly used statistical technique to explore the fundamental composition of a set of observed variables. According to Sung and Mayer (2012) EFA is intended to investigate whether there is an underlying structure in the pattern of correlations among items in the questionnaire. Factor analysis provides the tools for analyzing the structures of the interrelationships (correlations) among a large number of variables (Hair jr., et al., 2010; p.). Varimax rotation will be used in this context. According to Sung and Mayer (2012) EFA is intended to investigate whether there is an underlying structure in the pattern of correlations among items in the questionnaire. Sung and Mayer (2012) employed the EFA in the third phase of their data analysis; this was done by means of a principal component analysis alongwith varimax rotation. This third phase of EFA was followed by the confirmatory factor analysis (CFA) in this study (Sung & Mayer, 2012). Some of the parameters in relation to EFA that were looked at in this study were the Bartlett's Test of Sphericity, Kaiser- Mayer-Olkin(KMO),

common variance levels and communality as well as eigenvalues and finally the factor loading aspects.

In this study, Bartlett's Test of Sphericity and Kaiser- Mayer-Olkin(KMO) values were indicative of the adequacy of the correlations between variables and patterns of correlations between variables respectively(Field, 2009; Hair et al.,2010). With regards to Bartlett's Test of Sphericity, statistically significant (sig<.05) is indicative of sufficient correlation between variables collectively (Hair jr., et al., 2010). In terms of KMO, values close to 1 i.e. values between .8 and .9 and above .9 are deemed to be excellent (Field, 2009). In terms of common variance, a solution that comprises of 60% or more of the total variance is considered acceptable especially in the context of social sciences studies (Hair jr., et al., 2010). In this study, the variance both in the EFA results of the pilot and main study accounted for more than 60% of the total variance and was therefore considered practically well-applicable.

Communality explains "the proportion of common variance present in a variable"(Field, 2009; p.637). In normal circumstances a communality value of a variable ≥ 0.5 is considered significant. In this study in both the cases of the EFA for pilot study and main study, the communality values were ≥ 0.5 (Hair et al., 2010).

Eigenvalues "indicate the relative importance of each factor in accounting for the variance associated with the set of variables"(Hair yr., et al., 2010; p.). In usual circumstances, an eigenvalue of more than 1 is considered significant while in

certain cases values close to 1 can be also be deemed significant (Hair jr. et al., 2010). However, Jollife (1986) suggested that the criterion of having eigenvalues of more or close to 1 is quite stringent and a more flexible value may be suggested which is an eigenvalue ≥0.7 (Field, 2009). The criterion of eigenvalues close to 1 or over 1, also referred to as Kaiser's criterion, may be suggestive for cases with sample sizes exceeding 250 (Field, 2009). In this study, the pilot study involved a sample size of 200 and the first set of data from the main survey (calibration sub-sample) used for EFA has a sample size of 250. Therefore this study followed the criterion suggested by Jollife (1986).

A factor loading explains the correlationship between a variable and factor (Hair jr., et al., 2010). The factor loading values is considered significant based on different contexts with varying sample sizes. In some cases, the significance level of 0.5 is followed. However, Hair jr., et al., (2010) suggested factor loading value of ≥ 0.4 significant for a sample size of 200 while for sample sizes of 250 and 350 or above, factor loading values of .35 and .30 can be considered significant respectively.

4.6.4 Reliability and Validity Tests

In terms of reliability in the EFA, cronbach alpha value is used as a measure to examine the internal consistency of the scales. In many cases, a cronbach value of ≥0.7 is considered to confirm reliability while values above .80 and .90 are considered extremely well (Field, 2009). However, in cases in which the constructs are psychological in nature, Cronbach alpha less than 0.7 may be expected due to the diversity of such constructs (Field, 2009; Kline, 1999).

In the CFA, the scales which were used in the study underwent reliability tests through the calculation of the composite reliability. It refers to the reliability of the indicators of construct that represent the respective latent construct (Hair jr., et al., 2010, p.656). While there is no universally accepted cut-off value for composite reliability, it is suggested that composite reliability values between 0.60 and 0.90 is well acceptable (Nunkoo, Ramkissoon & Gursoy, 2013).

Validity refers to determine if the possibility of a construct is the fundamental cause for covariations between items. When it comes to validity of the measurement model in the CFA, there are two types; convergent and discriminant validity. Convergent validity refers to the extent to which constructs within a model or study are correlated while discriminant validity refers to the extent to which constructs or concepts in a study are distinct from each other (Hair jr., et al., 2010). Convergent validity is determined by the value of the Average variance extracted (AVE). Average variance extracted (AVE) is used to assess the amount of variance in a set of items in a scale in relation to measurement error. If the AVE value is ≥ 0.5, it is indicative of obtaining convergent validity (Nunkoo et al., 2013).

Discriminant validity is achieved by comparing the squared correlation between a pair of traits with the AVE of the two traits; if the AVE value is more than squared correlation between a pair of traits then it is indicative of obtaining discriminant validity (Nunkoo et al., 2013). The second way to determine discriminant validity is by looking at whether the correlations values between the constructs from the CFA

results are ≤.85. The correlation value between the constructs >.85 indicates poor discriminant validity (Kenny, 2012). However, Bagozzi, Yi and Philips (1991) suggested that if the correlation values between pair of traits are all below 1.00, it is indicative of achieving discriminant validity (Bagozzi, Yi & Philips, 1991). However, though it is posited that correlations between constructs or traits are conceptually expected to be significantly low or lower than 1.00 to meet discriminant validity, Byrne (2010, p.294) argues that "such findings are highly unlikely in general, and with respect to psychological data in particular". This study therefore mainly follows the conditions for achieving discriminant validity suggested by Bagozzi, Yi and Philips (1991) and partially by Kenny (2012).

4.6.5 Second/Higher Order Factor

Second order /higher order factors refer to hierarchical factorial structure that represent and explain first order factors (Byrne, 2010). In other words, the first-order factors are dimensions representing a higher/second order factor. In this study, VOC or value in online communities is the second order factor represented by the first-order factors of cooperation, reputation, altruism, trust and community identification leading to a hierarchical model.

4.6.6 Mediator

A mediator is a predictor variable that influences the connection between an independent variable and dependent/outcome variable. The purpose of having a mediator in a model is to obtain a more apt explanation of the relationship between an independent variable and dependent/outcome variable. According to Bennett

(2000; p.416), “a mediator is a variable that specifies how the association occurs between an independent and an outcome variable”. The effect of a mediator is examined whenever there appears “a significant direct effect between the independent and an outcome variable, but there is a possibility that mediator variable conceptually occurs between the two variables” (Bennett, 2000; p.416). A sobel test is normally conducted to examine whether the mediator has a significant effect between an independent and an outcome/dependent variable (Sobel, 1982). In the context of this study, satisfaction in socialisation via social media is regarded as the mediating factor predicting the association between the independent factor of VOC and the outcome/dependent variable of intention to share knowledge. The mediating effect of satisfaction in socialisation via social media will be examined in the main study by means of the use of the Sobel test.

4.6.5 Structural Equation Modelling (SEM)

The study uses structural equation modelling (SEM) techniques for analysing the main survey data given the complexity of the theoretical model used in this study. The distinctive analytical tools available in SEM can facilitate analyzing relationships and interrelationships between the constructs in the theoretical model in the study. Structural equation modelling (SEM) is a “family of statistical models that seek to explain the relationships among multiple variables” (Hair jr. et al., 2010, p.634). SEM is also referred to as a modern multivariate technique that involves both multiple regression and confirmatory factor analysis to measures a series of interrelated dependence relationships concurrently (Hsu & Lin, 2004). SEM permits a way more convenient in doing research analysis in terms of evading challenges of

multicollinearity and correlated dependent variables evident in many older statistical techniques (Cameron & Webster, 2011). SEM can test causal relationships between constructs in a theoretical model with a number of measurement items (Lin, 2007). According to Qin et al., (2011) "SEM is a statistical methodology that is ideal for testing a priori theoretical and measurement assumptions against empirical data".

The application of SEM in studies normally involves a two stage model-building process. Normally the first stage involves the confirmatory factor analysis (CFA) to study the reliability and validity of the measurement model. The second stage involves the analysis of the structural model to test the relationships between the constructs in the theoretical model (Cameron & Webster, 2011; Lin, 2007; Chiu et al., 2006). Examining the measurement model often involves the determination of the ways in which constructs in a research model are measured as per observable indicators which are scale items in the questionnaire (Hsu & Lin, 2008; Hsu & Lu, 2004; Qin et al., 2011). In other words, it attempts to reflect the relationship between latent variables and observed variables; the latent variables being empirical measures of the constructs of the theoretical model (Hsu & Lu, 2004). Examining the measurement model involves the determination of the strength and course of the relationships among latent constructs in the research model (Hsu & Lin, 2008; Qin et al., 2011). SEM has been widely used in information systems studies to examine the causal relationships between the constructs in a theoretical model (Qin et al., 2011). Previous studies on the benefits of using social media by tourists have employed structural equation modelling to test hypotheses and analyse data (Parra-Lopez,

2011; Wang & Fesenmaier, 2004). According to Hair jr. et al., (2010, p. 635), the main characteristics of SEM are:

1. Estimation of multiple and interrelated dependence relationships.
2. An ability to represent unobserved concepts in these relationships and account for measurement error in the estimation process
3. Defining a model to explain the entire set of relationships

SEM is an often used in constructing confirmatory model. A Goodness-of-fit measures will be looked into by using multiple indices to examine the degree of acceptable fitness between the proposed model and the data (Hair jar., et al., 2010, p.665).Based on the explanation above and the considerable extent of use of SEM in previous literatures, this study applies SEM to examine the proposed conceptual model and the causal relationships. This study uses Amos 6.0, a SEM software program used widely in research (Cameron & Webster, 2011).

4.6.5.1 Confirmatory Factor Analysis

Confirmatory Factor Analysis (CFA) is a statistical technique to validate the composition of observed variables and test the hypothesis relating to the relationships between observed variables and the fundamental latent constructs in the proposed structure. Chiu et al., (2006), Lin (2007), Cameron & Webster (2011) and Hsu & Lin, (2008) in their studies conducted the CFA to assess the reliability and validity of the items of the measurement model.

4.6.5.2 Maximum Likelihood Estimation

Maximum likelihood estimation (MLE) is process which repeatedly improves parameter estimates to minimize a specified fit function study (Hair jr., et al., 2010, p.632). It is the most commonly used SEM estimation technique and is considered a default in most software programs based on SEM. MLE when compared with other techniques have produced relatively much reliable results based on a number of circumstances and it has also been found to be reasonably effective in cases there are problems in the normality assumptions in data set (Hair jar., et al., 2010, p.663).

4.6.5.3 Fit Indices

Fit indices refer to the measure that determines whether data represents well the specified model. The Goodness-of-fit measures the "relative amount of variance and covariance" (Byrne, 2010; p.77). The aspects measured in this study were Goodness-of-fit indices (GFI), Root Mean Square Error of Approximation (RMSEA), nor med chi-square ($\chi 2^{)}$ as well as comparative fit index (CFI) and Tucker Lewis Index (TLI). While the GFI, RMSEA and normed chi-square ($\chi 2^{)}$ belong to absolute fit indices, CFI and TLI belong to incremental fit indices. With regards to GFI, values greater than .90 are considered very well (Byrne, 2010). For RMSEA, values between 0.03 and 0.08 are deemed acceptable and good while values below 0.05 are considered excellent (Byrne, 2010; Hair jar. et al., 2010). With neither regards to nor med Chi-square (χ^2), *p* values with significance <.000 are generally accepted. With regards to CFI and TLI, values close to .95 or more are considered excellent (Byrne, 2010).

4.7 SUMMARY

This chapter explains the process through the instrument has been developed as well as the measurement items have been developed. This was followed by the aspects of data collection in relation to settings, sampling design and sample size. Next were the details of the results of the pilot study. Finally, some discussions on structural equation modelling (SEM) in terms of its use for the data for the main study, the reasons for its intended use in this study as well as some its key elements were provided.

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CHAPTER 5 FINDINGS

5.1 FOREWORD

This chapter reports and discusses the findings of the findings. The findings emerge from the analysis based on the methodological approaches as mentioned in the previous chapter. The first part of this chapter explains on aspects of data normality, descriptive statistics and demographic statistics. This is followed by illustrations and explanations on the results of exploratory factor analysis, confirmatory factor analysis and the structural models. The final segments provide detailed discussions on the results in relation to the hypotheses in the model and theoretical and practical implications of the results.

5.2 Demographic Characteristics

This section discusses about the demographic aspects of the respondents as shown in Table 5.1. Out of the 600 structured questionnaires were used for the survey, 543 were returned. From the table 5.1, the first three demographic data that appears are data on soft and hard ecotourists and social media users. These data is based on the 3 screening questions that were used in the survey questionnaire to determine whether the respondents were ecotourists (soft or hard) and had used social media in relation to visiting ecotourism sites in Kuala Lumpur. Out of the respondents (n= 543), 27 % (147) were hard ecotourists and 73% (396) were soft ecotourists. This shows that

the respondents were ecotourists according to the conditions laid down in the screening questions for soft and hard ecotourists based on the literature. This confirms the findings of some of the previous studies which found most visitors to natural areas were not inclined towards hard-core ecological experiences but were consumers of nature-based expriences which involves a mix of more of recreational activities with some aspects of ecologically-based activities (Hughes & Morrison-Saunders, 2005; McKercher, 1993). As regards to social media usage, all the respondents were found to be users since this was the most imperative screening question for a respondent to continue responding to the questions in the questionnaire given the context of the study. This conforms to the observations of Lu and Stepchenkova (2012, p.704) ecotourists due to their younge age and being more educated use social media as a "reliable and credible" source of information.

In terms of the gender ratio, out of the respondents (n= 543), 55% (299) were females and 45% (244) were males. In terms of the marital status, 39.4% (214) of the respondents were unmarried and 59 % (320) were married and about 1.6 % (9) fell in others category. In terms of age, the age-group of 25-34 and 35-44 comprised 37.8% and 29.2% followed by the age-group of 18-24 comprising 21.8%. In terms of education levels, almost 59% were educated at the bachelors level followed by 23.3 % of the respondents who were educated at the level of diploma/higher diploma followed by 10.5% of the respondents who had masters degree. Both the age and educational data reflect the fact that ecotourists are relatively younger with higher education levels. The age-group of 25-34 and 18-24 comprise almost 60% of the respondents followed by the age –group of 35-44 who are also reasonably young.

The education levels comprised 59% with Bachelors qualification and 10.5% of Masters Degree holders which combines to form almost 69.5% of the respondents. This is accordance with the past literature on ecotourists' demographic profiles which found that ecotourists were relatively younger and also relatively with higher educational levels (Lu & Stepchenkova, 2012; Wight, 2001). However, Sharpley (2006) and Eagles and Casganette (1995) found ecotourists to be older referring to the baby boomer generation about a decade or more ago in the Western context but Fennell (1999) and Marques et al., (2010) found ecotourists to be younger in the Asian context. Interestingly, the respondents in this study were primarily from Western countries but were much younger compared to the age-group of ecotourists in the western context as found in some previous studies. This could possibly indicate a new trend in ecotourist activity as baby boomers don't seem to be the only educated and wealthy travelers but a younger generation of nature-based recreation appreciating and internet savvy travelers are also found to be reasonably educated and having the income levels to travel. Moreover, 87% of the respondents were found to be employed reflecting their financial abilities to travel. However, this study did not look into the details of income levels as it was found not related to the context of this study. Moreover, there could be the possible reluctance of the respondents to reveal their income levels since it involves their financial status which are in many cases found to be confidential. Finally in terms of the respondents' number of visitations to Kuala Lumpur for ecotourism, for 71.9% of the respondents, it was their second visit.

In terms of ecotourism activities, the two most undertaken activities were nature-viewing and jungle trekking/biking. Nature-viewing was undertaken by 57.2% of the respondents and jungle trekking/biking was undertaken by 56.9% of the respondents. This was followed by caving (56.3%), bird watching (43.1%) and canopy walk (30.3%). Wight (2001) and Tao et al., (2004), Kim et al., (2008) and Cini et al., (2010) found nature-viewing, jungle trekking and hiking, caving and birdwatching as popular ecotourism activities among ecotourists. In terms of top of sources of ecotourism knowledge in Kuala Lumpur, websites of ecotourism attractions were found to be the top source (74.7%) followed by social media sites (39.6%). This again conforms to the observations of Lu and Stepchenkova (2012) as most respondents were internet savvy in terms of obtaining information and knowledge on ecotourism attractions in Kuala Lumpur. However, Wight (2001) and Wearing and Neil (2009) in contrast focused more non-electronic sources like published materials, associations and magazines for reaching and providing necessary knowledge to ecotourists. This is indicative of the fact that social media/online mediated knowledge provision is getting considerable acceptance by ecotourists. In terms of the social media sites used, Facebook was found to be most popular with 93.4% of the respondents claiming to use it the most followed by Trip Advisor (69.4%). Other social media sites used were twitter (45.7%), Virtual Tourist (47.5%) and YouTube (26.2%). Flickr and Instagram were found to be used by 7.9% and 2.6% of the respondents respectively for ecotourism purposes. Finally in terms of nationality, majority of the respondents were from UK (26.1%), USA (25%) and Australia (19.1%). This reflects the fact that ecotourists also find Facebook and trip

Advisor as a popular medium to socialise online and gather and share useful information and knowledge as other segments of tourists (Santos, 2012).

Table 5.1 Demographic Profile(Main Study)

Items	Frequencies	Percentage (%)
Soft Ecotourists	396	73
Hard Ecotourists	147	27
Social Media Users	543	100
Gender	**Frequencies**	**Percentage (%)**
Male	299	55
Female	244	45
Marital Status	**Frequencies**	**Percentage (%)**
Unmarried	214	39.4
Married	320	59
Others	9	1.6
Age	**Frequencies**	**Percentage (%)**
Less than 18	11	2.0
18-24	119	21.8
25-34	206	37.8
35-44	159	29.2
45-54	42	7.7
55 or Above	8	1.5
Education	**Frequencies**	**Percentage (%)**
Less than High School	2	.3
High School	38	7.0
Diploma/Higher Diploma	127	23.3
Bachelors Degree	321	58.9
Post Graduate/Masters Degree	57	10.5
Travel to the attraction in KL	**Frequencies**	**Percentage (%)**
Once(excluding current visit)	392	71.9
Twice	110	20.2
More than twice	43	7.9
Employment	**Frequencies**	**Percentage (%)**
Employed	474	87
Unemployed	69	13

Table 5.2 Other Aspects of Demographic Profile of Respondents (Main Study)

Items	Frequencies	Percentage (%)*
Bird watching	235	43.1
Nature-viewing	312	57.2
Jungle Trekking/Biking	310	56.9
Caving	307	56.3
Canopy Walk	165	30.3
Source of Ecotourism Knowledge in Kuala Lumpur	**Frequencies**	**Percentage (%)***
Word-of-mouth	41	7.5
Travel Books/brochures/guide	192	35.2
Website of ecotourism attractions	407	74.7
Social Media sites	216	39.6
Social Media Sites Used	**Frequencies**	**Percentage (%)***
Facebook	509	93.4
Twitter	249	45.7
Trip Advisor	378	69.4
Virtual Tourist	259	47.5
YouTube	143	26.2
Flickr	43	7.9
Nationality	**Frequencies**	**Percentage (%)**
UK	142	26.1
USA	136	25.0
Australia	104	19.1
Spain	37	6.8
France	27	5.0
New Zealand	12	2.2
Canada	16	2.9
Italy	10	1.8
Singapore	9	1.7
Other Countries (Sweden, Switzerland, Vietnam, Greece, Albania, Croatia, Germany, Austria, Russia, Portugal, Holland, Ukraine, Norway, Sri Lanka, China, India, Japan, Fiji,	50	9.4

Philippines, Kazakhstan)

*** The frequency does not sum up to 100% because of multiple responses.**

5.3 Data Normality

The distribution of the data is an essential aspect in the use of SEM. The univariate and particularly multivariate normality is highly imperative since SEM has been found to be sensitive to the lack of multivariate normality. Lack of multivariate normality can lead to inflating of the Chi-square which in turn, results in firstly, upward bias of critical values in the process of determining co-efficient significance and secondly, affecting standard values (Babbie, 2004; Marchand, Kettinger, & Rollins, 2001). From Table 5.3, it is evident that the absolute values of skewness of all 33 variables ranged between .147 and 1.464 and the absolute values of kurtosis ranged between .340 and 4.464. These values mean that the variables were within the cut-off points of skewness (< 3.0) and kurtosis (<8.0) (Kline, 2005). This was indicative of the fact that the data did not appear to deviate too much from the normal distribution. However, multivariate normal distribution is not automatically achieved through a normal univariate distribution. Large sample size can inflate the chi-square values affecting the multivariate normality and hence data in many studies have been found to be unable to meet the assumptions for multivariate normality.

Table 5.3 Univariate and Multivariate Normality Test

Variable (*N=42*) Cooperation	Skew	*C.R.	Kurtosis	*C.R
OEVR	-.252	-2.393	.340	1.617
VCKO	-.596	-5.665	.775	3.687
VCMA	-.893	-8.497	2.438	11.597
OEUK	.859	-.8.174	1.563	7.434
OEII	-.813	-7.732	1.619	7.700
OEIK	-.827	-7.865	1.776	8.448
Depend	-.811	-7.714	1.648	7.839
Reputation	Skew	*C.R.	Kurtosis	*C.R
PIER	-.896	-8.526	1.162	5.529
Rewards	-.864	-8.217	1.562	7.429
EKR	-.704	-6.696	1.221	5.809
PAVR	-.815	-7.751	1.299	6.179
Prestige	-1.087	-10.345	1.979	9.414
Credibility	-.890	-8.471	2.442	11.617
Authority	-1.464	-13.928	4.464	21.235
Altruism	Skew	*C.R.	Kurtosis	*C.R
HOE	-.658	-6.256	1.353	6.436
HESP	-1.326	-12.613	3.171	15.085
DPAV	-1.058	-10.068	3.286	15.630
CESP	-.961	-9.147	2.246	10.684
ETD	-.941	-8.951	1.782	8.477
Trust	Skew	*C.R.	Kurtosis	*C.R
ESMK	-1.118	-10.640	2.609	12.410
ESSMPI	-.917	-8.719	1.704	8.106
Trustworthy	-.871	-8.285	1.175	5.591
Promises	-.854	-8.124	.978	4.654
ESMCM	-.977	-9.298	1.085	5.163
ESMT	-.786	-7.473	1.220	5.804
Community Identification	Skew	*C.R.	Kurtosis	*C.R
STOE	-1.128	-10.733	2.143	10.191
SOB	-.875	-8.319	1.704	8.108
FTE	-.572	-5.440	1.288	6.127
SOP	-.860	-8.177	1.464	6.962
PSMEE	-.758	-7.212	1.081	5.141
SMSLI	-1.036	-9.858	1.811	8.612
Ecotourists Satisfaction in Socialisation via Social Media	Skew	*C.R.	Kurtosis	*C.R
HSIE	-.961	-9.140	2.408	11.456
SARE	-.778	-7.404	1.622	7.716
SEE	-.709	-6.748	1.318	6.268

SOSE	-1.039	-9.884	2.447	11.641
SSPAV	-1.303	-12.400	2.795	13.296
Intention to Share Knowledge	Skew	*C.R.	Kurtosis	*C.R
IWSEK	-1.24	-11.833	2.687	12.544
IWSPAV	-1.20	-11.412	2.886	13.727
MIEKH	-.950	-9.037	2.127	10.116
IWRSM	-.709	-6.740	1.937	9.213
IIEK	-1.189	-11.313	2.527	12.021
FIEE	-1.189	-11.312	2.323	11.051
Multivariate			68.87	13.19

*C.R. (Critical ratio) - referred to standard normal distribution; C.R. values > 1.96 Indicate two-sided significance at 5% level

5.4 Descriptive Statistics

Table 5.4 demonstrates the mean and standard deviation of all the 33 variables. The scale ranges from 7- strongly agree, 6- agree, 5- somewhere agree, 4- neither agree or disagree, 3- somewhat disagree, 2- disagree, 1- strongly disagree. The mean value lies before the neutral score for all indicators. The mean values are indicative of the fact that the respondents tended to positive rate the dimensions in most cases.

Table 5.4 Means and Standard Deviations of Measurement Items

Cooperation	**Mean**	**Std. Deviation**
OEVR	5.22	.817
VCKO	5.47	.912
VCMA	5.43	.873
OEUK	5.45	.922
OEII	5.50	1.020
OEIK	5.48	.973
Depend	5.49	.951
Reputation	**Mean**	**Std. Deviation**

PIER	5.38	.893
Rewards	5.22	.988
EKR	5.39	1.037
PAVR	5.51	1.047
Prestige	5.50	1.052
Credibility	5.33	.914
Authority	5.45	.949
Altruism	**Mean**	**Std. Deviation**
HOE	5.38	.746
HESP	5.55	.831
DPAV	5.45	.968
CESP	5.59	1.023
ETD	5.59	.985
Trust	**Mean**	**Std. Deviation**
ESMK	5.12	1.079
ESSMPI	5.26	1.213
Trustworthy	5.21	1.188
Promises	5.09	1.129
ESMCM	5.04	1.013
ESMT	5.30	.928
Community Identification	**Mean**	**Std. Deviation**
STOE	5.37	.841
SOB	5.33	.919
FTE	5.34	.805
SOP	5.49	.941
PSMEE	5.53	.977
SMSLI	5.44	1.002
Ecotourists Satisfaction in Socialisation through Social Media	**Mean**	**Std. Deviation**
HSIE	5.45	.806
SARE	5.46	.887
SEE	5.54	.954
SOSE	5.63	1.008
SSPAV	5.55	1.042
Intention to Share knowledge	**Mean**	**Std. Deviation**
IWSEK	5.59	.909
IWSPAV	5.38	1.013
MIEKH	5.50	1.002
IWRSM	5.48	.882
IIEK	5.66	.931
FIEE	5.68	.983

Mean values of the variables under cooperation, reputation, altruism trust, community identification, ecotourists satisfaction in socialisation through social media as well as intention to share knowledge show that the respondents in general

terms rated them positively in terms of good understanding and agreement with the statements.

5.5 Reliability of the Measurement scales

Reliability analysis is an essential test to determine that the scale associated with measuring a construct dependably represents it (Hair et al., 2010). For ascertaining internal consistency of the VOC dimensions of cooperation, reputation, altruism, trust, community identification as well as the constructs of ecotourists satisfactions in socialisation via social media and intentions to share knowledge, reliability analysis was carried out. Statistically speaking, reliability is represented by Cronbach alpha value and the cut-off point value is >0.7. From Table 5.5, it is clearly evident that majority of the measurements of the constructs had Cronbach alpha value above 0.8.

Table 5.5 Reliability of Constructs

Variables	Reliability Coefficient
Cooperation	.879
OEVR	
VCKO	
VCMA	
OEUK	
OEII	
OEIK	
Depend	
Reputation	.890
PIER	

Rewards	
EKR	
PAVR	
Prestige	
Credibility	
Authority	
Altruism	.828
HOE	
HESP	
DPAV	
CESP	
ETD	
Trust	.911
ESMK	
ESSMPI	
Trustworthy	
Promises	
ESMCM	
ESMT	
Community Identification	.872
STOE	
SOB	
FTE	
SOP	
PSMEE	
SMSLI	
Ecotourists Satisfaction in Socialisation through Social Media	.836
HSIE	
SARE	
SEE	
SOSE	
SSPAV	
Intention to share knowledge	.888
IWSEK	
IWSPAV	
MIEKH	
IWRSM	
IIEK	
FIEE	

5.6 Measurement Models

The main survey data sample was divided into two parts or subsets. One of the data set is referred to as calibration sub-sample and the other is referred to as validation sub-sample. The first one is used for exploratory factor analysis (EFA) and the second one used for confirmatory factor analysis (CFA) (Carneiro, Rocha & Da Silva, 2009). This practice is followed due to the reasons of overfitting i.e. making a model excessively complicated to describe the idiosyncrasies in a data set (MacCallum, Roznowski & Necowitz, 1992; Hair et al., 2010). Therefore, this study randomly halved the main survey data into two, one as the calibration sub-sample (N=250) and the second one as validation sub-sample (293). The calibration sub-sample was used to run an EFA to eliminate items that were cross-loading i.e. to reduce the data set to a manageable size for a clearer understanding of the implications from the data of the study as well as the underlying structures of the constructs (Field, 2009). The validation sub-sample was used for running the confirmatory factor analysis to determine the dimensionality, composite reliability, convergent and discriminant validity of the data set. The study involved CFA model for first order variables - cooperation, reputation, altruism and trust under VOC and the CFA model for the overall conceptual model. The study also involved a CFA for the second order variable, VOC.

5.6.1 Overall Exploratory Factor Analysis (EFA)

EFA for all the constructs in the proposed model and based on the calibration sub-sample (N=250) was carried out to identify groups of variables and possible underlying dimensions. In terms of the variance, all the factors generated 62.16% of the total variance. Trust explained 36.27% of the variance, reputation generated

6.61%, and intention to share knowledge generated 9.24% of the variance followed by cooperation (5.5%), ecotourists satisfaction in socialisation via social media (4.5%) and altruism (3.1%) and reputation (3.5). The value of Kaiser-Meyer-Olkin (KMO) was 0.93 which is considered extremely well and hence the factors yielded are reasonably distinct and reliable (Field, 2009). Bartlett's test of Sphericity was also found to be at a significant level $p < .000$ and $\chi^2 = 3085.64$ and df = 351. In terms of reliability statistics, the Cronbach alpha values were all above 0.7 except for the factor of ecotourists' satisfaction in socialisation via social media had a Cronbach alpha value of .691. Constructs which are psychological with Cronbach alpha less than 0.7 is a realistic expectation due to the diversity of such constructs (Field, 2009; Kline, 1999). Since the constructs in this study are psychological in nature, Cronbach alpha values below 0.7 can therefore be expected. Items found to be cross-loadings and with mostly values <0.5 were removed. However, the item 'voluntary contribution of knowledge on social media between me and others leads to mutual advantages for all' with a value of .484 (<0.5) was retained as it had a communality value ≥ 0.5 and also due to the fact that item loadings with values .35 can be considered significant for a sample size of 250 and .30 for a sample size of 350 (Hair jr., et al., 2010).With regards to the communality all others items, all of them had a value of above 0.5 providing adequate explanation for the factors. After this process of deletion of items, there were 26 variables which were retained.

However, the eigenvalues of factors, reputation and altruism, were below the value of 1. An eigenvalue of 1 reflects an adequate level of variation (Field, 2009). However, eigenvalues quite close to 1 can be considered for retaining a factor (Hair

et al., 2010). Moreover, Jolliffe (1986) posited a cut-off eigenvalue of >0.70 for factors to be retained especially for a sample size within 250 (Field, 2009; Jolliffe, 1986). Besides the Cronbach alpha value of these two factors was above 0.7 and the communality values of the items under these factors were above 0.5. As a result, the factors of reputation and altruism were retained.

Table 5.6 EFA Results for Main study

Variable (*N=250*)	**Factor Loadings**	**Eigen-value**	**Var. (%)**	**Reliability Coefficient**	**Communality**
Cooperation		1.50	5.5	.786	
Q1.1 OEVR	.768				.666
Q1.2 OEII	.679				.607
Q1.3 VCKO	.669				.599
Q1.4 EKR	.553				.658
Q1.5 VCKO	.484				.5
Reputation		.952	3.5	.738	
Q.2.1 Authority	.690				.673
Q2.2 HESP	.535				.632
Q2.3 PSMEE	.655				.537
Altruism		.845	3.1	.730	
Q3.1 ETD	.705				.727
Q3.2 Prestige	.662				.647
Q3.3 CESP	.639				.639
Trust		9.79	36.27	.892	
Q4.1 ESMT	.757				.732
Q4.2 ESMCM	.781				.763
Q4.3 Promises	.756				.714
Q4.4 Trustworthy	.710				.736

Q4.5 ESSMPI	.602				.747
Q4.6 ESMK	.513				.631
Ecotourists Satisfaction in Socialisation through Social Media		1.21	4.50	.691	
Q5.1 HSIE	.703				.646
Q5.2 SARE	.633				.603
Q5.3 SEE	.547				.637
Intention to share knowledge		2.49	9.24	.829	
Q6.1 IWSEK	.753				.599
Q6.2 IWSPAV	.731				.609
Q6.3 IIEK	.722				.589
Q6.4 IWRSM	.725				.613
Q6.5 MIEKH	.664				.683
Q6.6 FIEE	.629				.714

As evident from the EFA conducted in the pilot study, the variable/factor 'community identification' was deleted at this stage. It was observed that after running different rotation methods, items related to 'community identification' either cross-loaded with values less than 0.35 or did not load due to the cut-off point of all loadings at ±.40 to accommodate the maximum number of significant loadings possible and facilitating interpretation. Variables with persisting cross-loadings are normally recommended for deletion (Hair et al., 2010). Moreover, one item 'participating in social media would enhance my chance to meet ecotourists who have common interests' related to 'community identification' loaded under the factors reputation that had items with higher loadings representing other variable/factors

(Hair et al., 2010). This provided the rationale based on which the construct 'community identification' was deleted.

The labeling or naming of the factors as shown in table 5.6, was done considering items with higher loadings and also considering the underlying relationships and dimensions (Hair jr., et al., 2010). Moreover, Hair jr., et al., (2010) suggests that labeling of factors is not determined by the factor analysis process run by means of the statistical software but is principally driven by the judgment of the researcher based on his/her subjective analysis of how the labels represents adequately the derived factors. As evident from Table under the factor of cooperation has items as represented in Q1.1, Q1.2 and Q1.3 with higher loadings and are items originally belonging to cooperation that conceptually reflect characteristics of it as per the literature. The same occurred in the cases of the factors of trust, altruism and reputation. With regards to the factor 'Trust', the items represented in Q4.1, Q4.2, Q4.3 and Q4.4 also had higher loadings and are items originally belonging to 'Trust' that conceptually reflect characteristics of it as per the literature. In case of 'Reputation' the item "By having the opportunity to provide effective ecotourism-related knowledge on social media, I can strengthen my authority in social media" had the highest factor loadings and also clearly represented 'Reputation' conceptually leading to the naming of the factor. With regards to the factor 'Altruism', out of the three items, two of them, Q3.1 and 3.3, clearly represented it conceptually and most importantly, Q3.1 “Since I have experiences of about ecotourism trips and destinations that may be of interest to others, I like to help others by sharing it with them on social media" had the highest loading and in turn providing the justification

to name the factor as 'Altruism'. With regards to the factors of 'Ecotourists' Satisfaction in Socialisation via Social Media' and 'Intention to Share Knowledge', all the items conceptually represented the characteristics of the factors based on the literature and hence providing sufficient justification in the naming of the factors.

5.6.2 Confirmatory Factor Analysis

5.6.2.1 Second Order Measurement Model

For the purpose of testing the variables that represented all first order factors under value in online communities, a CFA was carried out based on the validation sub-sample (293). 17 variables represented the latent exogenous/independent constructs.

As evident from Table 5.7, the factor loadings of all the indicators were >0.5. The average variance extracted (AVE) values were >0.5 indicating sufficient convergent validity (Nunkoo, Ramkissoon & Gursoy, 2013). The composite reliability values were all above 0.60 (Hsu & Lin, 2008). The model fit indices reflected were as follows: χ^2 = 213.992, DF= 115, p < .000, χ^2 /DF= 1.86, GFI=.92, TLI= .95, CFI= .96 and RMSEA= .054. Though the model Fit appears good, the value of RMSEA was required to improve and as a result some modifications were done to the model by drawing covariance's between errors with co-variance values ≥ 10. After the modifications, the model fit indices were as follows: χ^2 = 190.154, df= 113, p < .000, χ^2 /df= 1.68, GFI=.93, TLI= .96, CFI= .97 and RMSEA= .048. Hence, an excellent model fit was achieved for the first-order factors under value in online communities.

Table 5.7 Second Order Measurement Model: Value in Online Communities

		Estimate	C.R.	Factor Loading	Sq. Multiple Correlations	Composite Reliability	AVE
Cooperation						0.83	0.50
Q1.1	OEVR	.956	10.79	.706	.498		
Q1.2	OEII	1.22	10.52	.731	.534		
Q1.3	VCKO	1.10	10.81	.711	.506		
Q1.4	EKR	1.24	10.92	.722	.521		
Q1.5	VCMA	1.00		.698	.487		
Reputation						0.79	0.55
Q2.1	Authority	1.08	10.83	.734	.539		
Q2.2	HESP	1.02	11.62	.805	.648		
Q2.3	PSMEE	1.00		.700	.448		
Altruism						0.78	0.55
Q3.1	ETD	.883	10.93	.676	.457		
Q3.2	Prestige	1.11	12.70	.801	.642		
Q3.3	CESP	1.00		.745	.555		
Trust						0.90	0.61
Q4.1	ESMCM	1.34	12.52	.748	.530		
Q4.2	EMST	1.24	13.56	.798	.637		
Q4.3	Promises	1.37	13.12	.798	.637		
Q4.4	Trustworthy	1.30	13.56	.806	.649		
Q4.5	ESSMPI	1.24	13.91	.824	.679		
Q4.6	ESMK	1.00		.735	.540		
Value in Online Communities						0.94	0.79
	Cooperation	1.000		.896	.802		
	Reputation	1.15	9.21	.955	.912		
	Altruism	1.28	9.77	.903	.816		
	Trust	1.09	9.28	.812	.659		

χ^2 = 190.154, df= 113, $p < .000$, χ^2 /df= 1.68, GFI=.93, TLI= .96, CFI= .97 and RMSEA= .048

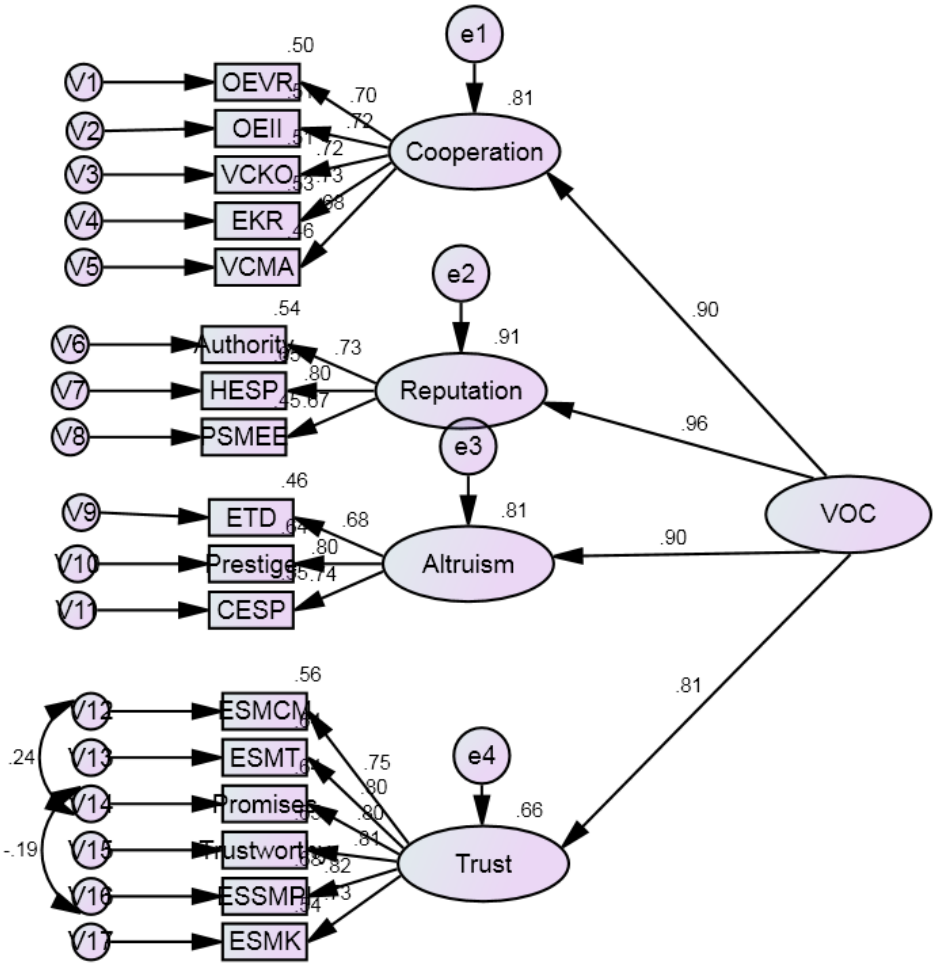


Figure 5.1 Second Order Measurement Model

5.6.2.2. Measurement Model for First Order Factors

The model fit indices initially did not reflect a fit most desirable. The model fit indices were as follows: χ^2 = 463.506, df= 284, p < .000, χ^2 /df= 1.63, GFI= .89, TLI= .95, CFI= .95, RMSEA= .047. The GFI as it appears from the results requires to be improved for the most desirable fit. As a result, covariances were drawn between certain errors with co-variance values ≥ 10 as it appears in Fig5.2. After these modifications, the model fit indices appears more improved: χ^2 = 417.822, df= 281, p < .000, χ^2 /df= 1.48, GFI= .90, TLI= .96, CFI= .96, RMSEA= .041. The value of GFI improved to .9 and the values of TLI and GFI were well above the cut off values of .95 (Byrne, 2010). These results are clearly indicative of the fact that the model sufficiently explains and fits the sample data. The values related to average variance extracted (AVE) values were all ≥ 0.5 indicating sufficient convergent validity (Nuncio, Remission & Gur soy, 2013) and the values related to reliability values were all above 0.60 (Hsu & Lin, 2008) as shown in table 5.8.

Table 5.8: Measurement Model for First Order Factors

	Estimate	C.R.	Factor Loading	Sq. Multiple Correlations	Composite Reliability	AVE
Cooperation					0.83	.50
Q1.1 OEVR	.949	10.62	.693	.481		
Q1.2 OEII	1.21	10.87	.715	.511		
Q1.3 VCKO	1.13	11.04	.720	.518		
Q1.4 EKR	1.26	11.09	.724	.525		
Q1.5 VCMA	1.00		.690	.477		
Reputation					0.78	.54
Q2.1 Authority	1.04	11.03	.723	.522		
Q2.2 HESP	.993	12.02	.802	.646		
Q2.3 PSMEE	1.00		.683	.467		
Altruism					0.78	.55
Q3.1 ETD	.906	11.05	.688	.474		
Q3.2 Prestige	1.11	12.66	.797	.636		
Q3.3 CESP	1.00		.739	.546		
Trust					0.90	0.61
Q4.1 ESMCM	1.30	12.58	.739	.547		
Q4.2 EMST	1.22	13.77	.796	.633		
Q4.3 Promises	1.33	13.18	.787	.619		
Q4.4 Trustworthy	1.27	13.71	.800	.640		
Q4.5 ESSMPI	1.23	14.36	.832	.693		
Q4.6 ESMK	1.00		.747	.558		
ESSSM					0.74	0.50
Q5.1 HSIE	1.00		.700	.490		
Q5.2 SARE	1.18	11.41	.716	.513		
Q5.3 SEE	1.23	11.26	.696	.485		
Intention to Share Knowledge					0.87	0.54
Q6.1 IWSEK	1.0		.751	.564		
Q6.2 IWSPAV	1.10	12.16	.702	.551		
Q6.3 IIEK	1.04	12.93	.748	.559		
Q6.4 IWRSM	1.01	12.78	.738	.544		
Q6.5 MIEKH	1.14	12.83	.742	.551		
Q6.6 FIEE	1.09	12.90	.743	.552		

χ^2 = 417.822, df= 281, $p < .000$, χ^2 /df= 1.48, GFI= .90, TLI= .96, CFI= .96, RMSEA= .041

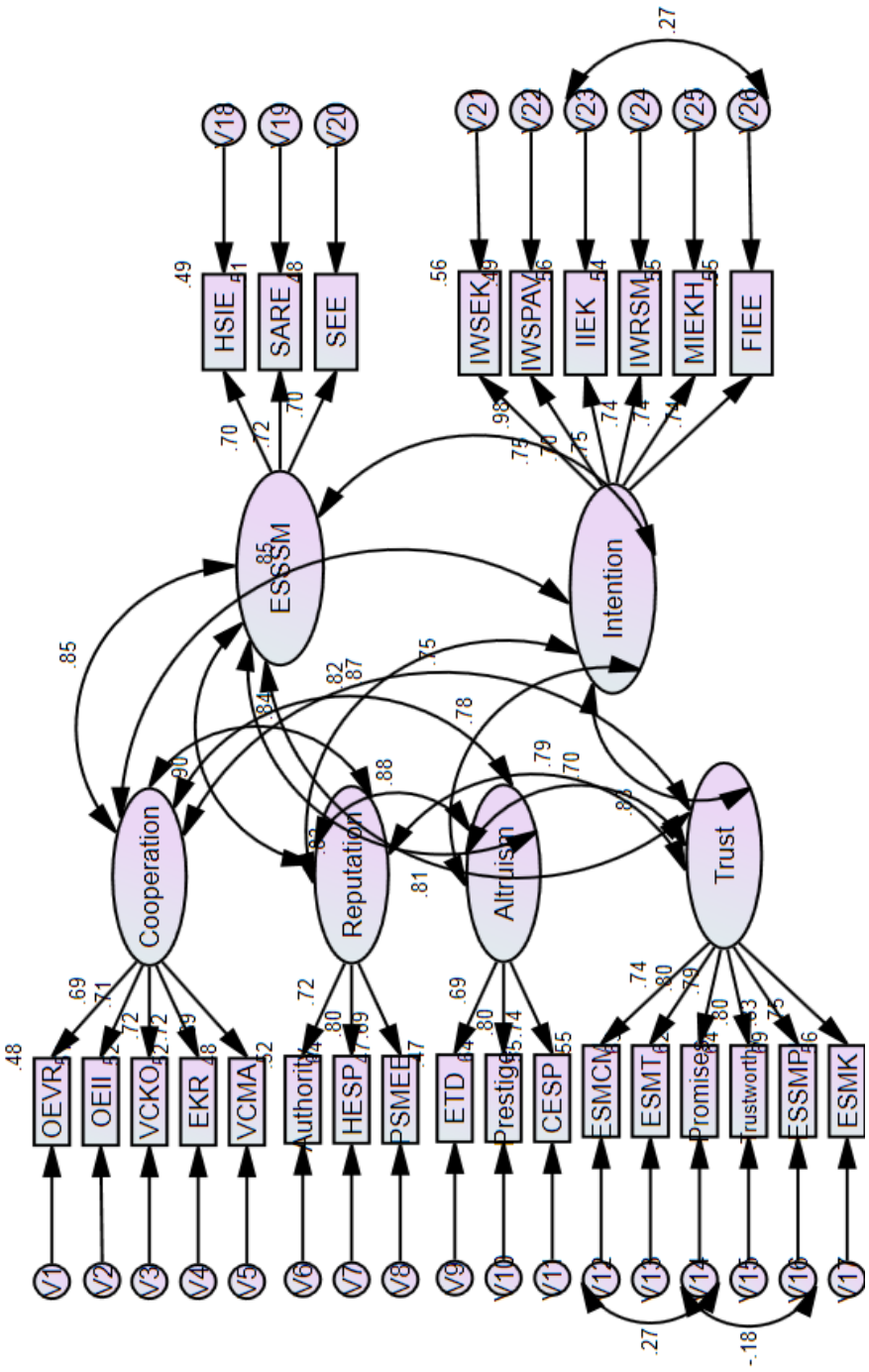


Fig 5.2 Measurement Model for First Order Factors

The correlations values between pair of constructs, as shown in Table 5.9, were mostly ≤.85 indicative of achieving discriminant validity (Kenny, 2012). However, the correlation value between the constructs of reputation and intention, reputation and ESSSM, reputation and altruism and ESSSM and intention were above >.85. But as the correlation values between pair of constructs were all below 1.00, it was clearly indicative of achieving discriminant validity (Bagasse, Yi & Philips, 1991).Though correlations between constructs or traits are conceptually expected to be significantly low or lower than 1.00 to meet discriminant validity, "such findings are highly unlikely in general, and with respect to psychological data in particular"(Byrne, 2010, p.294). Hence, in this study though some correlations between constructs appear high or close to 1.00, the data of this study being psychological in nature such outcomes can be deemed normal and acceptable.

Table 5.9 Correlations

Correlation Between Constructs	Estimate
Cooperation <--> ESSSM	.85
Cooperation <--> Intention	.85
Cooperation <--> Reputation	.84
Cooperation <--> Altruism	.82
Cooperation <--> Trust	.75
Reputation <--> Altruism	.87
Reputation <--> Trust	.78
Reputation <--> ESSSM	.90
Reputation <--> Intention	.87
Altruism <--> Trust	.70
Altruism <--> ESSSM	.82
Altruism <--> Intention	.78
Trust <--> ESSSM	.81
Trust <--> Intention	.83
ESSSM <--> Intention	.96

5.6.2.3. Overall Measurement Model

The next step was to develop and specify the overall measurement model based on the validation sub-sample (293), before developing the structural model. The overall measurement model consists of the second order factor of VOC, the mediating factor of satisfaction in socialisation and the dependent variable of intention to share knowledge. As evident from Table 5.10, it is evident that the factor loadings of all the indicators as >0.5. The squared multiple correlations of most of the indicators were above 0.5 except for only item. The average variance extracted (AVE) values were >0.5 indicating sufficient convergent validity (Nuncio, Remission & Gur soy, 2013). The composite reliability values were all above 0.60 (Hsu & Lin, 2008). The model fit indices reflected. Were as follows: $\chi^2 = 478.629$, df= 292, $p < .000$, χ^2 /df= 1.63 GFI=.88, TLI= .95, CFI= .95 and RMSEA= .047. Since the value of the GFI is required to improved, some modifications were done to the model by drawing covariances between errors with co-variance values ≥ 10. After the modifications, the model fit indices were as follows: $\chi^2 = 433.73$, df= 289, $p < .000$, χ^2 /df= 1.50, GFI=.90, TLI= .96, CFI= .96 and RMSEA= .041. Hence, an excellent model fit was achieved for the factors of value in online communities, satisfaction in socialisation and intention to share knowledge.

Table 5.10: Overall Measurement Model

		Estimate	C.R.	Factor Loading	Sq. Multiple Correlations	Composite Reliability	AVE
Value in Online Communities						0.94	.79
	Cooperation	1.00		.904	.817		
	Reputation	1.17	9.58	.946	.895		
	Trust	1.15	9.64	.845	.713		
	Altruism	1.24	9.77	.876	.768		
ESSSM						0.74	0.50
Q5.1	HSIE	1.00		.700	.490		
Q5.2	SARE	1.19	11.43	.717	.514		
Q5.3	SEE	1.23	11.26	.696	.484		
Intention to Share Knowledge						0.87	0.54
Q6.1	IWSEK	1.0		.753	.568		
Q6.2	IWSPAV	1.09	12.12	.698	.487		
Q6.3	IIEK	1.03	12.89	.744	.553		
Q6.4	IWRSM	1.01	12.85	.739	.547		
Q6.5	MIEKH	1.13	12.86	.742	.550		
Q6.6	FIEE	1.09	12.98	.746	.558		

$\chi^2 = 433.73$, df= 289, $p < .000$, χ^2 /df= 1.50, GFI=.90, TLI= .96, CFI= .96 and RMSEA= .041

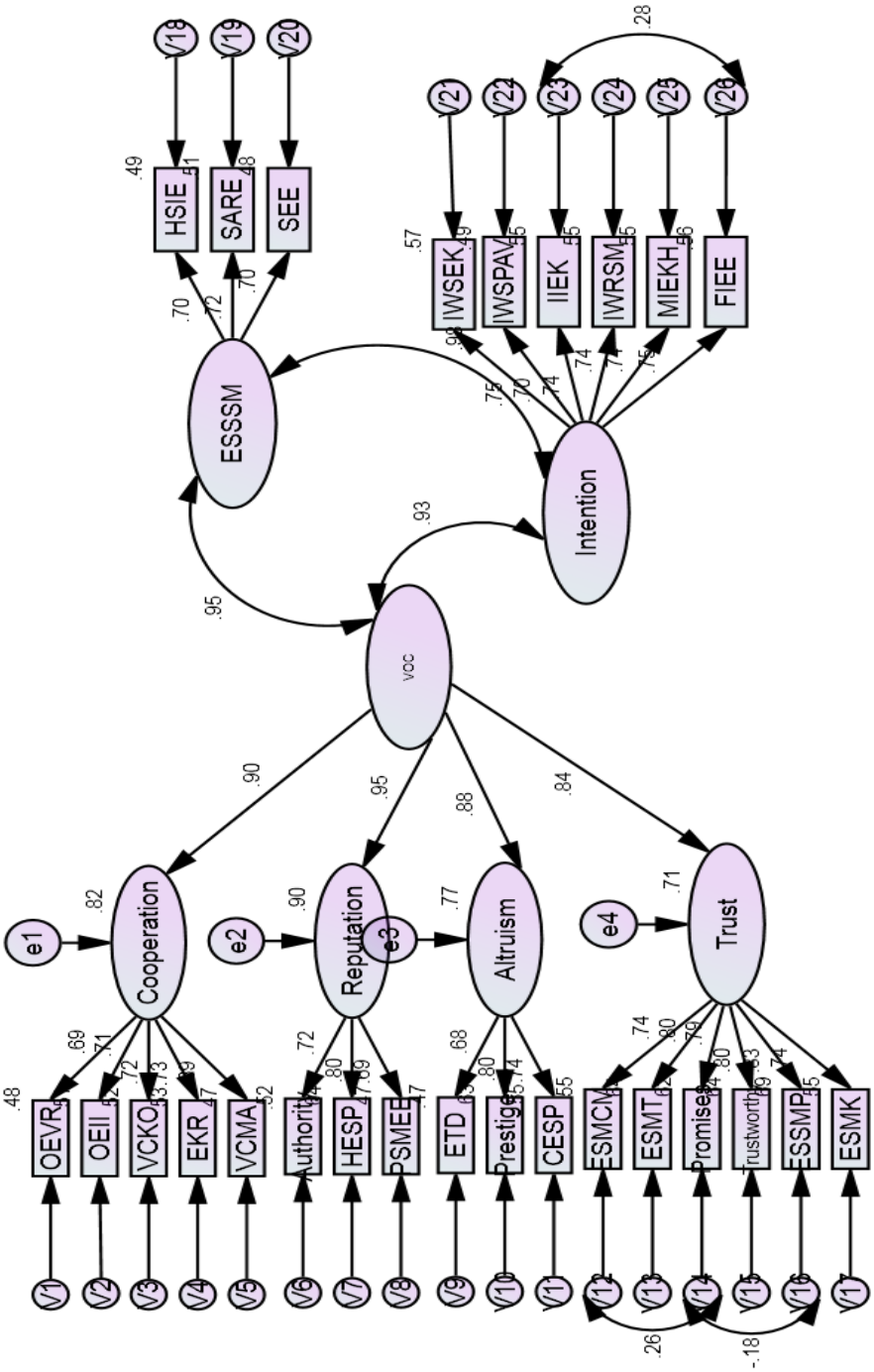


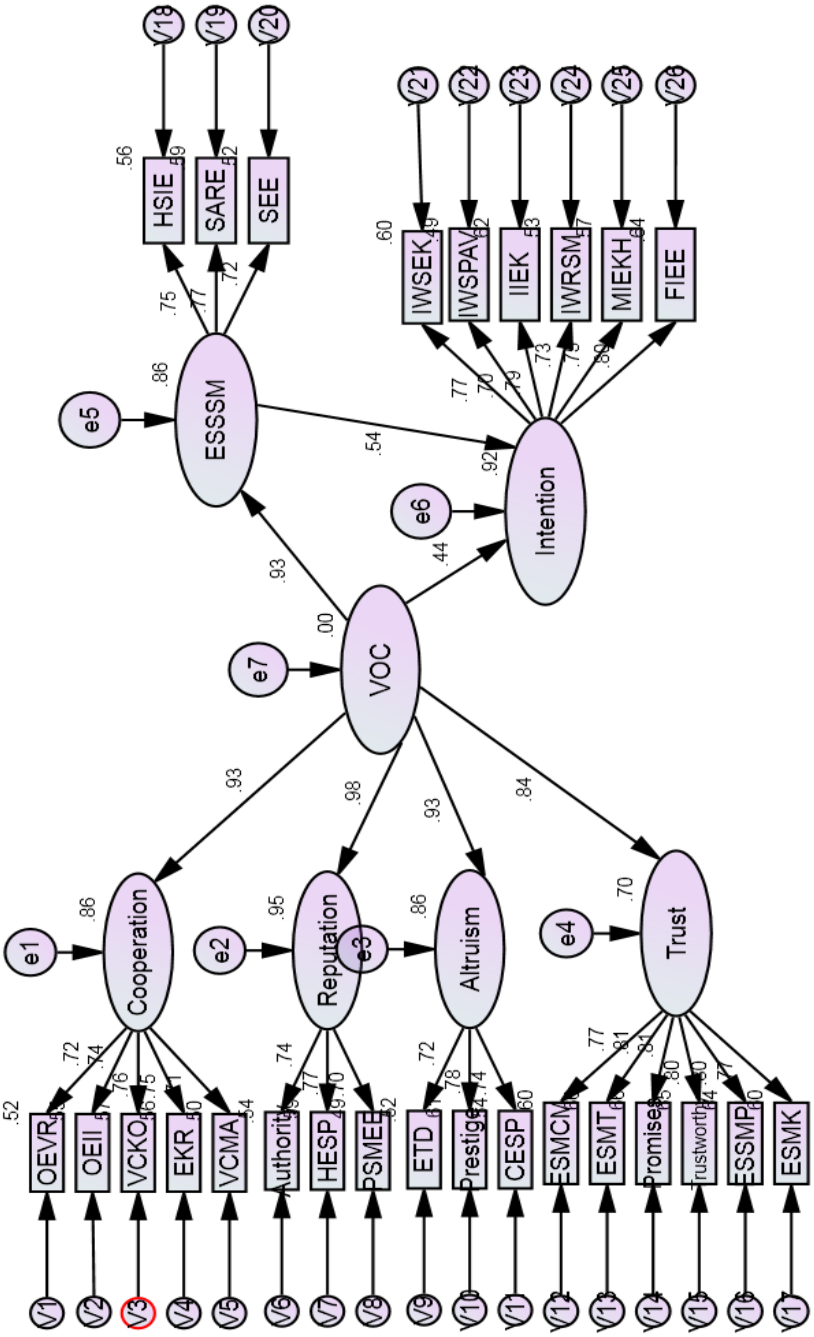
Fig 5.3 Overall Measurement Model

5.6.2.4. Structural Model

Based on the well-fitting measurement model, the structural model was developed. The structural model was specified to assess the structural relationships between constructs (hypotheses). In this case, the entire sample of (n=543) was used to develop the structural model. The structural relationships to be assessed were between VOC as the second order variable representing the dimensions of 'Cooperation', 'Reputation', 'Altruism' and 'Trust' and the constructs of 'Ecotourists' Satisfaction in Socialisation via Social Media' and 'Intention to Share Knowledge'. The structural relationships were assessed based primarily on the proposed theoretical model except for the dimension 'community identification' which was deleted after the EFA stage as shown in Table.5.6. The structural relationships are illustrated in fig 5.4 by means of one-way arrows firstly between the VOC and the constructs of 'Ecotourists' Satisfaction in Socialisation via Social Media' followed by one-way arrow between 'Ecotourists' Satisfaction in Socialisation via Social Media' and 'Intention to Share Knowledge' as well as one-way arrow between VOC and 'Intention to Share Knowledge' .

The Model fit indices of the structural model were: $\chi^2 = 661.368$, df= 292, $p < .000$, χ^2 /df= 2.26, GFI= .91, TLI= .95, CFI= .95, RMSEA= .048. This model fit indices reflected a reasonably good results and indicated a similar model fit as that of the measurement model. This confirming the validity of the structural model and sufficiently explains the relationships between the constructs. The factor loadings in the structural model and the CFA/overall measurement model were mostly the same with a maximum change of 0.1 indicative of retaining the loadings.

Fig 5.4 Structural Model



5.6.3 Multigroup Invariance

The purpose of the multigroup invariance analysis is to determine whether the measurement model as well as structural model are valid across multigroups. A multi-group CFA is normally suggested as a plausible and logical approach to measurement invariance in order to compare across groups (Steenkamp & Baumgartner, 1988). It also investigates whether indicator sets are able to examine the same latent variables across groups (Kline, 1999).

One of the most imperative aspects of testing muligroup invariance is to examine the Chi-square difference between two groups. A model is considered to be equal across groups when the Chi-square difference between the two groups is not significant (Byrne, 1998). However, it has been observed that Chi-square values are sensitive to sample size and non-normality and hence is not recommendable as a reliable criterion for determining multigroup invariance (Cheung & Rensvold, 2002). Therefore, the alternative indices suggested to determine multigroup invariance are the CFI and RMSEA (Byrne, 2001). The difference between the CFI values of two groups should not be more than 0.05 (Little, 1997). However, Cheung and Rensvold (2002) suggested that the difference between the CFI values between two groups should not be more than 0.01.

5.6.3.1 Multigroup Invariance- Gender and T-Test for Soft and Hard Ecotourists

There is an increasing number of female ecotourists who are economically independent and have considerable interest and awareness about ecological aspects which makes them travel to nature-based area around the world. As a result, this study found more female respondents. However, females have been found to be more eco-sensitive and engage in more social interactions than their male counterparts. Hence, this study tested the measurement invariance between the groups of Female (244) and male (299) respondents.

Therefore the overall measurement model was first test to determine the multigroup invariance.

Table 5.11 Results of Testing for Measurement Invariance across Gender

	Chi-square	**df**	**RMSEA**	**CFI**
Male	416.855	289	0.042	.96
Female	458.066	289	0.045	.96
Difference	41. 21	0	0.003	.00

As shown in Table 5.11, the difference between Chi-square values of males and females was 41.21 with no difference in the degrees of freedom. In terms of RMSEA and CFI, there was no difference between the groups of male and female groups. The results hence indicated clearly that the measurement model was equilvalent across male and female.

The next step was to determine the invariance across male and female groups in relation to structural model.

Table 5.12 Results of Testing for Structural Invariance across Gender

	Chi-square	df	RMSEA	CFI
Male	465.988	292	0.049	.95
Female	496.453	292	0.049	.96
Difference	30. 465	0	0.000	.01

As evident from table 5.12, the difference between Chi-square values of males and females was 30.46 with no difference in the degrees of freedom and the difference between the CFI values between male and female groups was .01 which was well within the suggested range by Little (1997). Therefore , the results suggest that the structural model was also equivalent across the two groups of male and female ecotourists.

Behaviour of the respondents in terms of soft and hard ecotourists were also looked into. T-tests were conducted and were found that both soft and hard ecotourists responded identically towards cooperation, reputation, altruism and trust which are the dimensions of value in online communities. Furthermore, the t-test results also indicated that in terms of satisfaction in socialisation and knowledge sharing, both hard and soft ecoturists responded identically. This is in contrast with the findings of Kim et al., (2008) where softer ecotourists were found to be more inclined towards socialisation activities and hard ecotourists were more inclined towards knowledge dissemination and exchange. This study clearly indicates that both soft and hard ecotourists are motivated sufficiently towards experiencing satisfying socialisation and knowledge sharing. Moreover, as observed by Ryan et al., (2000) ecotourists,

both hard and soft, derived satisfaction from socialising with peer ecotourists by means of sharing an experience with them.

Table 5.13 Path Coefficient in Final Structural Model

OCV, ESSSM, Intention	Estimate	P- Value
ESSSM <--- VOC	.93	***
Intention <--- ESSSM	.54	***
Intention<--- VOC	.44	***
Cooperation<--- VOC	.93	***
Reputation <--- VOC	.98	***
Trust <--- VOC	.84	***
Altruism <--- VOC	.93	***

Table 5.14 Hypothesis Testing

Hypothesis		Path	Result
H1	Value in Online Communities is a higher order construct consisting of four dimesnions: cooperation, reputation, trust, altruism and community identification	Value in Online Communities ⟶ Cooperation, reputation, trust, altruism and community identification	Partially Supported
H2	Value in Online Communities on Ecotourists satisfaction in socialisation via social media	Value in Online Communities ⟶ Ecotourists satisfaction in socialisation via social media	Supported
H3	Value in Online Communities on Intention to share knowledge	Value in Online Communities ⟶ Intention to share knowledge	Supported
H4:	Ecotourists satisfaction in socialisation via social media on Intention to share knowledge	Ecotourists satisfaction in socialisation via social media ⟶ Intention to share knowledge	Supported

5.7 Hypotheses Testing

Hypothesis 1: VOC had a positive and significant relationship with the dimensions of cooperation, reputation, altruism and trust. As reflected in chapter-3 and in Fig.3.1 VOC as the higher-order construct representing the dimensions of cooperation, reputation, altruism, trust and community identification. However, community identification had to be eliminated as a dimension of VOC at the EFA stage. As a result, this hypothesis was not entirely supported though majority of the dimensions had a significant relationship with VOC. Moreover, the Model Fit indices of the measurement model for second order was $\chi^2 = 190.154$, df= 113, $p < .000$, χ^2 /df= 1.68, GFI=.93, TLI= .96, CFI= .97 and RMSEA= .048 indicating a very good fit and the average variance extracted (AVE) values being ≥ 0.5 indicated sufficient convergent validity and the composite reliability values were all above 0.60.

Hypothesis 2: VOC was hypothesised to have a positive influence on ecotourists' satisfaction in socialisation via social media. The results confirm as evident in Table 5.13 and Fig 5.4, that VOC has a positive relationship with ecotourists satisfaction in socialisation. Moreover, the path strength of .93 makes it clearly evident that VOC has a considerable impact on ecotourists' satisfaction in socialisation via social media.

Hypothesis 3 : It was hypothesized that VOC positively influences intention to share knowledge. Based on the results, this hypothesis is also supported. Though the

path coefficient between the two constructs of VOC and intention to contribute knowledge was .44, the relationship was significant as evident from the results,.

Hypothesis 4: Finally, the hypothesis on the positive relationship between ecotourists' satisfaction in socialisation via social media and intention to share knowledge was also supported. The path strength between ecotourists' satisfaction in socialisation via social media and intention to share knowledge was .54 indicating that the relationship was relatively stronger than the relationship between VOC and intention to share knowledge. Therefore it is indicative of the fact that satisfaction had a significant effect on the relationship between VOC and intention to share knowledge. Furthermore, a Sobel test was conducted to methodically examine the indirect/ mediating effect of satisfaction on the relationship between VOC and intention to share knowledge (Sobel, 1982). The results (indirect effect coefficient= 0.61, t-value= 4.01, p-value = 0.00005893) indicated that the indirect path relationship between value in online community and intention to share knowledge was significant (Sobel test $p < 0.001$).

Therefore, all the hypotheses that were posited in Fig3.1 have almost been supported. Community identification that was posited alongwith cooperation, reputation, altruism, and trust to be a dimension of VOC as the second order was not supported based on the exploratory factor analysis (EFA).

5.8 Model Performance

Based on the EFA and CFA conducted, it could be concluded that the overall model was largely supported. However, the dimension of community identification could not be retained as items related to it persistently cross-loaded indicating deletion (Hair jr., et al., 2010). As a result, the other dimensions of cooperation, reputation, altruism and trust were positively related to VOC based on the significant results. As mentioned earlier, the SET factors of cooperation, reputation, altruism and trust were not tested together in a model previously. This study brings all these dimenions of into the conceptual model to see their relationships with VOC as the second order factor. All items measuring these dimensions have been incorporated from previous studies which were modified in the context of this study. The results of the reliability tests and EFA at both pilot and main study confirmed the internal consistency of these dimensions.

Secondly, satisfaction in socialisation as an attitude was incorporated into the model as a mediating factor VOC and intention to share knowlede. The Sobel test and R^2 value of intention to share knowledge (.92) confirmed the strong effect of satisfaction as a mediating factor. The scales which were used in this study were the same for all constructs and therefore consistent from the theoretical perspective as evident in the measurement model. Splitting of the data from the main study, (N=250) for EFA and CFA (N=293) or cross-validation resulted in strong composite reliability in the measurement model. This provides the evidence that the model is applicable across varied sample sizes or populations for generalisability. Finally, the

structural model after some modifications resulted in the highly satisfactory model fit indices in the indicating the high vitality of it.

5.9 VOC as the Higher Order Construct

The most significant finding emerging from the results of analysis of data in this study is VOC. It is clearly evident from the results that VOC consist of reputational, cooperative, altruistic as well as trust-based traits which are embedded in the intellectual, social and cultural elements in the social interactions and collective co-creation of content between members of the online communities. This is evidenced in this study by the high estimate values between VOC to reputation (.98), VOC to Cooperation (.93), VOC to Altruism (.93) and VOC to Trust (.84). Hence the incorporation of VOC into the context of online social interactions in this study explains the SET factors of cooperation, reputation, trust and altruism more significantly in the context of satisfaction in socialisation through social media and knowledge sharing. This supports the basis of employing the SET in the context of this study as previous studies using SET factors in the context of online social interactions have not focused on the critical aspects of cultural, social, intellectual and institutional perspectives in online social exchanges which embeds cooperation, reputation, trust and altruism (Muthusamy & White, 2005). This is also imperative due to the fact that the use of SET in online social interaction calls for improvisation through "context -specific factors" as compared to its actual theoretical foundations, social exchanges in practice are unpredictable (Shiau & Luo, 2012). The perspective of online communities in social media brings in the value

creation aspects in such communities in this study and hence it becomes a context specific factor to examine satisfaction in socialisation and intention to share knowledge based on the social exchange theory.

5.9.1 Reputation

As evident in Fig 5.4, the path strength between VOC and reputation(.98) was the strongest among the path relationships between VOC and its dimensions. This clearly implies that self-enhancement of expert knowledge sharing ecotourists in their online social interactions with each other is well reflected in VOC. Reputation refers to the enhancement of self -image of ones who derives recognition and respect by sharing expert content through social interaction with others in online communities (Chang & Chuang, 2011). VOC involves contribution by experts in terms of content co-creation in the area of concern through online social interactions leading to enhancement of intellectual value. Such contribution by experts render them respect and establishes their self-image or reputation. Therefore reputation is clearly evident to be embedded in VOC as one of its principal characteristics and contributes to intellectual value in online communities through co-creation of collective intelligence (Seraj, 2012). Moreover, it has been oberved that self-esteem enhancement is a vital motivation for ecotourists in recommending ecotourism destination to others as well as willingly participating in knowledge dissemination in relation to ecotourism destination awareness and sustainability (Hartley & Harrison, 2009). This study reveals that similar online behaviour seems to be reflected in the online context as ecotourists tend to derive reputational benefits by willingly engaging in content dissemination in relation to ecotourism through social media

and contributing to VOC. Therefore expert and professional content, audio-visual, textual or pictorial, contributed by expert ecotourists as well as by those who acquired through long experience are considered valuable by peer ecotourists in online communities of social media. Their appreciation and acknowledgement of the expert content on ecotourism related aspects not available through other means brings social rewards in the form of respect and recognition to the contributors and enhances their self-esteem.

The items under reputation also revealed positive mean values. In terms of previous studies in online knowledge sharing, reputation has been found to have a significant effect on knowledge sharing. Lee et al., (2011), Wasko and Faraj(2005), Chen and Wang (2010), Nambison and Baron (2010), Hsu and Lin (2008), Pi et al., (2013) all found reputation playing a significant positive role among contextual and personal factors in the knowledge sharing context. The results of this study confirm the findings of these studies as reputation appeared to be the strongest dimension and therefore the most important element of VOC.

5.9.2 Cooperation

'Cooperation' introduced as a SET factor into the context of ecotourists' social interactions through social media in this study has also been found to significant alongwith altruism as dimensions of VOC. The path strength between VOC and cooperation (.93) indicated cooperation as a vital dimension of value in online communities. Therefore, in the context of ecotourists' online behaviour, voluntary motive appears to be the basis that lead members of ecotourists' online community

in social media to self-organise and create an environment of shared interests for social interactions that in turn, results in cultural and knowledge enrichment and creation of online community value (Seraj, 2012). Cooperative actions among ecotourists in online communities of social media also reflect the cultural element of VOC as in other contexts, where mutually beneficial online spaces initiated through social media sites make ecotourists voluntarily interact with each other without any financial or monetary benefit leading to stengthening of relationships between them and enhancing their intention to interact more. Hence as observed by Rokka and Moisander (2009) in the context of eco-conscious travelers, ecotourists too find online communities in social media as a platform for dialogue on ecotourism that leads into a cooperative co-creation of content on ecotourism. Cooperation is considered as central to socialisation of members of information communities and their sustainablity that fosters the dialectic of ecology-based recreation and preservation (Fuchs et al., 2009). Therefore from the results of this study, cooperation appears to be one of the critical aspects in value creation in online communities of ecotourists that can enhance socialisation among them and sustain their relationships. Moreover, cooperation is often attributed to be a virtue of the ecotourists who represent the progressive green activists strongly carrying the values of cooperation and mutual understanding (Blamey & Braithwaite, 1997). However, as compared to reputation, cooperation does not seem to be the most important dimension of VOC given the fact that it embeds some of vital tenets of online community behaviour; collaboration, mutual interest and mutually beneficial exchange (Fuchs et al., 2010; Kozinets, 1999; Seraj, 2012). This may be indicative

of similar member behaviour in online communities across different contexts as evident from previous literature.

5.9.3 Altruism

The strong value of the path strength between VOC towards altruism (.93) confirms that altruistic motives of ecotourists in their interactions with each other is strongly represented in VOC. Altruism is represented well in VOC as online community members participate in online social interactions out of affective reasons instead of something in immediate return. Ecotourists tend to act altruistically due to their ecological consciousness levels and willingness to assist fellow ecotourists in pursuit of eco-friendly tourism. The results in this study reflects the observations of Rokka and Moisander (2009) as ecotourists' engagement in online dyadic dialogue based on altruistic motives without any immediate expectation from the community leads to the engagement of all members in the co-creation of content on ecotourism and community value. Previous studies of Wasko and Faraj (2005) and Lee et al., (2011) found weak altruistic motives of online community members. This study instead reflects strong altruistic motives of online community members that contributes to collective building of community value. The positive mean values of the items under altruism was indicative of the credible altruistic behaviour of ecotourists through social media in this study. The reason behind this altruistic behaviour of ecotourists online could be the imperativeness of social interactions enabling them collectively to enhance awareness on ecology and the sustainability issues related to it.

5.9.4 Trust

Trust as a dimension had relatively the least strong relationship (.84) with VOC. Trust in the context of this study refers to ecotourists in social media sites having the due respect for other ecotourists in terms of their existence and dependability on the interactions they initiate. Trust is often found to be an important element in online social interaction and is a highly essential element encompassing cultural, intellectual and social elements in online community value (Seraj, 2012). Previous studies by Chiu et al., (2006), Liang et al., (2008), Muthusamy and White (2011), Shiau & Luo (2012), Chen and Hung(2010) found trustworthiness highly imperative for social interactions among members of online communities. This study though still finds trust as an important factor, its importance as compared to other factors of reputation, cooperation and altruism is relatively much less. This is indicative of the fact that members of online communities are found to participate in such communities for collective well-being in terms of socialising and co-creating with others as they are motivated internally instead of being driven by external factors (Hsu & Lin, 2008). Here in this case of ecotourists, it also appears that reputational aspects, cooperative and altruistic motives seem to drive them more towards online community participation than giving emphasis on trusting each other. As explained earlier, the reputational aspects present among contributors in an online community automatically brings and enhances trustworthiness (Seraj, 2012). Therefore reputational aspects, cooperative and altruistic motives were more imperative in VOC than trust.

5.9.5 Community Identification

However, community identification was found not relevant in value creation in online communities based on the results of the overall EFA. This is indicative of the fact that community identification which is normally found to be central in social belongingness in traditional communities is not always significant in the case of online communities. Moreover, through cooperatives motives, reputational benefits, trustworthiness and altruistic motives of online community members, the element of sense of belonging critical in community identification already gets established as evident in this study. Therefore in the context of this study, community identification was not found significant enough since its virtues appear to be strongly existent in the factors of cooperation, reputation, altruism and trust. In other words, the results are indicative of the fact there is no particular need of community identification as its elements are already embedded in the other dimensions of VOC. This finding is therefore in contrast with the findings of Lee et al.,(2012) where community identification through intense social interactions was found to be central in the creation of VOC. This is plausible since the study of Lee et al., (2012) did not take into the consideration the other dimensions of cooperation, reputation, altruism and trust to understand real value in online communities.

VOC has been described as a concept in the previous studies. But cooperation, reputation, altruism and trust strongly evident in it has been not been identified as reflective indicators of VOC in such studies. This study with the help of SET which also involves the aspects as evident in VOC identifies these indicators. VOC is a reflective since cooperation, reputation, altruism and trust are the effects of it. They

are reflective indicators of VOC and as a result they are highly correlated. In this case, the aspects of cooperation, reputation, altruism and trust do not lead to the creation of VOC and as a result, the arrows are indicating from VOC towards these reflective indicators. In the context of psychological assessment, reflective constructs have manifest variables which are considered a reflection or an effect of the latent variable. As these manifest variables which are considered as reflect variables are shaped as per the similar effects of the latent constructs, there is high correlation among them as they have manifest in the same way as the underlying construct indicating internal consistency (Jarvis et al., 2003; Mackenzie et al., 2005). Infact if the reflective first-orders are highly correlated then the second-order structure can be reflective (Finn & Wang, 2013). In this case the manifest variables of VOC which are cooperation, reputation, altruism and trust manifest similar effects as of the latent construct i.e VOC and the correlation among them is also high indicating internal consistency. Moreover, all these manifest variables are reasonably identical to each other in terms of their underlying concepts and therefore the elimination of community identification at EFA did not affect VOC, the second-order construct in this study (Lee & Cardogan, 2013). The virtues of community identification are conceptually embedded in the other manifest variables of cooperation, reputation, trust and altruism. This is contrast to a formative model, where each of these manifest variables would have appeared as unique dimensions leading to VOC and the elimination of one of the dimensions would have conceptually challenged the second-order construct VOC (Lee & Cardogan, 2013).

Therefore the highly correlated reflective first-orders indicate the second-order structure involving VOC is reflective.

5.9.6 Other Implications of Value in online communities

The value involved in online communities of ecotourists also encompassed intellectual, social and cultural in nature. The intellectual element involved expert content shared by experts in ecotourism which established their authority and recognition as such content is considered as highly valuable expert knowledge by online community members (Seraj, 2012). This was reflected in reputation having strong relationship with VOC.

The strong relationship between cooperation and VOC reflected a credible process of co-creation of content of all forms, textual, audio-visual and pictorial by members of an online community of ecotourists in social media. It hence reflected the cultural element in value creation in the form of shared norms and procedures brought about by cooperation and based on the areas of common interest among the members of an online community. Additionally, It reflected that in online communities in social media exclusively meant for ecotourism, ecotourists as members of such communities are able to assemble, have social interactions based on the shared norms and practices in such shared online spaces brought about by cooperation. This sets an example for other niche tourists based on special interest.

Altruism alongwith cooperation was strongly related to VOC. It confirmed that ecotourists altruistic motives was out of affective reasons to help others based on their own experiences of ecotourism trips as well as helping others based on the

problems they faced themselves. Such altruistic motives of ecotourists online leads to the ethical responsibility of continuously engaging in social interactions and contributing towards creation of social value in the online community (Seraj 2012; Kozinets,1999).

Finally, trust being a component of VOC based on the results relates to the social and intellectual value ecotourists create in online communities of social media. The trustworthiness is initiated through the reliable knowledge shared by members that enable them to be recognised as individuals with expertise in ecotourism.

Therefore, the results of this study in relation VOC confirms that ecotourists' online communities in social media also deeply engage in value creation through the characteristics of cooperation, reputation, altruism and trust. As mentioned earlier, word-of-mouth significantly drives social interactions among ecotourists. It conforms with the findings of Kurikko and Tuominen (2012) where members of online communities attain cooperative, alturistic as well as trustworthiness and self-image enhancing virtues that lead to collective creation of value in online communities. Ecotourists' online community value creation is therefore comparable with collaborative value creation which Lee et al., (2012) observed in the context of Wikipedia and Linux which gives way to intellect created communally by means of voluntary labour contributed by each community member in the form of engaging in intense dyadic online social interactions. Finally, the results of this study statistically establishes the dimensions of cooperation, reputation, altruism and trust which Seraj (2012) qualitatively identified as characteristics of online social interactions embedded in the intellectual, cultural and social aspects in VOC.

Moreover, the VOC derived here in ecotourists' online communities in social media through intense social interactions/electronic word-of-mouth (e-WOM) between them can enable more strong relationships (Seraj, 2012). Hence the findings of this study confirms that VOC facilitates satisfactory socialisation among ecotourists by enhancing e-WOM communication among them on ecotourism-related knowledge and ecotourism destination awareness aspects. It also helps to build a cohesive ecotourist online community where the actual needs of the ecotourists are understood which in turn enhances and sustains their relationships expressed in the form of intentions to share more knowledge through such satisfactory social interactions (Ma & Agarwal, 2007).

5.9.7 Measurement Items of the dimensions of Value in online communities

The items measuring cooperation were 'Other ecotourists have the motive to voluntarily respond to my contribution of knowledge', ‘When I interact with others on social media, I find others expressing interest to interact', 'I believe in voluntarily contributing knowledge to others on social media' and 'Voluntary contribution of knowledge on social media between me and others leads to mutual advantages for all'. All these indicators had all positive mean values reflecting that the respondents found cooperation imperative in online social interactions. It is also clearly evident that voluntary actions are an important facet of online social interactions among ecotourists in social media. "Contributing ecotourism-related knowledge on social media helps build my reputation", an indicator of reputation loaded under cooperation possibly due to the fact that there can be underlying similarities between the indicators that measure the construct of cooperation and reputation which in turn

might have also led to inter-construct correlation value between these two dimesnions as .85.

The highest loading item under reputation was "By having the opportunity to provide effective ecotourism-related knowledge on social media, I can strengthen my authority in social media"(.69) clearly representing the expert status of expert-knowledge sharers who experience respect and recognition. This item sufficiently represents reputation apparently. However, items "I am keen to help other ecotourists media to solve their problems" and "Participating in social media would enhance my chance to meet ecotourists who have common interests" being indicators of altruism and community identification loaded under reputation. Such items might have possibly loaded under reputation because ecotourists are driven by altruistic and communal motivations to share knowledge which in turn enhances their self-image by earning them respect among fellow ecotourists in an online community (Hartley & Harrison,2009; Roka & Moisander, 2009). Online community member's sense of belonging with other community members with mutual interests as well their desire to help others without any immediate expectation have considerable potential to render them reputational benefits like social rewards and recognition as reliable and responsible individuals in the online community.

The items measuring altruism were "Since I have experiences of and/or comments about ecotourism trips and destinations that may be of interest to others, I like to help others by sharing it with them in social media" and "Writing and commenting on social media can help other ecotourists with similar problems that I have" clearly

the represented altruism holistically as they referred to altruistic motives ecotourists have in terms of their willingness to educate fellow ecotourists on ecotourism destinations and trips as well as reaching out to fellow ecotourists on issues related to ecotourism knowledge (Hartley & Harrison,2009). The item "contributing ecotourism-related knowledge on social media can bring more prestige to me than those who do not" an indicator of reputation loaded under altruism. This is a surprising finding given that altruism entails giving or helping others without any potential return from them. This may imply that altruistic motives are sometimes driven by something in return though not in monetary terms but in social terms like social recognition expressed in the form of prestige in this case.

Trust was associated with the items of 'I trust ecotourists on social media are willing to receive knowledge', 'I trust ecotourists on social media will not misuse my personal information', 'I believe ecotourists who participate in social media are trustworthy', 'I believe ecotourists who use social media will always keep the promises they make to one another', 'I believe ecotourists who use social media behave in a consistent manner', and 'I believe ecotourists who use social media are truthful in dealing with one another'. Moreover, in the second order measurement model (Fig 5.1), First Order Measurement model (Fig 5.2) and Overall Measurement model (Fig 5.3) the items of 'I believe ecotourists who use social media behave in a consistent manner' and 'I believe ecotourists who use social media will always keep the promises they make to one another' as well as 'I believe ecotourists who use social media will always keep the promises they make to one another' and ' I trust

ecotourists on social media will not misuse my personal information' are co-related to obtain a better model fit. This was due to the fact that these items are conceptually similar given that online members' behaviour in a consistent manner is based on their commitment to one another in terms of respecting to others and being responsible to them. This is indicative of the fact that there is reasonable correlation between these items of trust.

All these indicators relates to the levels of dependability of member of an online community. All the mean values of these indicators signified that the respondents rated them positively. This is indicative of the sense of belonging and collectivity in the online communities of ecotourists that emanates from the trustworthiness of the members as perceived by each of them. It is also a possible indication that the social interactive exchanges taking place between the online community members are reliable and the online social behaviour of all members are generally responsible in nature and involves the required levels of integrity and mutuality.

5.10 Value in Online Communities and Satisfaction in Socialisation via Social Media

The positive influence of VOC and 'Satisfaction' as an attitude has been strongly supported in this study. As per Figure5.4 and Table 5.13, the path relationship value between VOC and satisfaction in socialisation via social media is .93 indicating a strong relationship between them. In the contexts of previous studies of Ma and Agarwal (2007), Finn et al., (2009), Chen et al., (2012), Verhagen et al.,(2011),

Shiau and Luo (2012), Chen et al.,(2010), Hsu et al.,(2014), the path relationship between the factors leading to satisfaction and satisfaction itself were all significant and positive but the path coefficients were much weaker compared to this study. In the study of Ma and Agarwal (2007) the path coefficient between perceived identifty verification and satisfaction in the context of knowldge sharing was .22. Chen et al.,(2012) observed that the path coefficients between each the factors of subjective norms, image and critical mass and satisfaction was .29, .31 and .22. Hsu et al.,(2014) found strength of path coefficients between trust and perceived quality of website was .21 and .47. In the study of Chen et al.,(2012) the path coefficients between satisfaction and antecedents of satisfaction which were information quality, service quality and social climate, in the context of community citizenship behaviour, was .11, .44 and .28 respectively. Shiau and Luo (2012) found the effect of between the social exchange theory factors of reciprocity, reputation and trust and satisfaction in terms of path coefficients was .30, .031 and .56 respectively. In this study, the combined effect of the social exchange theory factors of cooperation, reputation, altruism and trust represented by VOC had a much higher impact on satisfaction as evident in the path relationship strength. Therefore, in relation to a number of findings reported in previous studies, VOC had a much stronger impact on satisfaction especially in the context of online knowledge sharing as evident in the study of Ma and Agarwal (2007). This is indicative of the fact that contextual and personal factors of cooperation, reputation, altruism and trust, represented in this study by VOC, play a much greater role in satisfaction in socialisation as compared to the case of Ma and Agarwal (2007) in which technological factors had much less

impact on satisfaction eventhough the relationships were statistically significant. Moreover, compared to the contexts in which social exchange theory have been employed in online exchange relationships as evident in the studies of Chen et al.,(2012) and Shiau and Luo (2012), the results of this study reflected that VOC exerts more postive and imperative influence on satisfaction in the process of online social exchanges. The factors leading to satisfaction in these studies had much lesser effect on satisfaction compared to VOC though the relationships were significant. In addition to this, the R^2 values of satisfaction in these studies were 0.67 (Shiau & Luo, 2012), 0.56 (Chen et al., 2010) and 0.39, 0.34(Ma & Agarwal, 2007). In comparison, the R^2 value in this study was .86 confirming once again that the VOC has a much greater effect on satisfaction.

Therefore, the results of this study confirms that VOC created through cooperative and altruistic motives of members as well as trustworthiness among them and the reputational benefits enjoyed by them can significantly lead to satisfaction in socialisation for all members (Seraj, 2012). Sanchez-Fernandez and Iniesta-Bonillo (2007) mentioned epistemic value leads to satisfaction and relationship continuance. This study also confirms this phenomenon that exchange of social interactions between online community members that creates epistemic value can have reasonable influence on satisfaction in the online socialisation process. The value created through the content generated via social interactions among members provide a repository and collective expertise in ecotourism that significantly

enhances the satisfaction levels of members in terms of their participation and socialisation (Bagozzi & Dholakia, 2002).

5.11 Satisfaction in Socialisation via Social Media and Intentions to Share Knowledge

In the context of this study, ecotourists' satisfaction in socialisation via social media has a strong influence on intentions of ecotourists to share knowledge. Therefore, the degree of satisfaction ecotourists derive in socialisation through social media on issues of ecotourism consumption is highly evident and ecotourism-related knowledge sharing intentions by ecotourism turns out to be the apparent outcome. As per Figure 5.4 and Table5.13, the path relationship value between satisfaction in socialisation via social media and intention to share knowledge is .54 indicating a stronger relationship between them in comparison to previous studies. In the study of Ma and Agarwal (2007) in the context of online knowledge sharing, the path coefficient between satisfaction and knowledge contribution was 0.24 and 0.17 for two online communities. In the studies of Shiau and Luo (2012) and Hsu et al., (2014) in the context of online group buying, the path coefficient between satisfaction and intention to online buying as well as the path coefficient between satisfaction and repurchase intention was .26 and .25 respectively. Chen et al., (2012) found in the context of usage of Web 2.0 the path coefficient between satisfaction and continuance intention was 0.16. Lim et al., (2013) found that the path coefficient between social media satisfaction and social media usage intention was .38 for one of the two respondent groups which belonged to United States. Therefore it is clearly evident that in comparison to all these studies, the relationship

between satisfaction and intention was much stronger. However, in the study of Chen et al., (2010) the path coefficient between satisfaction and community citizenship behaviour was .65. But in terms the R^2 value, community citizenship behaviour had R^2 value of .44 as an effect of satisfaction. In the study of Ma and Agarwal (2007), knowledge contribution had R^2 value of .44, .53 as an effect of satisfaction for two online communities. R^2 values of intention to online buying and repurchase intention in the studies of Shiau and Luo (2012) and Hsu et al., (2014) were .39 in both cases. In comparison to all these studies, the R^2 value of intention to share knowledge in this study is .92 indicating a much greater impact of satisfaction on intention.

This also indicates that unlike in most knowledge sharing studies where the direct relationship between personal and contextual factors and knowledge sharing was examined, satisfaction played a significant role of mediation. This is evident from previous online knowledge sharing studies where intentions of knowledge sharing/contribution had R^2 values of .40 (Chen & Hung, 2010), .55 and .44 for two groups (Lai and Chen, 2014), .19 (Wasko & Faraj, 2005), .30 (Phang et al., 2009), .63 (Muthusamy and White, 2005), and .17 (Chiu et al., 2006). Therefore, in most of these studies the personal and contextual factors (reciprocity, reputation, trust, community identification, altruism, self -efficacy, shared trust and shared culture) had much lesser impact on knowledge sharing than the effect of satisfaction on knowledge sharing as evident in this study. Moreover, in the studies of Pi et al., (2013) and Lin (2007) which examined the relationship between personal and contextual factors and knowledge sharing via attitude towards knowledge sharing,

the R^2 values of knowledge sharing intentions was .55 and .49 indicating much lesser impact of attitude towards knowledge sharing on it in comparison to the effect of satisfaction on intentions to share knowledge as evident in this study. Therefore the strong mediating role of satisfaction in socialisation between VOC and intention to share knowledge is clearly evident re-confirming the Sobel test results. In majority of previous studies, the relationship between SET factors or contextual and personal factors which are also the reflects of VOC, have been found to have a direct impact on intention to share knowledge. It can be noted that except for few studies like that of Phang et al., (2008) and Pi et al., (2013) and Lin (2007), where the mediating effect of usability and socialibility as well as attitude were explored, no other studies were found to have a mediator. Satisfaction is considered as an attitude conceptually (Shiau & Luo, 2012) and therefore is not that different as a mediator. Future studies can look at the factors of sociability and usability between VOC and intention to share knowledge in the context of online communities of social media.

On other hand, the findings also confirm the observations of previous studies where satisfaction has been found to be a strongest predictor of intentions (Shiau & Luo, 2012). Moreover, socialisation driven by interactions between consumers of a product through social media is increasing and one of the main outcomes of such socialisation has been intention to engage in more online activities (Wang et al., 2012). It has been mentioned earlier that satisfactory socialisation opportunities enrich the ecotourism experiences of ecotourists and is therefore vital for ecotourists during ecotours(Chan & Baum, 2007; Mcfarlane, 1996; Lu & Stepchenkova, 2012). Given this fact, this study posited the imperativeness of examining the socialisation

needs of ecotourists beyond ecotours. The findings of this study confirm that online socialisation is equally imperative for ecotourists as much as socialisation during ecotours in terms of knowledge sharing intentions on ecological and ecotourism related aspects. Holden and Sparrowhawk (2002) found that social interactions between ecotourists are a major part of their affective experiences in an ecotour. The satisfactory online experiences as evident in mean values of the items under ecotourists' satisfaction in socialisation via social media clearly reveal the same attitude of ecotourists in an online socialisation context. However, according to some previous studies, ecotourists who are primarily soft-core in nature tend to socialise with peer-ecotourists primarily out of hedonic reasons but they do not necessarily look for knowledge through socialisation (Kim et al., 2008) The positive relationship between ecotourists' satisfaction in socialisation via social media and their intentions to share knowledge in this study proves this may not be always the case since most ecotourists were soft-core ecotourists in this study. Moreover, it is also indicative of the fact that soft ecotourists like their hard-core counterparts also consider knowledge sharing important atleast in the online context.

5.11. 1 Measurement Items of Satisfaction

The items measuring satisfaction were i) 'I feel happy to socialise by interacting with ecotourists in ecotourism-based groups in social media sites' ii) 'I feel satisfied to socialise by asking advices and recommendations from other ecotourists in ecotourism-based groups on social media sites' and iii) 'I feel satisfied by the encouragement from other ecotourists to interact with them on social media sites'. These indicators clearly reflected the satisfaction levels in socialisation for

ecotourists in terms of their interactions with fellow ecotourists via social media, acquiring of advice related to ecotourism as well as the support from fellow ecotourists online in engaging in intense social interactions. This reflects that satisfying online socialisation is equally imperative for ecotourists as much as their satisfying socialisation during their actual eco-trips. Though ecotourists are not meeting each other physically as in their real ecotourism experiences, the ambiguous identities they have in online communities of social media appears to have provided them same levels of satisfying social interactions experiences as in real ecotourism experiences (Faraj et al., 2011). Participating in online communities in social media also helps them to socialise with a wider section of the ecotourist community than just socialising with friends, relatives or tour group members which in turn enhance their satisfaction levels further.

5.12 VOC and Intentions to Share Knowledge

Value in online communities also has a positive and strong influence on intentions of ecotourists to share knowledge. As shown in Fig5.4 and Table5.13, the path relationship value between VOC and intentions of ecotourists to share knowledge was .44. Jading et al., (2013) found that prosocial value in online communities could not sufficiently predict knowledge sharing intentions as it was subjected to certain conditions under which it could fully predict knowledge sharing. This study in contrast, found VOC which included prosocial values can sufficiently predict knowledge sharing intentions. However in contrast to other previous studies on knowledge sharing by Wasko and Faraj(2005), Chiu et al.,(2008), Muthuamy and

White(2005), Phang et al.,(2009), Chen and Hung(2010), Lai and Chen(2014), Chang and Chuang(2011), path coefficient between VOC and intentions of ecotourists to share knowledge in this study appears to be higher than the path coefficient between contextual and personal factors and knowldge sharing of these previous studies. Therefore the combined effect of the contextual and personal factors of cooperation, reputation, trust and altruism represented in VOC leads to a stronger path relationship with knowledge sharing than such factors having an effect on it individually. Knowledge sharing refers to the intent of online community members to share their knowledge and expertise with other members (Qu & Lee, 2011). The respondents view about intentions to share knowledge was positive even though many ecotourists who engage in online socialisation through social media are newcomers in the dialogue between ecotourists. So they tend to show reasonable intentions to share knowledge via social media.

5.13 Summary

This chapter provided a detailed view of the demographic statistics of the respondents. This was followed by illustration on the aspects of data normality and descriptive statistics implying the usability of the data collected in this study. The next section involved conducting the exploratory factor for the first set of data from the main survey otherwise referred to as calibration sub-sample (N=250). This was followed by the CFA conducted on the second set of data from the survey or the validation sub-sample (N= 293) for the constructs which were independents or

exogenous in nature and another CFA for overall conceptual model for the entire model. Finally the structural model was estimated with.

All the hypothesis were supported and the model fit indices results in the measurement models and structural models were excellent meaning that conceptual basis of this study was strong and the data supports and represents the model very well. However, one of the dimensions, community identification, was dropped at the stage of EFA on the first set of data from the main survey otherwise referred to as calibration sub-sample (*N*=250). VOC represented well the dimensions of cooperation, reputation, altruism and trust emanating from the social exchange theory. From the results of the structural model, it was evident that the SET was supported in the context of this study.

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CHAPTER 6 DISCUSSIONS, IMPLICATIONS AND CONTRIBUTIONS

6.1 INTRODUCTION

This chapter provides a summary of the entire study in terms of all key aspects of every chapter. The theoretical and practical implications and contributions are summarised and the limitations and the directions for future studies are provided.

6.2 Implications of the results of this study in relation to Social Exchange Theory

This study introduced satisfaction in socialisation via social media as an attitudinal aspect through which the SET factors can predict the behaviour or intentions. Moreover, VOC was introduced representing the SET factors leading to satisfaction and in turn to intention to share knowledge. These two aspects are significant contributions in terms of theory to the existing literature on knowledge sharing studies using SET. Ma and Agarwal (2007) examined the technological factor of community artefacts and knowledge sharing through satisfaction but this study did not involve social exchange theory as the underlying theory to explain the relationship. This study instead incorporated satisfaction in socialisation between VOC (that represented the contextual and personal factors of cooperation, reputation, altruism and trust) and knowledge sharing employing the social exchange theory as the underlying theory. Moreover, in comparison to previous studies of Muthusamy and White (2005) Liang et al., (2008), Lee et al., (2011), Phang et al., (2009) and Liu et al., (2011) which examined the direct relationship between SET factors as well as other personal and contextual factors and knowledge sharing using

the social exchange, this study employing the social exchange theory examined the indirect relationship between VOC and knowledge sharing via satisfaction in socialisation and found the relationship positive. Therefore, in the context of online knowledge sharing studies employing the social exchange theory, VOC and satisfaction are major conceptual contributions.

From the perspective of examining and testing theoretical models of social media in tourism, Pan and Crotis (2012) posited the use of social exchange theory as one of underlying theories for future studies to explore. Social exchange theory is one of the "micro-theories" or one of the "underlying paradigms" that could potentially enable to understand the processes of online communication and social interactions between "individual social actors" (Pan & Crotis, 2012; pp 73-76). This study therefore also contributes to the body of knowledge in social media use in tourism by employing social exchange theory for explaining the social interactions between individual social actors who are ecotourists in this context that enables socialising satisfaction and knowledge sharing intentions. The social exchanges here are actually communal relationships between ecotourists' in online communities which get strengthened in the form of enhanced knowledge sharing resulting from satisfying social interactions between them (Cropanzano & Mitchell, 2005). These social interactions are driven by the desire to meet communal needs instead of personal member needs and therefore such interactions bring socio-emotional benefits to all members of the online communities. Moreover, as mentioned earlier, Muthusamy and White (2005) observed that their study did not focus on the imperative aspect of understanding the cultural and social aspects in social

exchanges. This study by focusing on the cooperative, reputational, altruistic and trustworthiness which all emanate from the social and cultural as well as intellectual aspects of VOC have recognized the significance of such aspects in social exchange processes of ecotourists' online social interactions. The use of SET in this study also helped to understand that ecotourists' online and offline behavior in terms of socialising satisfaction and knowledge sharing intentions are identical. This is in contrast with the findings of Shiau and Luo (2012) where the use of SET in the context of online group buying led to the observation that buyer's online and face-to-face behaviour in terms of transactions are different. This made them to conclude that social factors examining human offline behavior are not similar to those of their online behavioural pattern (Shiau & Luo, 2012). In comparison, in this study it appears social factors that comprised VOC result in similar outcomes in the online context as that of offline context in terms of satisfying socialisation experiences and knowledge sharing for ecotourists.

6.3 Ecotourists' online behaviour and Sustainability

These findings also reflect the levels of ecological citizenship practices by ecotourists through contentful socialisation in social media and sharing of knowledge related ecological aspects as a part of their ecotourism experiences. Ecological citizenship refers to responsible and sensible thinking and dialogue collectively by people on environmental issues and ecological aspects that can lead to necessary actions and practices resulting in socio-ecological well-being (Roka & Moisander, 2009). The satisfactory socialisation process among ecotourists and

enhanced knowledge sharing intentions through social media provides the foundation for ecological citizenship.

In the wake of the emergence of issues of sustainable development and awareness on ecologically ethical consumption, the behaviour of ecotourists as consumers of ecologically responsible tourism has become an area of significant discourse (Budeanu, 2007). Such discourse has been found to take place in both real and online spaces. The discourse involves intense dialogue on environmental aspects by consumers that leads to strong collective form of ecological citizenship (Roka & Moisander, 2009). This ecological citizenship in the context of consumers has been found to be significantly enabled through discourses among them in online spaces like social media sites. Ecotourists who are ecologically conscious and nature-appreciating travellers therefore also engage in ecological citizenship through social interactions and ecological knowledge sharing practices online. Eco tourists exhibit ecological citizenship by expressing 'altruistic motives' by articulating their ecological sensibilities and awareness through dialogue in relevant online communities in social media that shapes into responsible and ethical behaviour along the lines of sustainability. Such dialogue online in the form of audio-visual, textual and pictorial content transforms Eco tourists as green consumers into activists and experts in the discourse of sustainable development. The online social dialogue between Eco tourists on sustainability and ecological citizenship drives and provides the foundation for the norms and values of their online community. It turns out to be a cultural practice where ecotourists through social media -enabled online communities play a key role in contributing towards sustainable development by

means of such intense online social dialogue and sharing of knowledge. Therefore the abilities of social media in meeting the needs of ecotourists beyond the utilitarian needs of mass/general tourists have been confirmed through the findings of this study. This study has been able to focus on the communitarian and cultural role of social media enabled online communities in the context of ecotourists which is beyond the utilitarian perspective of general consumers of tourism.

6.4 Contributions of the Study

6.4.1 Theoretical Contributions:

The theoretical and practical contributions of this study have been explained in chapter 1 and chapter-5. In this chapter, the contributions and implications in terms of theory and practice are summarised. The social exchange theory was supported in this study which was conducted in the non-organisational and individual-to-individual context. The most significant contribution in terms of the use of SET was VOC which conceptually represented the cooperation, reputation, trust and altruism which are also the SET factors in social interactions. Secondly, the role of satisfaction in socialisation in positively affecting intention to share knowledge with the underlying theory as social exchange theory was another contribution in this study. The results of this study proved that the value created in social interactions in online communities of ecotourists were intellectual, cultural and social in nature. These intellectual, cultural and social elements in VOC embeds cooperative, altruistic, self -image enhancing motives and considerable amount of trust among

members (Seraj, 2012). More specifically, the theoretical contributions can be explained as follows:

1. This study looked into the perspective of interpersonal social relationships between individuals which in the context of this study are ecotourists' online social relationships while applying the social exchange theory. Most previous studies using the SET have been carried out from the organizational and inter-organisational perspective where online interactions between employees at different hierarchical levels have been studied. Therefore, the SET has been supported in the context of interpersonal social relationships between individuals which in the context of this study are ecotourists' interpersonal social in online communities in social media.

2. VOC as a higher-order construct embedding the SET factors of cooperation, reputation, altruism and trust was one of the most significant contribution of this study. The significant relationships between VOC and cooperation, reputation, altruism and trust proved that the former is a higher order construct of the SET factors. The results proved that VOC is an important aspect in online communication that in relative terms has a more explanatory power to explicate the aspects of social interaction i.e. the SET factors of cooperation, reputation, altruism and trust.

3. Moreover, most previous studies have looked at the direct connection between SET factors or contextual and personal factors with satisfaction and intention (Hsu & Lin, 2008; Hsu & Lu, 2004; Chiu et al., 2006; Shiau & Luo, 2012). Given that the SET factors are embedded in VOC, this study focused on the combined effect of these factors (VOC) on satisfaction and intention to share knowledge which turned out to be significant as evident in the results of the study.

4. Satisfaction as a mediating factor was found to be significant in terms of its positive influence on knowledge sharing. This study therefore extends the SET into the context of predicting the relationships between firstly, VOC with satisfaction in online socialisation and knowledge sharing and secondly, the relationship between satisfaction in online socialisation and knowledge sharing intention. As evident from the sobel test as well as the path strength between satisfaction in socialisation and intention to share knowledge (.54), the mediating effect of satisfaction has been proved strongly instrumental in enhancing the impact of VOC on intention to share knowledge.

6.4.2 Practical Contributions

Practically speaking, this study offered insights on the significance of satisfaction of social interactions and knowledge sharing for ecotourists. The satisfactory socialisation via social media and knowledge sharing offers them alternative means of obtaining knowledge about ecological aspects of ecotourism attractions and also

about the reasons to visit ecotourism destinations. The deficiency of knowledge available through DMOs and ecotourism attraction management bodies as well as ecotour guides can be overcome by means of knowledge sharing through social media. Moreover, the online dialogue and knowledge sharing between ecotourists in social media leads to awareness and understanding of sustainability issues. This awareness and understanding of sustainability issues in turn leads to ecological citizenship. Spherically speaking, the practical implications are as follows:

i) This study provides a strong indication for ecotourists on the impetus on enhancing the use of social media that helps in building VOC which in turn impacts strongly on their socialisation satisfaction and knowledge sharing online. The difficulties they are faced with in terms of DMOs and ecotour operators not providing enough socialisation and knowledge sharing opportunities can be reasonably overcome through enhanced participation by ecotourists in social media interactions that helps in building value which in turn, leads to socialising satisfaction and knowledge. It is through this process that ecotourists can obtain knowledge about ecotourism destinations and reasons to visit them. This study therefore offers insights into the advantages social media can render to ecotourists in terms of firstly, satisfaction in socialising beyond the ecotourism trips and secondly, through such socialisation the enhancement of the intention of sharing and building of collective knowledge related to ecotourism aspects.

ii) The study also has implications for awareness and understanding of sustainability issues among ecotourists. The value existent in ecotourists communities online enhances satisfying social interactions as well as sharing of knowledge, awareness and understanding about sustainability aspects associated with ecotourism destinations. The process of VOC impacting satisfying social interactions and knowledge sharing between ecotourists via social media therefore leads to a 'transformative dialogue' on sustainable development in tourism and eventually ecological citizenship (Rokka & Moisander, 2009; p.203). Ecological citizenship built through online communities of ecotourists can shape the pattern of nature-based tourism consumption in a more responsible and socially and ecologically ethical manner. This will in turn have operational and management implications for ecotour operators and management bodies of nature-based attractions.

iii) This study provides strong implications for ecotourism DMOs and ecotourism operators in terms of encouragement of ecotourists towards enhanced use of their social media sites leading to creation of VOC and enabling knowledge sharing. It enables to explore the potential of social media as a key channel to enhance VOC (enhancing cooperative actions, reputational benefits, altruistic motives and trustworthiness) in social media. This is imperative given that ecotourists have been found to consider word-of mouth (WOM) as a prime medium to share knowledge and experiences, ecotourism DMOs and ecotour operators can enhance building of VOC that strongly influences knowledge sharing by means of e-WOM among

ecotourists through their pages in sites like Facebook, YouTube or their specific blogs. This can enable innovation in terms of enhancing awareness on ecotourism destinations they are associated with and effectively marketing and promoting the ecotourism products they are offering.

iv) Moreover, ecotourism DMOs and ecotour operators can be enabled through this study to understand the need to enhance socialisation satisfaction of ecotourists online beyond their ecotourism trips. This is imperative given that the results of this study clearly indicate that it is not just VOC but satisfaction in socialisation that effectively leads to knowledge sharing by Eco tourists. Hence, the importance to providing ecotourists with the right technological facilities i.e. offering them social media sites to enhance socialisation satisfaction that helps in create collective knowledge is also enabled by this study.

6.5 Summary

This chapter therefore provided an account of the theoretical and conceptual implications of the study as well as contributions of this study in terms of theory and practice. Contributions were identified in terms of theoretical aspects of the social exchange theory and the online community value and satisfaction in socialisation.

CHAPTER 7 CONCLUSIONS

7.1 Introduction

This chapter provides an overview of the achievements of study. The limitations and the directions for future studies are provided.

7.2 Achievements of this study

The achievements of the study are explained in terms of meeting the study objectives.

Objective 1:

To examine the relationship between VOC with its dimensions of cooperation, reputation, altruism, and trust and community identification.

The results of the second order measurement model and final structural model confirmed and supported this objective. However, community identification was dropped at the EFA stage with the calibration sub-sample (N=250) of the main survey. The convergent validity, composite reliability as well as the model fit indices confirmed that VOC significantly represented the dimensions of cooperation, reputation, altruism, and trust.

Objective 2:

To analyse the impact of VOC in affecting ecotourists satisfaction in socialisation through social media and knowledge sharing intentions.

Again the results of the overall measurement model and the final structural model supported this objective. The path from ecotourists' satisfaction in socialising through social media towards intentions to share ecotourism related knowledge showed a reasonably high estimate value of .93. The positive and significant hypothetical relationship between VOC and ecotourists' satisfaction in socialising via social media and intentions to share ecotourism related knowledge was revealed in the results in terms of the strong path relationship between and R^2 values of satisfaction in socialisation and intention to share knowledge.

Objective 3:

To examine the impact of ecotourists' satisfaction in socialising through social media on their intentions to share knowledge related to ecotourism.

The results of the sobel test as well the significant path relationship between ecotourists' satisfaction in socialising through social media and their intentions to share knowledge and the R^2 values of intention to share knowledge, all confirmed that satisfaction in socialisation had a major impact on intentions to share knowledge.

Objective 4:

To validate the proposed conceptual model in this study.

The final structural model validates the conceptual model. VOC represented the SET factors of cooperation, reputation, altruism, and trust as the higher order construct though community identification was dropped. The relationships between VOC, satisfaction in socialisation and knowledge sharing intentions were found positive

and significant. Moreover, the satisfaction was found to be a significant factor in having an indirect/mediating effect on intention to share knowledge. Conceptually speaking, the model was validated and finalised.

7.3 Generalisability

Though the settings of this study in terms of data collection were nature-based attractions in and around Kuala Lumpur, the findings of this study apply to ecotourists universally. The findings of this study in terms of the online ecological dialogue among ecotourists have been found evident in the context of eco-conscious travellers as well (Rokka & Moisander, 2009). The satisfactory online socialisation and knowledge sharing levels as experienced by ecotourists in this study applies to any other contexts of ecotourists visiting ecotourism attractions or involved in ecotourism activities in any part of the world. Moreover, the study did not target a particular type of ecotourists based on nationality, culture or other demographic parameters. It looked into ecotourists in general as respondents and as a result the findings of this study have implications across the ecotourist community universally speaking.

Moreover, the aspects of VOC, socialisation and knowledge sharing aspects can apply to other forms of alternative tourists alike ecotourists. Berger and Paris (2014) focused on the social relationships between backpackers impacted by Facebook, a prime social media site. The study found social relationships between ecotourists via Facebook strengthens their 'personal', 'professional' and 'fellow traveler' networks

(Berger & Paris, 2014). Therefore, the aspects of VOC,satisfaction in socialisation and knowledge sharing intentions in the contexts of other alternative tourists like backpacker travelers could also be explored based on the implications of this study.

7.4 Limitations

Quite a few implications and possible directions for future studies were identified in this study which may test the conceptual and methodological justifications made in this study.

1. In this study, the levels of satisfaction of ecotourists in online socialisation via social media which positively affected their knowledge sharing intentions were observed. This limits the satisfaction of ecotourists to online contexts. This study did not attempt to look into the extent of impact satisfaction of ecotourists in online socialisation can have on their satisfaction in their actual ecotourism experiences. In other words, whether satisfaction in online socialisation can transform into their satisfaction in socialisation during actual ecotourism experiences with peer ecotourists, requires to be studied. Therefore, future studies may also look into how online activities of ecotourists have an impact on their satisfaction levels in their actual ecotourism experiences given their inclination towards knowledge seeking and socialising tendencies with peer ecotourists.

2. The issues of common source data and common method variance with respect to the data and data analysis were not elaborately looked given that such issues may in some cases lead to less genuine internal consistency among variables.

3. Moreover, this study in terms of the demographic aspects did not look into the income levels of ecotourists due to confidentiality reasons. Based on previous literature, it is imperative to look into the income levels as it has been observed that ecotourists with strong commitment for ecotourism tend to be wealthier and more educated than general tourists.

7.5 Directions for Future Studies

1. Future studies need to gain insights into least active social media users in terms of perception of online socialisation and knowledge sharing activities and draw a comparison with those active users of social media to determine the impact of online communities in social media. This is because socialisation activities do not arise out of mere usage of social media but requires people to interact in social media. So social media usage may not necessarily mean socialisation or satisfaction in socialisation which in turn can lead to intention to share knowledge. As a result the satisfaction levels in terms of satisfactory socialisation and knowledge sharing of those ecotourists who are least active users of social media or non-users is something this study did not look into and therefore leaves opportunities to explore this aspect.

2. Future studies need to look into the extent of satisfaction in socialisation and knowledge sharing intentions in social media from the perspective of different segments of social media users; watchers, commentators, sharers and producers. In this connection, mixed method studies may be conducted by obtaining qualitative data through analysis of content posted by different members in social media sites (Lu & Stepchenkova, 2012) followed by development of a model based on the qualitative data and testing and validating the model through maximum likelihood or partial least squares methods. This approach can provide more insights on the nature of different social media users, their satisfaction levels and their actual intentions to engage in online activities like knowledge sharing.

3. Studies using SET in similar context as this study may focus on the significance of VOC as a representative of the characteristics under SET theory. Online communities are becoming stronger and impactful in diverse contexts. Therefore the value created in an online community can have wide implications in terms of the body of knowledge in online socialisation and knowledge sharing studies as well as in value co-creation studies. Moreover, the aspect of knowledge acquisition/receiving aspects of online knowledge sharing may be looked into the future. Such an approach will enable studies to compare differences between knowledge sharing and knowledge receiving aspects as well as examining

relationships between satisfaction, online community value and knowledge receiving.

4. Future studies also have the opportunity to explore the aspect of level or frequency of social media usage in affecting the impact of VOC on satisfaction in socialization and intention to share knowledge as a moderating factor

7.6 Summary

This chapter brings the study to an end. The objectives were well achieved as evident from the results of the study. The limitations of this study like in every study were provided. Some key areas were explained in terms of the limitations which need to be addressed by future studies. Finally, directions for future research studies are provided.

APPENDICES

Appendix1. Research Questionnaire

School of HTM
Hotel & Tourism Management
酒店及旅遊業管理學院

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

Research Topic:

Investigating the Factors Affecting Ecotourists' Satisfaction in Socialisation and Intentions to Share Knowledge in Social Media

Thank you very much for giving your consent to participate in this study. Your participation is valuable and highly appreciated. This research examines satisfaction in socialisation and intentions to share knowledge on Social Media regarding your visit to ecotourism sites in Kuala Lumpur. Your opinion is very significant in terms of our understanding of the sharing of ecotourism-related knowledge on social media. There is no right or wrong response – only your opinion counts!

The answers you give for this study will only be used for academic purposes only. Your personal response will remain anonymous and strictly confidential.

The participation of completing this questionnaire is totally voluntary. The survey would take about 20 minutes to complete. If you have any difficulties in responding to the survey, please feel free to contact us.

Sincerely,

Sudipta Kiran Sarkar

Sudipta Kiran Sarkar	Dr. Norman Au	Prof. Rob Law
Tel: (852)3400 2324	Tel: (852) 3400 2236	Tel: (852) 3400 2181
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Meaning of Social Media, Ecotourism and Ecotourists

Social Media are internet-based applications for building social relationships online. Social media enables sharing and exchange of information and content which can be textual, pictorial and audio-visual. Examples of social media sites can include Facebook, Twitter, YouTube, Flickr, Trip Advisor

Ecotourism refers to travel to relatively undisturbed natural areas with the specific objective of studying, admiring, and enjoying scenery, flora and fauna and local cultures existing in these natural areas

Ecotourists can be defined as anyone travelling with the primary motivation of viewing, enjoying and experiencing nature in a relatively undisturbed and uncontaminated natural area and undertaking at least one ecotourism experience during their trip.

Do you consider yourself a tourist who visits nature-based attractions in Kuala Lumpur for authentic and quality environmental experiences that can involve risks or challenges, seek rich knowledge about environment?

Yes	
No	

Do you consider yourself a tourist who visits nature-based attractions as *one of the many activities* in your entire trip to Kuala Lumpur that involves recreational or thrill experiences and seek knowledge about environment?

Yes	
No	

Do you use social media in relation to your ecotourism trips to Kuala Lumpur?

Yes	
No	

The following statements describe your views about the factors in using social media in relation to your visits to ecotourism sites in Kuala Lumpur. Please indicate the extent to which you agree or disagree in each of the following statements. Please mark (X) in one of the seven spaces on each row.

Strongly Agree	**Agree**	**Somewhat Agree**	**Neither Agree Nor Disagree**	**Somewhat Disagree**	**Disagree**	**Strongly Disagree**
7	**6**	**5**	**4**	**3**	**2**	**1**

Cooperation							
1) Other ecotourists have the motive to voluntarily respond to my contribution of knowledge	**7**	**6**	**5**	**4**	**3**	**2**	**1**
2) I believe in voluntarily contributing knowledge to others on social media	**7**	**6**	**5**	**4**	**3**	**2**	**1**

Strongly Agree	**Agree**	**Somewhat Agree**	**Neither Agree nor Disagree**	**Somewhat Disagree**	**Disagree**	**Strongly Disagree**
7	**6**	**5**	**4**	**3**	**2**	**1**

3) Voluntary contribution of knowledge on social media between me and others leads to mutual advantages for all	**7**	**6**	**5**	**4**	**3**	**2**	**1**
4) I believe, other ecotourists will contribute useful knowledge back to me when necessary on social media	**7**	**6**	**5**	**4**	**3**	**2**	**1**
5) When I interact with others on social media, I find others expressing interest to interact	**7**	**6**	**5**	**4**	**3**	**2**	**1**
6) When I interact with others on social media, I find others expressing interest to share knowledge	**7**	**6**	**5**	**4**	**3**	**2**	**1**
7) I can depend on other members on social media for useful interactions	**7**	**6**	**5**	**4**	**3**	**2**	**1**
Reputation							
1) Participating in interaction with other ecotourists on social media enhances my reputation	**7**	**6**	**5**	**4**	**3**	**2**	**1**
2) Participating in interaction with other ecotourists on social media earns me rewards	**7**	**6**	**5**	**4**	**3**	**2**	**1**
3) Contributing ecotourism-related knowledge on social media helps build my reputation	**7**	**6**	**5**	**4**	**3**	**2**	**1**
4) Providing pictorial and/or audio-visual content on ecotourism attractions on social media improves my reputation	**7**	**6**	**5**	**4**	**3**	**2**	**1**
5) Contributing ecotourism-related knowledge on social media can bring more prestige to me than those who do not	**7**	**6**	**5**	**4**	**3**	**2**	**1**
6) By having the opportunity to provide effective ecotourism-related knowledge on social media, I can strengthen my credibility in social media.	**7**	**6**	**5**	**4**	**3**	**2**	**1**
7) By having the opportunity to provide effective ecotourism-related knowledge on social media, I can strengthen my authority in social media.	**7**	**6**	**5**	**4**	**3**	**2**	**1**

Strongly Agree 7	Agree 6	Somewhat Agree 5	Neither Agree nor Disagree 4	Somewhat Disagree 3	Disagree 2	Strongly Disagree 1

Altruism							
1) I like to help other ecotourists on the social media	**7**	**6**	**5**	**4**	**3**	**2**	**1**
2) I am keen to help other ecotourists on social media to solve their problems	**7**	**6**	**5**	**4**	**3**	**2**	**1**
3) I always disseminate pictorial and/or audio-visual content on different ecotourism attractions to other ecotourists in social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**
4) Commenting on social media can help other ecotourists with similar problems that I have	**7**	**6**	**5**	**4**	**3**	**2**	**1**
5) Since I have experiences of about ecotourism trips and destinations that may be of interest to others, I like to help others by sharing it with them on social media	**7**	**6**	**5**	**4**	**3**	**2**	**1**
Trust							
1) I trust ecotourists on social media are willing to receive knowledge	**7**	**6**	**5**	**4**	**3**	**2**	**1**
2) I trust ecotourists on social media will not misuse my personal information	**7**	**6**	**5**	**4**	**3**	**2**	**1**
3) I believe ecotourists who participate in social media are trustworthy	**7**	**6**	**5**	**4**	**3**	**2**	**1**
4) I believe ecotourists who use social media will always keep the promises they make to one another	**7**	**6**	**5**	**4**	**3**	**2**	**1**
5) I believe ecotourists who use social media behave in a consistent manner	**7**	**6**	**5**	**4**	**3**	**2**	**1**
6) I believe ecotourists who use social media are truthful in dealing with one another	**7**	**6**	**5**	**4**	**3**	**2**	**1**
Community Identification							
1) I feel strong ties to other ecotourists in social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**
2) I feel a sense of belonging with other ecotourists in interacting with them on social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**

Strongly Agree 7	Agree 6	Somewhat Agree 5	Neither Agree nor Disagree 4	Somewhat Disagree 3	Disagree 2	Strongly Disagree 1

3) I have a feeling of togetherness with other ecotourists in sharing knowledge with others on social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**

4) I have a sense of pride in being a member of ecotourism-based groups on social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**
5) Participating in social media would enhance my chance to meet ecotourists who have common interests	**7**	**6**	**5**	**4**	**3**	**2**	**1**
6) Social media sites help to share social lives and information with other ecotourists	**7**	**6**	**5**	**4**	**3**	**2**	**1**

The following statements describe your views about satisfaction with socialisation in social media and intentions to share ecotourism knowledge in relation to your visit to ecotourism sites in Kuala Lumpur. Please indicate the extent to which you agree or disagree with each of the following statements. Please mark (X) in one of the seven spaces on each row.

Strongly Agree 7	**Agree** 6	**Somewhat Agree** 5	**Neither Agree nor Disagree** 4	**Somewhat Disagree** 3	**Disagree** 2	**Strongly Disagree** 1

Satisfaction for Ecotourists in Socialisation Through Social Media							
1) I feel happy to socialise by interacting with ecotourists in ecotourism-based groups in social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**
2) I feel satisfied to socialise by asking advices and recommendations from other ecotourists in ecotourism-based groups on social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**
3) I feel satisfied by the encouragement from other ecotourists to interact with them on social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**
4) I feel satisfied with my overall socialisation experience with other ecotourists in ecotourism-based groups on social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**
5) I feel contented in socialising with other ecotourists on social media by sharing pictorial and/or audio-visual content on different ecotourism attractions in Kuala Lumpur	**7**	**6**	**5**	**4**	**3**	**2**	**1**
Intention To Share Knowledge							
1) I am willing to share ecotourism-related knowledge to others through social media	**7**	**6**	**5**	**4**	**3**	**2**	**1**
2) I will share pictorial and/or audio-visual content on ecotourism attractions with other ecotourists in social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**
3) My intention to share ecotourism-related knowledge to others through social media is very high	**7**	**6**	**5**	**4**	**3**	**2**	**1**

Strongly Agree 7	**Agree** 6	**Somewhat Agree** 5	**Neither Agree nor Disagree** 4	**Somewhat Disagree** 3	**Disagree** 2	**Strongly Disagree** 1

4) I will return to the social media site through which I share ecotourism-related knowledge to others	**7**	**6**	**5**	**4**	**3**	**2**	**1**

5) I intend to enhance my contribution to ecotourism-related knowledge to others through social media in the future	**7**	**6**	**5**	**4**	**3**	**2**	**1**
6) In the future, I will encourage other ecotourists not using social media to contribute ecotourism-related knowledge to others in social media sites	**7**	**6**	**5**	**4**	**3**	**2**	**1**

Your Personal Information

Gender (Please Mark (x) on the appropriate box)

Male	
Female	

Marital Status

Married	
Unmarried	
Others	

Your Highest Educational Qualification. Please mark (x) on the appropriate box

Less than High School		
High School		
Diploma/Higher Diploma		
Bachelors Degree		
Post-graduate/Masters degree		
Others		

Which Age-group do you belong to? Please mark (x) on the appropriate box

Less than 18		
18-24		
25-34		
35-44		
45-54		
55 or above		

Your Status of Employment. Please mark (x) on the appropriate box

Employed	
Unemployed	

Number of times you have previously visited this attraction. Please mark (x) on the appropriate box		
Once(excluding the current visit)		
Twice		
More than twice		

Which of the following ecotourism activities do you take part in while visiting a natural attraction in Kuala Lumpur? Please mark (x) on the appropriate box/boxes		
Bird watching		
Nature-viewing		
Jungle trekking and /or biking in nature-trails		
Caving		
Canopy walk		
Any other activity (Please Specify) _____		

Which is your top source of knowledge on ecotourism in Kuala Lumpur? Please mark (x) on the appropriate box		
Word-of-mouth (Offline)		
Travel books/guides/brochures of ecotourism attractions		
Websites of ecotourism attractions in Kuala Lumpur		
Social media sites		

Which of following social media sites do you use? Please mark (x) on the ones you used		
Facebook		
Twitter		
TripAdvisor		
Virtual tourist		
YouTube		
Flickr		

Others(Please Specify) _____		
When did you start to use social media? _____		
What is your nationality? _____		
Thank You For Your Participation		

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