School of Marketing

Social Exchange Process in Ecotourism: Realizing Benefits for the Local Community

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This thesis is presented for the Degree of
Doctor of Philosophy
of
Curtin University

October 2017

Declaration

To the best of my knowledge and belief this thesis contains no material previously published by any other person except where due acknowledgment has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

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Abstract

The demand for environmentally-sustainable and income-generating tourism development has gained significant attention from tourism practitioners across the world. As a result, ecotourism development has emerged as an important tourism option due to its potential for environmental conservation and income opportunities for local communities. Ecotourism allows for wider economic integration by exchanging local resources that can facilitate the livelihood of local residents. The existing ecotourism literature presents conflicting findings on exchange initiation; exchange formation and maintenance; and the consequences of exchange, from which the key research questions of this study originate. This current study addresses the weaknesses of the existing literature by examining the antecedents and consequences of the exchange relationship in line with the social exchange process.

This study is based on the theoretical underpinning of social exchange theory (SET) and the theory of planned behaviour (TPB) and effectively integrate the exchange relationship variables and behavioural variables to explore the improved standard of living that results from community participation in ecotourism. Sundarbans in Bangladesh, which is known as the world's largest mangrove forest, is selected as a single study site for this research. The research design adopts the qualitative → quantitative based 'mixed-methods' approach. Data is collected from residents of the local community of the Sundarbans. The qualitative approach is conducted to identify factors and sub-factors to contextualise the initial research model. In the qualitative phase, 29 interviews are conducted using a semi-structured interview schedule. NVivo 11 software is used to analyse the qualitative data and, based on the findings, a comprehensive research model is developed for quantitative stage of the study.

In the quantitative phase, a set of hypotheses are developed and structured questionnaire is designed for the field survey. The quantitative data are analysed by using the partial least squares-based structural equation modelling (PLS-SEM) technique. The quantitative findings supported nine of the 11 hypothesised relationships. The findings also supported significant 'serial mediation' effects between perceived benefits and/or perceived costs, and the improved standard of living due to ecotourism through the community's attitude, intention and the community's participation behaviour.

The research has important theoretical, methodological and practical implications. By encompassing the explanatory power of each component, the behavioural exchange model of this research has advanced both social exchange theory (SET) and the theory of planned behaviour (TPB). This research has incorporated 'information sharing' as the new component of exchange relationship formation which supports the notion of social exchange theory (SET). The empirical findings of this study also extends the existing theory of planned behaviour (TPB) by using improved standard of living due to ecotourism (which is the ultimate dependent variable of the current research model) as the outcome of actual participation behaviour of the local community. From the methodological standpoint, the adoption of the qual → QUAN based mixed-methods approach in this research unearths in-depth insights of the current study site. In addition, the application of serial mediation analysis in the current research setting provides a new dimension of ecotourism research to confirm the relationships between the study variables. From practical perspective the study finds that ecotourism is the means to an improved standard of living for the local community. Local planners and policy makers should thus embrace study's findings in planning for ecotourism development.

Key words

Ecotourism, Local community, Sundarbans, Bangladesh, Exchange relationship, Community attitude, Community participation, Standard of living, Mixed-methods, PLS-SEM.

Acknowledgements

With the name of Almighty Allah, the Most Gracious and the Most Merciful ---

First and foremost, my heartfelt gratitude goes to Professor Mohammed Quaddus who triggered my PhD journey by giving his consent to supervise this thesis. His continuous guidance and support have led me to reach the end of my studies and attain my PhD dream. I should remember his advice "Don't be rushed" which has inspired me to complete the entire thesis work. I would like to thank him for his continuous and persistent guidance as well as his moral support.

I sincerely acknowledge the role of Dr Tekle Shanka as co-supervisor of this thesis. His valuable comments, suggestions and insights have kept me on track at all times. My deepest gratitude is also devoted to Professor Nigel de Bussy and Professor Ian Phau whose support and cooperation have facilitated the administrative affairs of my PhD course.

I am really grateful to Associate Professor Vanessa Quintal, Associate Professor Christof Pforr and Dr Sandra Gountas for their rigorous review of my candidacy proposal. Their feedback and comments have helped me to design the research problems and to gain an understanding of the theoretical underpinnings of this research. I am also thankful to Dr Min Teah for her prompt action as Higher Degree by Research (HDR) coordinator for any administrative issues. It would be ungrateful if I did not acknowledge the contribution of Dr Fazlul Rabbanee to my PhD journey. It was my privilege to knock on his door to discuss anything that I found confusing as well as new insights that came to mind. He is really a mentor of this research.

I would like to extend my gratitude to the Curtin Strategic International Research Scholarship (CSIRS) authority for providing the financial support. Without this support, it would have been impossible for me to conduct my doctoral study in Australia, and particularly at Curtin University. I am indebted to all Australian citizens whose taxation money is allocated to my scholarship. I should remember this for the rest of my life.

My gratitude goes to the Deputy Dean, Curtin Business School (CBS) Associate Professor Fay Rola-Rubzen for taking care of HDR students at CBS with an encouraging attitude at all times. I am also grateful to her for her initial support in

renting a house in Perth city which released a huge of mine at the early stage of my PhD journey.

I am truly grateful to Professor M. Shah Nowaz Ali, Professor Sanjib Kumer Saha and Professor Shamsuddoha for their excellent reports as referees for my PhD admission process.

I would like to thank Dr Craig Baird for his intensive input in writing the thesis. I am also thankful to Ms Jenney Goddison for arranging and maintaining facilities across the CBS HDR Hub. I should not forget to give special thanks to all administrative staffs at the Graduate School of Business (GSB), School of Marketing (SOM) and CBS for their support, cooperation and friendly attitude.

I sincerely acknowledge Budi Cahyono for helping me with the NVivo analysis of the field study data. He has contributed ample time to teach me different applications of NVivo software. I am also grateful to Udsanee Pakdeetrakulwong for her cooperation and support with the formatting of this thesis.

I am thankful to Abdul Alim, Rudrandu Roy, Rokonuzzam and Iqbal Hossain for their great help in collecting the data for this research, both in the qualitative and quantitative phases. Without their help and cooperation, it would have been so difficult for me to manage the data collection procedure while located in Australia.

I am indebted to all my past and present fellow members of CBS for their direct and indirect help and companionship in my study and personal life. I have to particularly offer thanks to Dr Enayet Hossain, Dr Faridul Islam, Dr Nuruzzaman, Dr Shah Azam, Dr Kamrul Hassan, Dr Mostafa Hasan, Dr Farid Khan, Dr Nasir Uddin, Dr Alamgir Hossain, Dr Maruf Hossan Chowdhury, Dr Eijaz Ahmed Khan, Dr Shamsuddoha, Dr Feroz Ahmed, Shahadat Hossain, Nahidul Islam, Rubayet Ahmed Khan, Ariful Islam, Dr Imran Haider, Dr Yh Thum, Dr Desmond, Sanoara Yasmin, Saadia Shabnam, Mohammad Al Qahtani, Jubran Al Qahtani, Abdul Aziz Al Qahtani, Abdullah Al Qahtani, Nasser Al Sharife, Muteeb Saad Alahmari, Mohammad Asiri, Abdullah Alharbi, Bilal Abu Salih, Abdulaziz Bahlal Baban Eulaiwi and Faisal Al Salhe. My sincere thanks go to some of my personal friends, namely, Dr Salekuzzaman, Harun-or-Rashid, Faisal Mahmud, Moazzem Hossain and Masud, and to my sisters-in-law Moonmoon, Nishi, Rumana, Mumpy and Nusrat whose company has given myself and my family the utmost mental pleasure while living abroad.

I must not miss giving special thanks to my wife Lily who suffered much during my entire PhD route. She has had to handle all family affairs including regular cooking of meals for five family members as well as caring for our two school-going children alone with a little baby boy. Probably, this has been the hardest part of her life, living abroad without any helping hands. I am also thankful to my mother-in-law Momtaj Begum and my brother Torab Ali, and my sisters Hamida, Anowara, Monjuara, Anjumanara, Ronjuara and Mafia, and my cousin Jalal Sardar and my wife's brother Mostafa Iqbal and her sisters Firoja, Salina and Kamrun Nahar back in Bangladesh. I am also indebted to my brothers-in-law Nazrul Islam, Mofazzal Hossain, Mohammad Ali, Moshiar Rahman, Robiul Islam, Sirajul Islam and Shukur Ali, and my sisters-in-law, Daliya Akter, Anjuara and Lipi. They are all really missing us because I am the youngest son of my parents and my wife is also the youngest daughter of her parents. I also deeply remember my brother, the late Taiyabur Rahman, my sister, the late Monowara, and my father-in-law the late Shahar Ali whose blessings are always with me.

Last, but not least, I am especially indebted to my loving children Abdullah Ali Azgor (Alif), Ali Ahsan Linkon and Ashraf Kabir Ali (Likhon) who have sacrificed much through not having a sufficient sense of belonging and affection from me due to my work on my studies. I will not be able to return this to them, so I will owe this to them forever.

Dedication

With all my love to my parents, the late Azgar Ali Sardar and the late NurJahan Begum,

and

to my ancestors and descendants

Conference Papers from This Dissertation

1. Ali, M. B., Quaddus, M., & Shanka, T. (2017). Ecotourism development and issues around the local community: The income generation perspective. Paper presented at the 5th International Conference on Hospitality and Tourism Management 2017. Colombo, SriLanka.

2. Ali, M. B. (2017). Understanding the participation behaviour of local residents in ecotourism and its impacts on standard of living of the community. Paper presented at The 2017 CBS HDR Colloquium, Curtin University, Perth, Australia.

3. Ali, M. B., Quaddus, M., & Shanka, T. (2016). Social Exchange Process in Ecotourism: Realizing Benefits for the Local Community. Paper presented at the ANZMAC Mid-Year Doctoral Colloquium 2016, School of Marketing, Curtin University, Perth, Australia.

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List of Abbreviations

ANT	Actor-network theory
Attr	Attraction
AVE	Average variance explained
BETA	Belize Eco Tourism Association
CAtti	Community attitude
CBS	Curtin Business School
CFA	Confirmatory factor analysis
CInt	Community intention
CMV	Common method variance
Cor	Corruption
CPart	Community participation
CR	Composite reliability
CSIRS	Curtin Strategic International Research Scholarship
DMOs	Destination marketing organizations
EU	European Union
ExR	Exchange relationship
GDP	Gross domestic product
GP	Government policy
GSB	Graduate Research School
HDR	Higher Degree by Research
ISLE	Improved standard of living due to ecotourism
LMX	Leader management exchange
MDGs	Millennium Development Goals
Mot	Motivation
NGO	Non-governmental organization
PB	Perceived benefits
PC	Perceived costs
PIns	Political instability
PLS	Partial least squares
PLS-MGA	Partial least squares-based multi-group analysis
PLS-SEM	Partial least squares-based structural equation modelling
qual	Qualitative
QUAN	Quantitative
SD	Standard deviation

SEM	Structural equation modelling
SET	Social exchange theory
SOM	School of Marketing
SPSS	Statistical Package for the Social Sciences
SQRT	Square Root
ST-EPI	Sustainable Tourism Eliminating Poverty Initiative
TIES	International Ecotourism Society
TMX	Team management exchange
TPB	Theory of planned behaviour
UN	United Nations
UNCTAD	United Nations Conference of Trade and Development)
UNDP	United Nations Development Programme
UNEP	United Nations Education Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNWTO	United Nations World Tourism Organization
US/USA	United States/United States of America
VIF	Variance influence factor
WB	World Bank
WSSD	World Summit on Sustainable Development

Chapter 1 INTRODUCTION

1.1 OVERVIEW

Tourism has been conceptualized using different terms that highlight its diverse areas of application, such as pro-poor tourism, sustainable tourism, nature-based tourism, ecotourism and many more (Bakker & Messerli, 2017; Björk, 2000; Blamey, 1997; Duffy, 2015; Hummel & van der Duim, 2012). Pro-poor tourism was first endorsed in 2002 at the World Summit on Sustainable Development (WSSD) in Johannesburg, with the United Nations World Tourism Organization (UNWTO) also launching the Sustainable Tourism Eliminating Poverty Initiative (ST-EPI) (Hummel & van der Duim, 2012). Prior to that, the sustainability issue in tourism emerged during the late 1980s: since then, the term 'sustainable tourism' has been used in abstracts, as key words or as titles in the academic literature (Hall, 2011). Another growing area of tourism development is nature-based tourism which involves experiencing flora and fauna in a natural setting (Jafari, 2002). In fact, nature-based tourism promoted the early development of ecotourism due to its characteristics of attractions and products (Fennell & Weaver, 2005). Ecotourism is predominantly a natural attraction-based tourism focusing on enjoyment and education about ecological, socio-cultural, economic and environmental sustainability (Björk, 2007; Reimer & Walter, 2013; Walter, 2011). It is one of the fastest-growing segments of the tourism sector in many economies (Hawkins, 2004; Hunt & Stronza, 2009; Scheyvens, 1999; Silva & McDill, 2004). Over the last decade, ecotourism has gained significant attention across different parts of the world (Goeldner & Ritchie, 2006; Orams, 2005, 2002; Parker & Khare, 2005; Southgate, 2006; Zhuang, Lassoie, & Wolf, 2011). In recent times, it has been considered by many governments as an economic tool for fostering sustainable development (Dowling, 2013).

In the 1980s, the term 'ecotourism' started appearing in English language tourism literature (Weaver & Lawton, 2007). Hetzer was the first academic to coin the term 'ecotourism' in 1965 when he suggested that responsible, alternative tourism should

have: (i) minimum environmental impact; (ii) maximum respect for host cultures; (iii) maximum benefits to local people; and (iv) maximum recreational satisfaction to participants (see Fennell, 1998, p. 233). Ceballos-Lascurain was another pioneer scholar in this field and described ecotourism as

> tourism that consists in travelling to relatively undisturbed or uncontaminated natural areas with the specific objectives of studying, admiring, and enjoying the scenery and its wild plants and animals as well as any existing cultural manifestations found in these areas (Jafari, 2002, p. 165).

Belize Eco Tourism Association (BETA) emphasized environmental preservation as the primary theme of ecotourism (Medina, 2005). Dowling (2013) presented an extended discussion about the development of ecotourism with reference to numerous scholars, including Lindberg and McKercher (1997); Fennell (1999); Page and Dowling (2002); Fennell and Weaver (2005); and Weaver and Lawton (2007).

The rapid expansion of ecotourism across the world has been possible due to growing environmental awareness together with ongoing development in transport and communications systems across and between countries (Hawkins, 2004). As ecotourism development is principally based on uncontaminated natural phenomena (Björk, 2000), a country with these resources has the potential to develop an ecotourism market segment which can promote local businesses (Zhao & Ritchie, 2007) and generate employment as well as income opportunities for the local community (Timothy & White, 1999; Zhao & Ritchie, 2007). Bangladesh, as a sample country, has huge potential for the successful development of an ecotourism market segment due to its abundant ecotourism attractions. It has six seasons throughout the year, each of which comes with different natural and scenic attractions. It is important to note that numerous ecotourism sites and attractions can be found in Bangladesh including the world's largest unbroken sea beach in Cox's Bazar and the world's famous mangrove forest, the Sundarbans. However, the contribution of these sites to improving the livelihood of the local community and to the economy is unknown. In fact, the ecotourism literature in Bangladesh concentrates on ecotourism as a concept, and on its problems and development issues, while largely ignoring its contribution to the improvement of the standard of living of the local community (Alam, Furukawa, & Akter, 2010; Islam, Iftekhar, & Islam, 2011; Mohd, Jusoff, Sheikh, & Yaman, 2008; Tisdell, 1997).

The demand for environmentally-sustainable and income-generating tourism development has attracted the attention of tourism scholars and businesses since the 1980s. In fact, the emergence of ecotourism is due to its potential for environmental conservation and for income opportunities for local communities (Hawkins, 2004). Thus, ecotourism has been recognized as one of the most viable options for community development owing to its wide-scale acceptance in addressing poverty alleviation through employment creation for the local community by ensuring an uncontaminated natural environment (Khanal & Babar, 2007). Ecotourism allows for wider economic integration by exchanging local resources that facilitate an improved standard of living for local residents (Timothy & White, 1999).

With reference to the above discussions, ecotourism represents one of the viable sectors in Bangladesh, thus having substantial economic, socio-cultural and environmental importance. The contribution of ecotourism to the improved standard of living of the local community is evidently in need of careful investigation.

1.2 PROBLEM STATEMENT

'Community participation' has become an umbrella term for a new type of development intervention (Butcher, 2013), describing the process of building a community by enabling, teaching and motivating its members and organizations toward self-help (Lee, Kim, & Phillips, 2015). Ecotourism is considered a worthwhile sector for changing the living conditions of the local community (Akama & Kieti, 2007). In fact, community members are the basic element for ecotourism development at a certain destination as they provide the primary tourism offerings which influence tourists' experiences (Kim, Ritchie, & McCormick, 2012). The involvement of community people for resource generation and the creation of jobs are emerging from the development of the ecotourism industry, thus providing niche market benefits to the community (López-Guzmán, Sánchez-Cañizares, & Pavón, 2011). For ecotourism development, community members need to work together with the government and other co-players to explore local resources and attractions for wider ecotourism markets. Thus, the appropriate exchange between industry players is important to maximize the benefits for all stakeholders, including the local community.

Authors in the existing literature has studied the exchange relationship phenomena in multiple dimensions to assess the impacts of the broad tourism sector on local residents. Ap (1992) developed the social exchange process to assess residents' perceptions of the impacts of tourism. This author emphasized the balanced and unbalanced forms of exchange relationships which define the allocation of the actors' resources in the exchange situation. Nunkoo and Ramkissoon (2011) studied the complex relationship of community support for tourism. In their study, the authors considered trust, power and neighbourhood conditions as the antecedents of perceived benefits, perceived costs and overall community satisfaction that influence the support for tourism. Apart from the dimensions of the exchange relationship, the tourism literature also focused on assessing the impact of behavioural variables on the local community. Lai and Nepal (2006) addressed the local perspectives of ecotourism development assessing the influence of community attitude and intention towards different dimensions of ecotourism. Nunkoo and Gursoy (2012) examined residents' positive and negative attitudes toward supporting tourism, with highlighting the impact of resource-based occupational identity, environmental identity and gender identity on attitudes toward supporting tourism. Lu, Gursoy, and Del Chiappa (2016) examined the influence of materialism on attitudes toward and interest in ecotourism which further influenced ecotourists' intention and willingness to pay a premium. These authors suggested incorporating additional factors to influence attitudes toward ecotourism. Karki and Hubacek (2015) developed a conceptual framework and empirically tested the relationships between attitude, intention and behaviour of the community.

According to the above references, the existing literature presents the exchange relationship variables and behavioural variables to assess the impact of tourism on the community. It is also necessary to combine the exchange relationship variables (i.e., exchange initiation, formation and consequence factors) and behavioural variables (i.e., attitude, intention and actual behaviour) within a single study setting. The successful blending of these two sets of variables provide actual outcomes of the exchange relationships of ecotourism actors that might impact positively on local communities' livelihoods.

True exchange relationships in ecotourism can be initiated when the offered destination is full of attractions and engages people from the community surrounding

the destination with proper motivation for the exchange. Other concerns about the actors' power, trust and opportunities for sharing information become important in forming and maintaining these exchange relationships. The ultimate concern is the consequences of the exchange relationship that forms attitudes, participation intention, actual participation and its outcomes relating to the local community. Hence, to ensure community participation in ecotourism development, it is imperative to have evidence of the direct benefits from ecotourism for the community's livelihood. Most developing countries are looking for alternative means of income and employment to improve the livelihood of its citizens and, thus, ecotourism development can progress towards achieving this goal. Despite the apparent impact of the exchange process, its effect on the local community's standard of living has received limited attention in earlier research (e.g., Buckley, 2009; Hunt, Durham, Driscoll & Honey, 2015; Nault & Stapleton, 2011; Schellhorn, 2010).

The Sundarbans of Bangladesh is selected as the study site in this research. This is considered one of the single most valuable resources of Bangladesh and bears significant economic, socio-cultural and environmental importance. The roles of different actors for ecotourism development in this area are not very visible; the community people hardly recognize that ecotourism can bring positive changes in their lives; similarly, the government and other stakeholders are also ignorant about the importance of this viable sector. Hundreds of thousands of local people are directly and/or indirectly dependent on this forest for their livelihoods. Local people are involved in resource extraction from the forest as part of their regular source of income. They are primarily engaged in offering tourism services, fishing and honey collection. The activities of these local people are affecting the normal living conditions of forest inhabitants. The natural lives of both land- and water-bound animals are affected by the activities of both tourists and local people. Plant species are also affected due to waste disposal from tourists' boats and other water vessels and many other activities performed by local people and tourists. What has now become a priority concern are the worthwhile steps that need to be taken regarding the interests of both tourists and locals as well as maintaining biodiversity across the forest. In fact, the local people will have very limited options for alternative means of their livelihood if they are withdrawn from forest-based activities. Similarly, tourists will remain ignorant about the many attractions and biodiversity of the forest if visiting the forest

is restricted. Hence, ecotourism development in the Sundarbans has become a matter of concern for local people's lives and protection of the biodiversity of the forest.

The above-mentioned deficiencies in ecotourism research have been streamlined to undertake the current study. This research explores how an effective exchange process (i.e., exchange initiation, exchange formation and maintenance, and exchange consequences) can contribute to an improved standard of living for the local community people of the study site. The theoretical justification for the above notion of the exchange relationships of ecotourism actors needs to be explored.

1.2.1 The Sundarbans — The Study Site

The Sundarbans is the largest forest in Bangladesh and the largest mangrove forest in the world. The forest originated about 7,000 years ago from the slopes of the Himalayas through the Ganges River channel (Aziz & Paul, 2015). The Sundarbans was badged as a UNESCO World Heritage site in 1997. It is located partly in Bangladesh and partly in India. The total area of the forest is about 10,000 square kilometres of which the Bangladesh area covers about 6,000 square kilometres. The Bangladesh part of the Sundarbans has been managed by the Sundarbans Forest Circle with a total of 55 Compartments under four Ranges, that is, Sharankhola, Chandpai, Khulna and Satkhira (Aziz & Paul, 2015).

The specialties of this forest are the presence of mangrove trees; tidal shifts (high tide and low tide); mudflats; many rivers and canals; streams from freshwater (rivers) to saline water (sea); and exceptional biodiversity with flora and fauna. It is the home of numerous animal and plant species. About 1,136 wildlife species including 315 species of birds inhabit the Sundarbans (Aziz & Paul, 2015). The common animals of this forest are the famous royal Bengal tiger, crocodile, spotted deer, monkey and different kinds of snakes, birds, and fishes. In addition, 115 plant species are recorded as growing in this forest which give the true features of the mangroves of this forest (Aziz & Paul, 2015). The dominant flora of this forest comprises Sundari, Gewa, Goran and Keora; the forest was, in fact, named as the Sundarbans due to the abundance of the Sundari tree. The local term '*Sundari*' itself means 'beautiful'. The forest is beautiful due to its geological, botanical and biological features which offer immense pleasure to visitors and the opportunity for their increased understanding.

Having an awesome experience during his visit to the Sundarbans in 1989, Nobel laureate British poet Ted Hughes wrote several poems (Hussain, 2012). Two are presented below:

Fuler Mala

We are sailing along festooned
With the silky sheet of the forest's reflections,
A fuler mala of the flowers of the Sundarbans.
Freckled Rajanigandha of the chital,
Gathered in clusters at evening and morning,
White lilies of all the kinds of heron
Black hyacinth of the wild boar
Weightier wind flower of the white-faced fish-hawk
Dark, hugely-petalled flower of the horn-bill
And blooming through the fangled wall of the forest
Over the water
The glaring flower of the smell of the
Tiger
Finger-petalled flower of the monkey
Silk-flash sari flower of the kingfisher
Yellow and olive gigantic, long swamp arched, the crocodile
And the four-petalled rose of the tiger's pug-mark
Plucked last night
With the thorny rose of the tiger's assault
That missed us by a day.
We are sailing along eating better than the tigers
Festooned
In the everlasting flower of the smile
And the big reddening lotus of the day that folds and gives
Into the smoky blue Bay of Bengal.

(Source: Hussain, 2012)

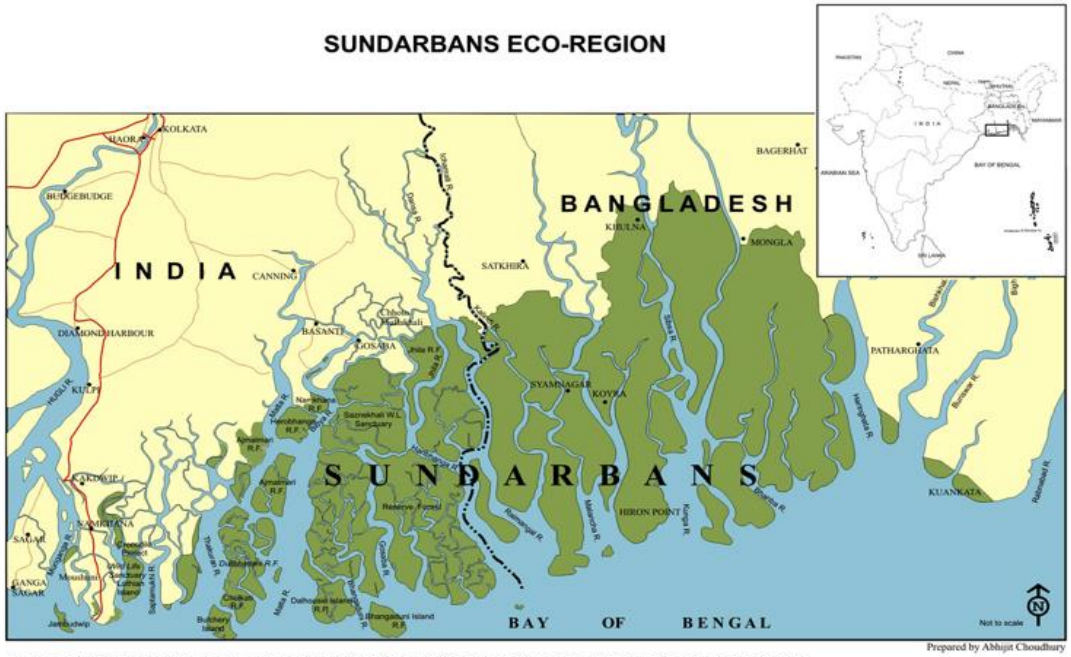
Dreams Like Deer

I slept here a night of chaotic dreams,
I could not keep my dreams inside the rest-house,
They spread out through the forest,
Real tigers trod on them.
In the morning the sea
Was a bed of pink rose petals
Where somebody very beautiful had slept
A perfect sleep.

(Source: Hussain, 2012)

The Sundarbans plays a significant role in the economic, social and environmental lives of the south-western population of the country. It has significantly contributed to Bangladesh by facilitating fish breeding and raising, coastline protection, and carbon stock and erosion control. From the literature, it is evident that mangrove plants can store organic carbon at levels 3–5 times higher than terrestrial plants (Nam, et al.,

2016). The Sundarbans contributes to improving the quality of the natural environment by storing over 56 million metric tons of carbon (Aziz & Paul, 2015). It supplies the largest volume of forest produce for the country. The forest supplied raw materials for Khulna Newsprint Mills, Bangladesh, from its inception in 1959 until their shutdown in 2002. This mangrove forest has significantly been contributing to the protection of the local neighbourhood from sea-originated natural disasters, such as cyclones and storms which cause a huge amount of damage to human and animal lives. In fact, the Sundarbans is called the *natural wall* of the country (Aziz & Paul, 2015). Thus, together with its economic value, the social and environmental importance of the forest is unavoidable.



Source: https://www.pinterest.com.au/pin/303359724869745761/ (visited on 25/05/2018)

Figure 1-1: Map of the Sundarbans

The Bangladesh part of the Sundarbans is surrounded by the Bay of Bengal in its south, and shrimp production and croplands in the north and east. However, the western part of the forest belongs to India (see Figure 1-1). The forest is geographically connected with 154 local councils (i.e., locally called Union) under 17 Upazilas of the Khulna, Satkhira, Bagerhat, Pirojpur and Borguna districts of Bangladesh, and has an estimated population of 3.5 million (Aziz & Paul, 2015). The people living adjacent to this forest are directly and/or indirectly dependent on the forest. The main professions of the Sundarbans-based population are related to offering ecotourism services, fishing, harvesting honey and the collection of Nypa leaves that have a significant impact on

their household economy. Visitors to the Sundarbans are one of the important market segments for fish and honey; however, Nypa leaves go to the local trading market. Apart from these activities, local people are engaged in handicrafts and the staged performance of local folk culture for commercial purposes, targeting the visitor markets.

In fact, the Sundarbans nurtures numerous animal and plant populations which contribute to the protection of the natural environment and ecology. In addition, the economic and social lives of local residents are supported by the Sundarbans. The above-mentioned research problems are persistent in this area; thus, the solution to these problems can significantly contribute to the local community.

1.2.2 **The Local Community**

The definition of the term 'community' is the group of people living in a certain location who interact within a specific socio-cultural structure (i.e., customs, values and belief systems). The entity of a community reflects how its members are sharing and distributing the community resources among themselves. Many overlapping concepts of community development have been found in the literature; however, the term refers to two main fields: relational and geographic (Gusfield, as cited in McMillan & Chavis, 1986). Thus, the sense of community characterizes the relationship between its members and the social structure within a territorial setting (Chavis & Wandersman, 1990). The individual's participation in the use of community resources can improve the quality of the physical environment as well as social conditions (Chavis & Wandersman, 1990). Each community has its distinct economic, social, cultural, environmental and governance goals and priorities for the well-being of its members (Cox et al., as cited in Lee et al., 2015).

The Sundarbans is also known as the saline water-bound area of the country. Crop cultivation has become almost impossible for local people due to the flooding of saline water onto the agricultural lands. As a result, people in this area are gradually experiencing increasing poverty. They are now inclined to find alternative sources for their livelihood. Ecotourism development has been considered as an alternative means of income generation for the local community in this area which has come to the attention of the government and national policy makers. In fact, the development of

the Sundarbans-based ecotourism will have considerable impact on the income generation and consumption patterns of community people.

The local community is the main stakeholder of the Sundarbans-based ecotourism development. The socio-demographic characteristics of this area are a low education rate, poor infrastructure, poor health facilities, limited income and dependency on resource extraction from the Sundarbans. Despite ample resources and opportunities for ecotourism development, this area has been experiencing difficulties in accomplishing an effective exchange process among stakeholders. Tourists have very limited interactions with the local people during their visits to this forest due to the geographic features of the forest. They travel to the forest from distant stations where water-bound transports are primarily centred. In fact, water-bound transports (i.e., boats, launches and ships) are the only means for tourists to enter the forest and are offered from the nearest river ports which are located far from the neighbourhood of the Sundarbans. Other than transport service providers, tourists' interaction with the local community is negligible owing to poor ecotourism offerings from the local people. Thus, appropriate exchange has barely been practised among the ecotourism actors in this area which has inhibited exchange initiation, formation and maintenance, as well as the outcomes of that exchange which are critical elements for ecotourism development at this site.

Thus, in addressing the research problems, this study will be able to suggest how the current benefits from ecotourism could be injected into the local economy which would facilitate an improved standard of living for community members. The research has the ultimate goal of discovering a worthwhile means for improving the standard of living of the Sundarbans-based community people through their participation in various ecotourism-related activities.

1.3 RESEARCH QUESTIONS

Research question 1a: How can the exchange relationship be conceptualized for improving the standard of living of the local community at the ecotourism destination?

Research question 1b: How can the behavioural dimensions of community people be integrated within the exchange process to explore an improved standard of living?

Research question 2: What are the current attitudes of the local community towards participating in ecotourism-related activities?

Research question 3: What are the socio-economic benefits of ecotourism development in a developing country context?

1.4 RESEARCH OBJECTIVES

This research is undertaken to explore the impacts of ecotourism development in a destination context that affect the standard of living of the local community. Hence, the specific objectives of this study are:

Research Objective 1: To evaluate the role of the exchange process in improving the standard of living of the local community by reconceptualising the exchange relationship.

Research Objective 2: To develop a model by integrating relevant behavioural variables within the framework of the social exchange process.

Research Objective 3: To evaluate the significance of the community's support for and participation in ecotourism development.

Research Objective 4: To assess the socio-economic benefits of ecotourism in a developing country context.

1.5 SIGNIFICANCE OF THE RESEARCH

This study is expected to contribute to the area of ecotourism research where community benefits are the primary focus. The significance of this study is presented in both the theoretical and practical contexts.

1.5.1 Theoretical Contribution

The impacts of ecotourism have been studied in different dimensions by numerous researchers (e.g., Butcher, 2011; Hunt & Stronza, 2009; Lai & Nepal, 2006; Lu,

Gursoy, & Del Chiappa, 2016; Ormsby & Mannle, 2006; Pasape, Anderson, & Lindi, 2015; Pegas & Castley, 2014; Vincent & Thompson, 2002). However, most of the existing studies are conceptual and lack empirically validated dimensions of the behavioural exchange relationship. Therefore, the current study identifies the dimensions of exchange initiation, exchange formation and maintenance, and the consequences of exchange with reference to the behavioural and exchange variables related to the current research context. In addition, this research identifies the antecedents of the exchange relationship and empirically measures and tests their relationships. The existing literature is limited in its presentation of any comprehensive model in line with the behavioural exchange relationship of ecotourism stakeholders at the local community level. Therefore, the current study has blended some relevant behavioural variables within the behavioural exchange framework and has empirically tested the applicability of the model in the study context. This consolidation of behavioural variables and exchange relationship variables is considered a landmark move towards the enrichment of the ecotourism literature. Another important theoretical contribution refers to the extension of existing theories (i.e., social exchange theory [SET] and the theory of planned behaviour [TPB] within the premises of the social exchange process (Ap, 1992). The positive and significant findings in the current research provide a more generous definition of the exchange relationship. In addition, the inclusion of *improved standard of living* as the outcome variable in the research model is considered an important contribution to the existing literature.

1.5.2 **Practical Contribution**

A growing trend in ecotourism research has been found in developing countries in Asia, Africa and Latin America. Bangladesh is one of the developing countries in Asia where many opportunities are at the forefront of ecotourism development. As mentioned, the study area of the Sundarbans is characterized by a low education rate; underdeveloped infrastructure; low income opportunities; dependency on the forest; and a saline water-bound area. Thus, the average living standard of local people is not up to the mark. The current research has explored the impacts of ecotourism development in this area. For this purpose, a model has been developed. It is expected that through the application of this model at the destination, local people will find ecotourism-related opportunities that could facilitate their employment, income and

consumption patterns. In addition, exploring the opportunity for ecotourism development, the Sundarbans area would be able to attract more ecotourists: in catering for them, additional investment and business opportunities would follow. Furthermore, the findings of this research will open the eyes of the local people to the economic and environmental value of the forest and that it can contribute to their social and cultural lives. Moreover, the study findings may impact on policy making at national and local levels for ecotourism development in this area. Thus, this study has economic, social and environmental importance for the local community of the Sundarbans as well as the country of Bangladesh.

1.6 DEFINITION OF THE KEY TERMS

This section contextualises some of the key terms that are frequently used throughout the thesis that documents this research. The following key terms are defined with reference to the study's purpose:

Ecotourism: Ecotourism is principally nature-based tourism in which tourists travel to attractions with a view to the conservation of the natural environment, and their interactions with the attractions focus on education and knowledge about the uncontaminated natural phenomena, and also lead to the well-being of the local community (TIES, 2015; Weaver & Lawton, 2007).

Local community: The local community encompasses the group of people in a place where they are born, grow up and live, and where they know other people around them (MacQueen et al., 2001). From the perspective of ecotourism development, the local community is a psychologically empowered community whose residents are happy with the roles they perform in ecotourism activities and who are optimistic about the benefits generated by ecotourism for their livelihood (Garrod, 2003).

S**ocial exchange process:** The social exchange process is an exchange process among actors where power, trust and the opportunity for information sharing determine the ability of actors to take advantage of tourism development (Nunkoo & Ramkissoon, 2012; Nunkoo & Smith, 2013). The term 'ability' refers to each actor's resources that denote power. The tourism exchange process includes economic, social and environmental resources that lie with local residents which assist them to evaluate the

exchange and thereby to form their attitude toward tourism (Jurowski, Uysal, & Williams, 1997).

Exchange initiation: The initiation of an exchange begins with the interaction of the actors in order to satisfy their needs (Ap, 1992; Moyle, Croy, & Weiler, 2010). Antecedents are prerequisites for the interaction among actors. In the current study, the attractions of the ecotourism site and community motivation are seen at the interacting point of the exchange.

Exchange formation and maintenance: Exchange formation comprises three interconnected components: antecedents, exchange relationship and type of exchange (Ap, 1992; Moyle et al., 2010). The antecedent factors provide the actors with opportunities to be perceived before the exchange is formed, with these opportunities leading to the withdrawal or formation of the exchange relationship, whereas the types of exchange relationship depend on the power dependency relationship between the actors (Moyle et al., 2010).

Exchange consequence: The exchange consequence is the final stage of the exchange process in the current research setting. The 'exchange consequence' is defined as either positive or negative—a positive outcome leads to persisting with the exchange; a negative consequence, on the other hand, may cause withdrawal from the exchange (Ap, 1992; Moyle et al., 2010).

Standard of living: The standard of living portrays various living conditions that individuals can have or cannot have and the ability to achieve those living conditions (Steckel, 1995). Living conditions can be defined with reference to employment and income earning together with the availability of required commodities and infrastructure.

1.7 STRUCTURE OF THE THESIS

This thesis is presented in eight different but interrelated chapters. Figure 1-2 shows the sequential order of the chapters. Presented below is a brief summary of each chapter:

Chapter 1- Introduction: This chapter introduces the context of the study starting with a brief overview and the background of the research. The research problems are identified in this chapter followed by the research questions and research objectives. Finally, the significance of the study is asserted in line with the theoretical and practical contributions of the study.

Chapter 2- Literature Review: This chapter presents a brief evolution of the ecotourism literature followed by an extended literature review in line with the constructs and measurement items used in the research model. The literature on social exchange theory (SET) and the theory of planned behaviour (TPB) is also presented to establish the study's theoretical basis. In the review process, the primary focus is the tourism and ecotourism literature. Based on the literature review, a conceptual model is proposed in this chapter followed by identification of the existing research gaps.

Chapter 3- Methodology: The paradigmatic view of this study is discussed at the beginning of this chapter followed by the research methods that are considered for this study. This chapter further delves into the justification for the use of the mixed-methods approach in the current study's context. The sample selection and data collection procedures are also addressed in this chapter. A detailed presentation of the data analysis procedure is given at the end of this chapter.

Chapter 4- Field Study: This chapter describes the field study procedure and its findings. The underlying factors and sub-factors and their relationships are identified from the content analysis of the field study data. Based on the findings, the initial research model is modified and the development of the comprehensive research model is presented in this chapter.

Chapter 5- Hypotheses: This chapter deals with the development of the hypotheses based on the links and relationships between the constructs of the comprehensive research model. This chapter also confirms the measures for each of the constructs and their sources. The final questionnaire development for the survey is also presented in this chapter.

Chapter 6- Data Analysis and Results: This chapter contains the analysis of the quantitative data including the pilot study data. The initial analysis has been carried out to check the data quality with the help of testing for non-response bias and common

method bias. Further analysis of the survey data is performed with partial least squares (PLS)-based structural equation modelling (SEM) analysis to determine the validity and reliability of the measures and the constructs, and the relationships between the constructs used in the research model. The results of the SEM analysis (i.e., the measurement model and structural model) are accordingly reported in this chapter. Finally, this chapter presents the analysis of the mediating effects and, finally, the effects of the control variables.

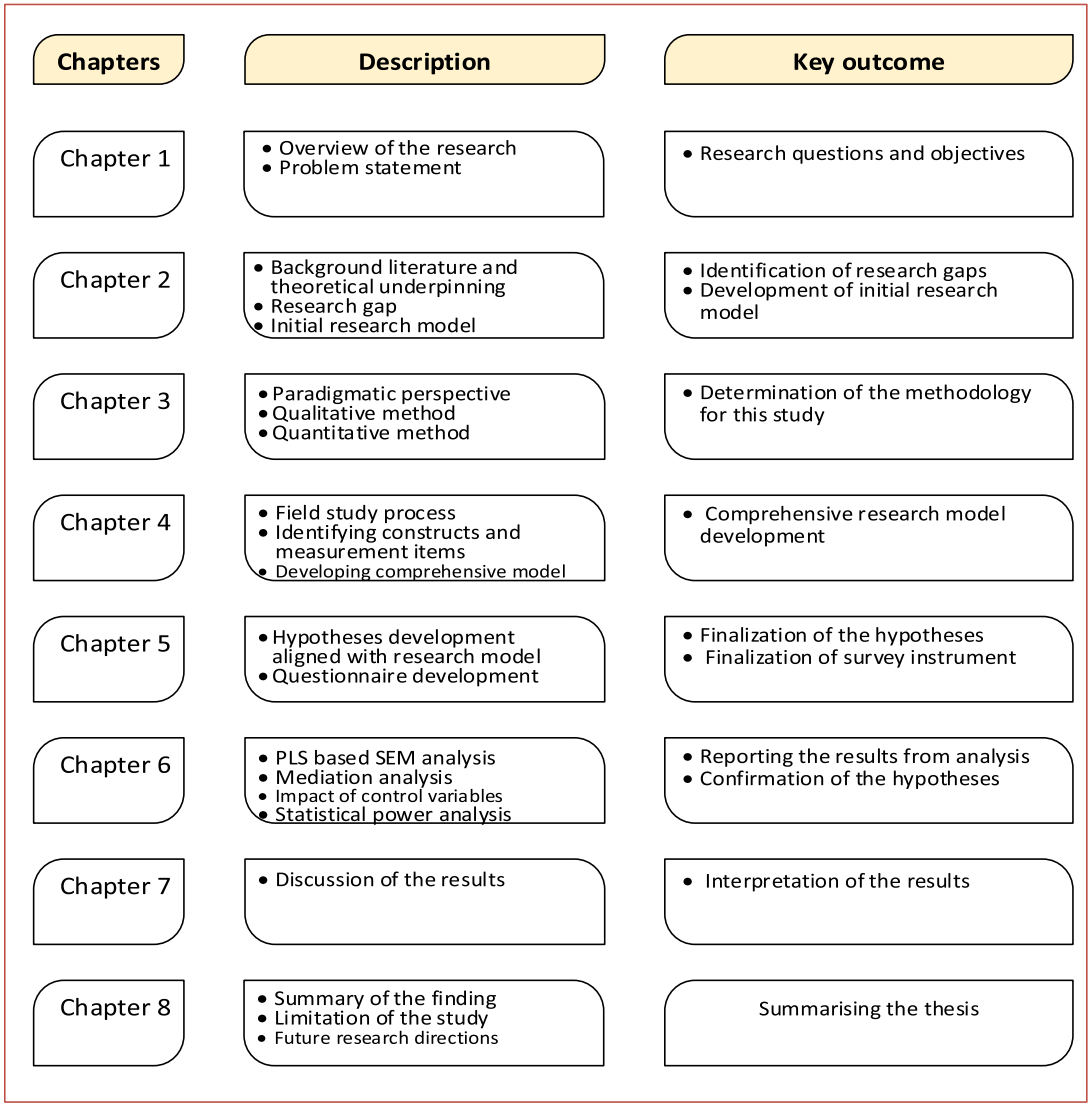


Figure 1-2: Structure of the thesis

Chapter 7- Discussion of the Findings: This chapter offers the interpretation of the results derived from the quantitative study. The quantitative findings are discussed, with reference to the findings of the earlier literature, along with the qualitative results of the current study. In addition, the findings are discussed in line with the hypotheses of the study as well as its associated research objectives.

Chapter 8- Conclusions: The final chapter brings together the contents of the thesis. This chapter presents the summary of the findings followed by several areas in which the thesis has contributed, areas that are highlighted in the study findings. Finally, the limitations and weaknesses of the study are highlighted in this chapter followed by a presentation of future research directions.

1.8 CHAPTER SUMMARY

This chapter aimed to present a brief introduction to the research topic and to the issues related to the research context. In the beginning of the chapter, the research background was discussed. The next section discussed the research problems of the study area followed by a brief description of the study site and the study sample. The specific research questions and research objectives were highlighted in this chapter. Furthermore, this chapter discussed the significance of the study from theoretical and practical perspectives. Definitions of key terms used in this research were also provided in this chapter. Finally, the structure of the thesis was presented to conclude this chapter.

Chapter 2 LITERATURE REVIEW

2.1 INTRODUCTION

In this chapter, the literature related to ecotourism, the exchange process and ecotourism's contribution to the livelihood of the local community is reviewed. The literature review begins with a brief discussion of the background of ecotourism. The next section explains how various studies in the literature has been found through a search process designed for the study's purpose. The following section in this chapter covers the reviewed literature focusing on the main variables and constructs used in this study followed by the design of the conceptual model. The subsequent sections discuss the existing research gaps and the theoretical underpinnings used in seeking to fulfil these gaps.

2.2 EVOLUTION OF ECOTOURISM

Tourism is one of the world's largest and fastest growing export sectors, contributing nearly 10% of the world's gross domestic product (GDP), 6% of the world's total exports, and accounting for one in 11 jobs worldwide (UNWTO, 2015). As an export category, tourism ranks fourth globally after fuels, chemicals and automotive products (UNWTO, 2011). Thus, the relationship between tourism and development has become one of the most discussed topics among tourism scholars and destination marketing organizations (DMOs) in almost every corner of the world. However, the conceptualisation of this relationship has ranged across diverse magnitudes over time. For a newly independent and Third World country between the 1950s and 1960s, tourism was identified as a potential modernization strategy for earning foreign currency (Hummel & van der Duim, 2012). Later, tourism was promoted as the development strategy for technology transfer, attracting foreign investment, and increasing the employment rate and GDP, as well as improving the way of life for local communities in Western societies (Hummel & van der Duim, 2012). From the 1970s to more recently, tourism has caught the attention of world organizations, such as the

World Bank (WB), United Nations (UN) agencies (e.g., United Nations World Tourism Organization [UNWTO], the United Nations Development Programme [UNDP], United Nations Education Programme [UNEP], United Nations Education, Scientific and Cultural Organization [UNESCO] and the United Nations Conference of Trade and Development [UNCTAD]) and many other multinational institutions worldwide. In fact, all these organizations have emphasized the economic value of tourism as the means of poverty alleviation by encouraging local participation, equity, gender equality and empowerment (Hawkins & Mann, 2007; Scheyvens, 2007). Akinboade & Braimoh (2010) found a favourable impact of tourism on the country economy examining the relationship between international tourism receipts and the economic growth of South Africa.

During the 1990s, the attention of tourism development broadened towards sustainable development and environmental conservation through local participation in various tourism-related activities (Buckley, 2012; Hummel & van der Duim, 2012; Scheyvens, 2007). With world population growth in recent years, tourism demand has been increasing. Hence, sustainability and environmental issues have come to the forefront of tourism development, as tourism offerings directly impact on the local atmosphere (i.e., air, water, soil and biodiversity, and through vegetation damage and wildlife disturbance) and also indirectly impact on manufacturing and transport in, and to and from, that area (Buckley, 2012). These environmental sustainability issues thus legitimate responsible entry into the tourism industry for donors and non-governmental organizations (NGOs) (Hawkins & Mann, 2007). The indented section below describes the involvement of funding organizations (i.e., the UN, the WB, the European Union [EU] and public investors) in tourism sectors for infrastructural development, human resource development, improving policy and regulation, capacity building, sustainability, cultural preservation and conservation of the environment and wildlife.

> Tourism project is first financed by the World Bank in 1966 to Morocco and Tunisia. Between 1966 and 1979, there are 19 financial intermediary loans made to 17 countries amounting [to] US$590 million. Most of the loans are for meeting the needs of foreign exchange, construction, manufacturing and tourism businesses. An addition [al] US$525 million is lent to 18 countries between 1970 and 1979 through 28 Sector Investment and Maintenance Loans. Of these, 22 are called "Tourism Projects" that are related to providing infrastructure, urban regeneration, capacity building, water and sanitation supply, and the conservation of wildlife resources. However, the rapid growth of tourism during 70s leads to the decision of the World Bank in 1979 that tourism projects are no longer fit for the development policies (objectives) of the Bank. Bank management realises that the markets and the private sectors are the most appropriate growth engine and no further focus is necessary. Between 1981 and 1990, there are few projects with a tourism dimension. During this period, European Community (now the European Union) comes as a major development assistance player in developing countries through its series of Lom**é** Conventions benefiting 84 African, Caribbean, and Pacific countries and territories. During this period, tourism grows rapidly in many developing countries and attracts public investment to support it in connection with infrastructural development, human resource development, improving policy and regulation, and resource conservation and management. Over the time "sustainable development" is transform[ed] as "sustainable tourism" and the ideology of environment and social sustainability provides a new entry opportunity for the World Bank between 1991 and 1999. A partnership agreement between the Bank and UNDP about the Global Environment Facility open[s] a new room for tourism to be included in a host of new projects that deals with the economic benefits to justify the sustainability of investment for environmental and cultural preservation. During the 90s, the projects are directly or indirectly related to tourism and the benefits are mainly oriented toward environmental, cultural and social themes. There are 44 projects in 34 countries during this period, most of the projects are on biodiversity conservation, 10% of the projects are heritage preservation, and only one project covers explicitly tourism (Hawkins & Mann, 2007, pp. 353-354).[1]

Tourism development was reflected in the UN's Millennium Development Goals (MDGs) which were implemented in the early 2000s (Buzinde, Kalavar, & Melubo, 2014; Hummel & van der Duim, 2012). These development goals focused on poverty alleviation, gender equality, empowerment and environmental sustainability in the sub-region (Buzinde et al., 2014). The emphasis of the MDGs in respect of tourism development was on discussing the effectiveness of integrating conservation and development through rural tourism (Butcher, 2011). The UNWTO proposed sustainable tourism as the most viable and responsible way for achieving the MDGs and claimed that tourism development would help countries where people are struggling with poverty (Scheyvens, 2007). Thus, from the MDGs' perspective,

[1] For details, see Hawkins and Mann (2007, pp. 353-357).

tourism is seen as a tool for both environmental preservation and local development by alleviating poverty especially in regions where tourism resources are still under-explored and the local poor have limited access to the collection of resources. Local people of these areas can participate in tourism by developing a variety of tourism products that can be a means to increasing their household income. In fact, the socio-economic importance of tourism is wide-scale in its different areas of application, such as poverty alleviation, environmental conservation and employment creation, thus encouraging the local community's positive attitude toward tourism development (Andriotis & Vaughan, 2003; Schellhorn, 2010). Indeed, tourism is considered to be an important driver for economic, social and environmental improvements for the local community.

As mentioned earlier, the term 'ecotourism' was first introduced by Hetzer in 1965 who endorsed the four main aspects of the ecotourism definition, namely: (i) minimum impact for the environment; (ii) maximum respect for host cultures; (iii) maximum benefits to local people; and (iv) maximum recreational satisfaction of participants (Björk, 2000; Fennell, 1998).[2] Hector Ceballos-Lascurain is another pioneering author who is attributed for gaining recognition among scholars of ecotourism. In fact, the comprehensive definition of ecotourism found in Ceballos-Lascurain (1987) states that:

> tourism is travelling to natural areas untouched and uncontaminated by [the] human factor, with the specific purpose of studying, admiring and enjoying the scenery, wild animals and plants in it, as well as any cultural events (past and present) found in these areas (as cited in Jafari, 2002).

In addition to the contributions of Hetzer and Ceballos-Lascurain in conceptualizing the term 'ecotourism', Hall is one of the early authors who contributed to the expansion of how ecotourism can be established as a trendy area of research (Dowling, 2013). As mentioned in Dowling (2013), Fennell surveyed 85 definitions of ecotourism in 2001 that were published between 1991 and 1996; from his analysis, he observed that most of the cited variables in the ecotourism definitions are related to natural areas, conservation, culture, benefits to locals and education.

'Ecotourism' first began to appear in the English-language academic literature during the late 1980s, as cited in Weaver (2002) and Weaver and Lawton (2007). In fact, the

[2] For details, see Björk (2000) and Fennell (1998).

phenomenon of ecotourism has been practised in different ways or following various themes long before the introduction of the term 'ecotourism' as terminology (Page & Dowling, 2002). It has been practised in almost all parts of the world including the United States (US), Canada, Africa and on treks in the Himalayas since at least the eighteenth century; mostly by the early geographers (now known as ecotourists) who toured the world searching for new lands, species and cultures (Dowling, 2013). According to Beaumont (1998), the establishment of national parks—Yellowstone in the USA in 1872, Banff in Canada in 1885, and African Wildlife Safaris and Himalayan Treks in the 1960s and 1970s, respectively— were the major ecotourism initiatives in the early period (Page & Dowling, 2002). Until the 1980s, ecotourism had not found a common platform in academia; however, the expansion of ecotourism is associated with the work of Ceballos-Lascurain in 1983 and 1987 (Page & Dowling, 2002). Both Lindberg and McKercher (1997) and Fennell (1999) argued that ecotourism searches for the common ground due to the rapid growth of tourism and the increasing interest of people in the natural environment, as cited in Page and Dowling (2002). All the above evidence indicates that hardly any consensus existed among scholars on the definition of ecotourism until the late 1990s. Admitting the ambiguity about the origin of ecotourism, Fennell (1999) urged that a common definition of ecotourism be developed (as cited in Page & Dowling, 2002). Table 2-1 presents different dimensions of the ecotourism definition.

2.2.1 **Definition of Ecotourism**

The definition of ecotourism has been widely discussed and debated among scholars since its inception as an area of study in academia.

According to Hetzer (1965),

> Ecotourism is a form of tourism principally based upon natural and archaeological resources, such as birds and other wildlife, scenic areas, reefs, caves, fossil sites, archaeological sites, wetlands, and areas of rare or endangered species (as cited in Björk, 2000, p. 190).

The proper theme of ecotourism belongs to what Ceballos-Lascurain (1987) defined as

> 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 any existing cultural manifestations (both past and present) found in these areas (as cited in Blamey, 2001, p. 6).

In their paper, Weaver and Lawton (2007) mentioned the following three core criteria that ecotourism needs to satisfy:

> (1) attractions should be predominantly nature based, (2) visitor interactions with those attractions should be focused on learning or education, and (3) experience and product management should follow principles and practices associated with ecological, socio-cultural and economic sustainability (see p. 1170).

Xu, Cui, Sofield and Li (2014) compared the Western concept of the definition of ecotourism with the Chinese concept. They argued that the Western concept of ecotourism is defined by three common criteria, that is:

> (1) ecotourism products and attractions should be conservation-based primarily; (2) interpretation and education are necessary; (3) it must be designed to be sustainable ecologically, economically, and socio-culturally (see p. 1132).

In defining the Chinese concept of ecotourism, Sofield and Li (2007) negated any distinction between nature-based tourism and ecotourism, mentioning ecotourism as

> any tourism development or activity located in a natural setting will, in China, be described as eco-tourism regardless of whether it meets any of these three common criteria (see p. 1132).

Under the Quebec Declaration on Ecotourism at the first World Ecotourism Summit in 2002, in referring the ecotourism, the participants

> recognize that ecotourism embraces the principles of sustainable tourism, concerning the economic, social and environment impacts of tourism. It also embraces the specific principles which distinguish it from the wider concept of sustainable tourism: contributes actively to the conservation of natural and cultural heritage; includes local and indigenous communities in its planning, development and operation, and contributing to their well-being interprets the natural and cultural heritage of the destination to visitors; [and] lends itself better to independent travellers, as well as to organized tours for small size groups (as cited in Buckley (2013), pp. 9-10).

According to Ecotourism Australia (n.d.) at <https://www.ecotourism.org.au/

> Ecotourism is ecologically sustainable tourism with a primary focus on experiencing natural areas that fosters environmental and cultural understanding, appreciation and conservation.

The above association certified ecotourism with reference to three advanced criteria, namely: (i) tourism in natural settings aiming at the proper use of resources; (ii) ensuring conservation practices; and (iii) helping the livelihood of local communities.

The International Ecotourism Society (TIES) defines ecotourism as "responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education" (TIES, 1990; updated 2014). According to TIES (2015), ecotourism is about uniting conservation, community and sustainable travel and should adopt the following ecotourism principles:

- Maximize physical, social, behavioural, and psychological impacts.
- Build environmental and cultural awareness and respect.
- Provide positive experiences for both visitors and hosts.
- Provide direct financial benefits for conservation.
- Generate financial benefits for both local people and private industry.
- Deliver memorable interpretative experiences to visitors that help raise sensitivity to host countries' political, environmental, and social climates.
- Design, construct, and operate low impact facilities.
- Recognize the rights and spiritual beliefs of the indigenous people in your community and work in partnership with them to create employment.

Table 2-1, which is borrowed from Fennell (2014), provides a comprehensive picture of the definitions of ecotourism and how they differ and contrast with other forms of tourism.

Table 2-1 Comparisons of selected ecotourism and nature tourism definitions

Main principles of ecotourism definitions	**Definitions**										
	1	2	3	4	5	6	7	8	9	10	11
Invest in nature	√	√		√	√	√		√		√	√
Contributes to conservation			√	√	√	√	√		√	√	√
Reliance on park and protected areas	√		√	√	√	√	√		√	√	√
Benefits local people/ long-term benefits			√	√	√		√		√	√	√
Education and study	√	√	√		√			√		√	√
Low impact/non-consumptive				√					√	√	√
Ethics/responsibility							√			√	√
Management				√		√		√			√
Sustainable						√		√			√
Enjoyment/appreciation	√			√						√	
Culture	√			√						√	
Adventure		√								√	
Small-scale											√

1 Ceballos-Lascurain (1987); 2 Laarman and Durst (1987)[b]; 3 Halbertsma (1988)[b]; 4 (Ziffer, 1989); 5 Fennell and Eagles (1990); 6 (Valentine, 1993); 7 The Ecotourism Society (1993); 8 Australian National Tourism Strategy (1993); 9 Goodwin (1996); 10 Wallace and Pierce (1996); 11 Page and Dowling (2002)

[a] Variables ranked by frequency of response

[b] Nature tourism definitions

From its birth, the concepts and practices of ecotourism have grown and today it is considered one of the fastest growing segments of the tourism industry (Liu & Lo, 2016). On its journey, ecotourism has gained significant attention from the government, industry, academics and community circles (Blamey, 1997; Dowling, 2013). It has been observed that ecotourism is defined in many different ways; however, most authors support the concept of ecotourism as tourism in the natural setting with the view to conservation and benefits for the local community. Many governments consider it to be one of the main economic drivers for fostering the sustainable development of their economy (Dowling, 2013). Indeed, the current study focuses on the benefits of ecotourism to the local community and on community participation behaviour for conservation. For this study, ecotourism was defined as a tourism exchange of natural phenomena with the view to the responsible use of local resources for improving the standard of living of the local community.

2.3 METHOD OF LITERATURE SEARCH

The literature search was conducted with the aim of identifying existing research gaps in the area of the current study. The literature search process included several activities, such as: (i) collecting publications; (ii) choosing publications based on the current study's context; and (iii) analysing them for their application in the current research. In the first step, the researcher gathered an extensive number of publications in the field of tourism and the area of ecotourism. The researcher also collected methodological and theoretical papers for review. Most of the literature were gathered from the Google Scholar website and Curtin University library databases. The main databases were Business Source Complete, Emerald, ProQuest, ScienceDirect and Wiley Online Library. Some relevant books were collected for gathering ideas and thoughts on tourism, ecotourism and research methods. The researcher used key words to explore these materials for the study's purpose, such as: 'Exchange relationship'; 'Antecedents of exchange relationship'; 'Social exchange process'; 'Benefits and costs of exchange'; 'Community attitude and intention'; and 'Standard of living'. The literature related to the application of theories in tourism research was also explored during the search stage. The main theories highlighted in the searching process were stakeholder theory, actor-network theory (ANT), social exchange theory (SET) and the theory of planned behaviour (TPB). Approximately 200 relevant studies published in the literature between 1939 and 2017 in the above-mentioned areas were gathered.

The second step involved determining the studies in the literature that were relevant to the current research. Thus, exclusion criteria were employed to filter out the less relevant resources. The studies with some degree of relevance to the factors and sub-factors of the current study were chosen for review. As a result, many of the initially collected resources were discarded. Most of the retained studies contained details of the exchange relationship and its antecedent and consequence variables. Attention was also given to identifying the theory-driven literature in the current study's context. This search of the literature also found the application of different methodologies in tourism research, such as qualitative, quantitative, case study and mixed-methods.

2.4 LITERATURE REVIEW

The literature review encompasses two main sections, starting with the review of the existing literature relating to the antecedents and consequences of the exchange relationship, and followed by the theoretical and methodological underpinnings of these factors. This section highlights the previous studies based on the constructs considered for the current research settings. In this review, attention was given to comparing and contrasting the existing literature with a view to finding research gaps. A table presenting a summary of the literature review is presented in Appendix A.

2.4.1 Attraction of Ecotourism Site

The universally accepted definition of the term 'attraction' is hard to find in the tourism literature. Attraction is the ability of a destination to draw the attention of tourists and to serve their needs for recreation (Weidenfeld & Leask, 2013). Attraction is the core of any tourism experience and, thus, an ecotourism destination is unlikely to exist without attraction (Lew, 1987; Richards, 2002). In motivation theory, attraction is a pull factor, with this referring to destination-related attributes and activities (Iso-Ahola, 1980; Jang & Cai, 2002) that invite tourists to a destination. In addition, attractions provide the opportunity for the local community to interact with ecotourists through ecotourism activities and offerings. Therefore, attraction is the primary element base on which ecotourism-related activities are practised in a destination. In the existing literature, the diversified applications of attraction topologies are evident. Pearce and Tan (2006) studied the distribution mix of tourism attractions and found that the characteristics of attractions influence the distribution mix of attraction providers. In delivering memorable tourism experiences, natural attractions are considered an important variable at a destination (Kim, 2014). Residents' support for the tourism attraction was used as a dependent variable in the study by Sirakaya, Teye and Sönmez (2002) in which they found a significant positive relationship between independent variables (i.e., employment status, membership in the community organizations, perception of personal benefits, and attitude) and the dependent variable. According to Weaver (1999), an attraction has a positive influence on the destination's economy. The reason is that a destination with a full range of ecotourism attractions can draw in (i.e., 'pull') ecotourists which benefits the local community as

ecotourists tend to consume local goods, with this having multiplier effects on the local economy (Holloway & Humphreys, 2012). Connell et al. (2015) studied attraction as a dependent variable of seasonal differences. They found a significant difference in the seasonality and attraction relationship.

Although the existing literature discusses attractions within the realm of tourism, no study has empirically tested the influence of attraction on the formation of the exchange relationship which results in an improved standard of living for the local community. The theoretical underpinning of attraction research is limited in the existing literature. Most attraction literature is contextual and the organized components focus on specific discussions of the destination attractions. Furthermore, the primary focus of existing attractions research is developed-country specific; research from the perspective of developing countries is scant in the ecotourism field. These paucities in the literature open a new window of further research to see attraction of the ecotourism site as an important antecedent construct of the exchange relationship of ecotourism stakeholders in the developing country context. This exchange relationship benefits ecotourists with destination attractions and offerings while, on the other hand, local participants obtain income benefits and other facilities due to the ecotourism attractions which result an improved standard of living of the local community.

2.4.2 **Motivation for Ecotourism Development**

Human motivation is one of the most important but complicated areas of research in tourism (Jang & Cai, 2002). Motivation persuades individuals to take an action (Chang, Backman, & Huang, 2014). Past research indicates that tourists visit a destination with the motivation being to experience new knowledge about nature (Chandralal & Valenzuela, 2013; Chen & Jim, 2012; Kim, 2014). Existing research has also highlighted that conservation practices and environmental issues are the primary motivations for participating in ecotourism activities at the community level (Reimer & Walter, 2013; Stem, et al., 2003). Other literature has suggested that economic benefit is considered one of the most powerful motivations for community participation in tourism activities (e.g., Gursoy, Jurowski, & Uysal, 2002; Stylidis & Terzidou, 2014). In exploring the motivation for ecotourism, Moyle, Croy and Weiler

(2010) found that the most common motivation of local people to interact with tourists is the aspiration for obtaining satisfying financial or economic benefits. In their study of ecotourism, gender and development issues in northern Vietnam, Tran and Walter (2014) found that hosting tourists was the motivation for widening the knowledge of the community about other cultures. The literature has also revealed diverse applications of motivation in tourism research.

Moscardo (2004) suggested that motives are influenced by social networks and by the culture and personality of tourists which, in turn, influence the choice of shopping area. Yoon and Uysal (2005) investigated tourist motivation examining push and pull motivation as the antecedents of travel satisfaction. These authors found a significant negative relationship between pull motivation and travel satisfaction, but no significant relationship between push motivation and travel satisfaction. Hsu, Cai and Li (2009) examined motivation as a moderating variable for studying tourist behaviour. In that study, the authors found a partial motivating effect on the relationship between expectation and attitude. In the study by Jang, Bai, Hu and Wu (2009), motivation was considered as the focal construct. These authors found a significant influence of positive and negative effects on travel motivation, and that travel motivation had a partial effect on travel intention. Hung, Sirakaya-Turk and Ingram (2011) used motivation as a means of community participation in tourism. According to their finding, community participation may not only be affected by the motivation of benefits; it can also be affected by the costs perceived by the community.

Motivation is apparently a construct used in many dimensions in tourism research. Previous studies have examined the relationship between motivation and various facets of tourists as well as locals' participation behaviour in tourism, but rarely have these studies established the relationship between community motivation and the exchange relationship. Furthermore, the findings from the motivation research are conflicting. Although Ap (1992) indicated the need for the study of resident motivation for tourism exchange, research to date on this particular agenda has been minimal. In fact, motivation research is rich in the theory-driven literature, but the application of motivation as an antecedent construct has received limited attention in existing literature (e.g., Caber & Albayrak, 2016; Lin & Lu, 2011; Snepenger, King, Marshall, & Uysal, 2006; Tikkanen, 2007). None of the existing studies has explicitly discussed the relationship between motivation and the exchange relationship in particular. Thus,

the current study urges the need to study motivation as an antecedent construct of the exchange relationship.

2.4.3 Exchange Relationship

The exchange relationship is the starting point of the strategic integration of two different entities (Johnson, 1999). According to Larson (1992), personal reputation and prior relations are the pre-condition of the exchange relationship. Yi and Gong (2009) studied different forms of exchange relationships as antecedents of customer satisfaction and found empirical evidence that customers relationships with the organizations, service providers and other customers vary according to their level of experience. Shore, Tetrick, Lynch and Barksdale (2006) examined social exchange and economic exchange as the intervening variables that affect the relative absence and relative tardiness of employees in the organization context. The exchange relationship also applied as the antecedent variable in examining cooperative communication and group cohesion behaviour (Abu Bakar & Sheer, 2013). These authors found that at the individual level, leader management exchange (LMX) was positively related to team management exchange (TMX) and at the team level, cooperative communication mediated the link between LMX and perceived cohesion, and between TMX and perceived cohesion.

Successful exchange formation and its maintenance depend on different components of the exchange relationship, such as power, trust (Ap, 1992; Dwyer, Schurr, & Oh, 1987; Nunkoo & Ramkissoon, 2011; Shore et al., 2006) and information sharing (Jensen, 2009). Power (predominantly related to the actors' resources) is the ability of one actor that influences the action of other actors (Ap, 1992; Dwyer et al., 1987). Power has been accepted as the central component of social exchange by numerous scholars (e.g., Látková & Vogt, 2012; Nunkoo & Ramkissoon, 2012). Alongside power, trust has a pivotal role in forming and maintaining exchange relationships (Bendapudi & Berry, 1997; Dwyer et al., 1987; Nunkoo & Ramkissoon, 2011). Trust strengthens positive and sustainable exchange outcomes (Kayat, 2002). Together with power and trust, the information available about other actors plays an important role in forming and maintaining an effective exchange. It is obvious that well-informed actors become more interested in exchange relationships than non-informed actors.

Thus, information sharing is an integral component in the occurrence of an effective exchange relationship.

Power

The power relationship between parties has been seen as an important dimension of exchange formation in the tourism industry (Nunkoo & Ramkissoon, 2011). In the exchange relationship context, power is considered as the ability of actors to control the resources that are needed for exchange formation between the actors (Kayat, 2002). Power in the exchange process is often transformed from the individual to the group and vice versa (Nunkoo & Ramkissoon, 2011). The existing literature has discussed the power component of exchange from different perspectives at the point of an exchange situation. Frazier (1983) opined that cooperation and influence are mutually exclusive in the power relationship because low influence is needed when a high level of cooperation exists within the relationship framework.

Trust

Like power, trust is another central concept for understanding the exchange relationship (Nunkoo & Ramkissoon, 2012). Trust is generated from the regular discharges of obligation as well as from the maintenance of regular exchanges between the parties (Nunkoo & Ramkissoon, 2012). For this purpose, an exchange partner practises different cues to instigate trust. Researchers measured trust in different dimensions based on the type of exchange relationship in different research contexts. Thus, trust has been objectively used in the existing literature.

Information Sharing

Information sharing is the initial stage for any supply chain collaboration as it enables the decision-making process of firms (Campos, da Costa Mendes, Silva, & do Valle, 2014; Sigala, 2008). Carr and Kaynak (2007) studied information sharing with reference to supplier development and performance. Although the key role of information sharing in the exchange relationship was established in the supply chain literature, this component was given very limited attention in the existing tourism research. Considering the paucity of studies in the tourism literature, the current study intends to explore information sharing as one of the important components of exchange relationship formation and its maintenance for ecotourism development.

The existing literature has explored the exchange relationship in different dimensions, such as power, trust, reciprocity, rationality and the justice principle (Ap, 1992; Nunkoo & Ramkissoon, 2012). Apart from the component-specific studies, the exchange relationship has a rich theoretical underpinning. The literature has suggested the wider applications of social exchange theory (SET) in the tourism exchange. Furthermore, from the methodological standpoint, most tourism literature on the exchange relationship has followed the quantitative method. Thus, the study of the ecotourism exchange using a different methodological approach would be of interest.

2.4.4 **Perceived Benefits**

The benefits from the exchange relationship are always expected by the parties involved. Gursoy and Rutherford (2004) examined the individual effects of community attachment, community concern, ecocentric attitude and utilization of tourism resources on perceived benefits. Their study also examined different forms of benefits as the mediating variables of the relationship between community attachment, community concern, ecocentric attitude and utilization of tourism resources, and support for tourism. The previous literature has studied perceived benefits as an intervening construct and has examined its relationship with trust (Nunkoo & Ramkissoon, 2011) and power (Nunkoo & Ramkissoon, 2011, 2012) as well as with support for tourism. Lee (2013) further examined the direct relationship between community involvement and perceived benefits and the relationship between perceived benefits and support for tourism. That study also explored the mediating effect of perceived benefits in the structural relationship. The author found significant positive influence in both the direct and mediating relationships of perceived benefits for sustainable tourism development. Jeon, Kang and Desmarais (2016) explored perceived economic benefits as the intervening variable in studying residents' perceived quality of life. In this study, the direct hypothesised relationships between seasonal factors and perceived economic benefits and between perceived economic benefits and quality of life were supported. Ouyang, Gursoy and Sharma (2017) examined the moderating effects of perceived benefits in the relationship between trust and support for mega-events.

Most of the recent literature (e.g., Jeon, Kang & Desmarais, 2016; Lee, 2013; Ouyang et al., 2017) has examined the mediating effects of perceived benefits in studying residents' support for tourism. Additional research is needed to explore perceived benefits as the intervening variable to examine the effect of the exchange relationship on perceived benefits and also its direct influence on community attitude as well as on an improved standard of living. Furthermore, the existing literature on perceived benefits has measured the relationships using the quantitative method: however, other methodological approaches need to be explored to examine the relationships in the current context.

2.4.5 **Perceived Costs**

Apart from its many positive aspects, tourism engenders costs from the exchange between tourists and community stakeholders (Nunkoo & Gursoy, 2012). The methodological approach and the relationship patterned on the study of perceived costs are very similar to that in the study of perceived benefits. Previous studies have explored different dimensions to measure tourism costs for the local community. Jurowski and Gursoy (2004) examined the direct relationships between residents' ecocentric attitudes and perceived costs, and the relationship between perceived costs and support for tourism. Nunkoo and Ramkissoon (2011, 2012), examined perceived costs as the intervening construct in the model of community support. The study of Nunkoo and Ramkissoon (2011) found a significant negative relationship between power and perceived costs, and between perceived costs and support for tourism, but no significant relationship was found between perceived costs and support for tourism in their later study (Nunkoo and Ramkissoon, 2012). Ouyang et al. (2017) explored the direct relationships of perceived costs with hosting mega-events and with positive emotions and negative emotions. Their study also explored direct and indirect relationships between residents' trust in government and perceived costs. Nunkoo and Gursoy (2017) demonstrated the negative influences of perceived costs on support for alternative tourism; support for mass tourism; and political trust in tourism. Of these three types of relationships, the study results only supported the negative relationship between the perceived costs of tourism and support for alternative tourism.

Ecotourism in particular, also endanger costs for the local community which was highlighted in several studies. For example, Das (2016) studied various economic factors that influence the participation of indigenous local community in ecotourism. In her research, author found ecotourism as an economic rescuer for the community people who did not have alternative source of earning other than the extraction of natural resources from the sanctuary. This research also pointed out the cost of ecotourism occurred in regards to the human-animal conflict and the non-participant sufferings for crop depredation and livestock depredation which aggravate poverty, food insecurity, and cost of living resulting diminishing socio-economic well-being for the community as a whole. Thus, ecotourism can generate some income and contribute community development, but within certain limitations in regards to the conservation of biodiversity (Coria & Calfucura, 2012; Kiss, 2004).

Jitpakdee & Thapa (2012) studied the ecological, economic and social dimension of ecotourism. This study found ecotourism benefited local poor by proving employment, however, it caused gradual degradation of natural and environmental resources of the Yao Noi island of Thailand. It also found that promoting ecotourism by locals resulted increased land grabbing and investment by outsiders and also negatively affecting Muslim culture by foreign culture.

Previous studies have demonstrated the application of costs or negative effect of tourism in the role of antecedent variable, intervening variable and/or outcome variable; however, the findings of the existing literature are conflicting. Hence, the current study has urged the need for further research on perceived costs as the intervening variable to assess its relationship with the exogenous focal construct and endogenous constructs.

2.4.6 **Community's Attitude towards Participation in Ecotourism**

Research on attitude has been a predominant occupation in the field of social psychology (Hsu et al., 2009). The existing literature has demonstrated the causal relationship of attitude and other behavioural variables, such as behavioural beliefs, intention and actual participation behaviour (Hsu & Huang, 2012). McCool and Martin (1994) studied the relationship between community attachment and attitude toward tourism. In that study, attitude was considered as the dependent variable of different forms of community attachment profiles. Gursoy and Rutherford (2004) studied the host community attitude toward tourism where the ecocentric attitude of the host community was considered as the antecedent construct to explore its relationship with perceived benefits and perceived costs. The existing tourism literature has also explored the attitude with reference to the basic TPB model where behavioural belief influences attitude, and attitude further influences behavioural intention (Lam & Hsu, 2006). Hsu et al. (2009) demonstrated attitude as the dependent variable of their tourist behavioural model. That study established a significant positive relationship between expectation and attitude which was also partially mediated through motivation. Hsu and Huang (2012) demonstrated several causal relationships, that is: the relationship between motivation and attitude; the relationship between attitude and behavioural intention; and the relationship of attitude and actual behaviour. In their study, attitude was explored as both the antecedent and the intervening construct of the research model. Lu, Gursoy and Del Chiappa (2016) explored the negative relationship between materialism and ecotourism attitude, and the positive relationship of ecotourism attitude with ecotourism intention, ecotourism interest and willingness to pay a premium for ecotourism. Although the application of attitude is well documented in the existing literature, no consistent roles have emerged of this particular variable within the premises of its exogenous and endogenous relationships in ecotourism. Furthermore, most existing attitude studies in tourism are more focused on quantitative measures. Thus, the paucity of the application of other methods limits the application of the findings of attitude research. Furthermore, most attitude studies are TPB-driven literature. Other theoretical justifications would extend the theoretical validity of attitude research.

2.4.7 **Community's Intention to Participate in Ecotourism**

Intention is the individual's subjective probability of performing a specific behaviour under certain circumstances (Casaló, Flavián, & Guinalíu, 2010; Chang et al., 2014; Fishbein & Ajzen, 1975). Knowing the future intention of consumers is one of the most important dimensions of consumer behaviour research. Garbarino and Johnson (1999) demonstrated future intention as the ultimate dependent variable of its relationship with commitment and trust, and further examined the mediating effect of overall satisfaction on the future intention of consumers. Lam and Hsu (2006) presented behavioural intention as the ultimate dependent variable which is influenced by attitude, subjective norms and perceived behavioural control. On the other hand, Hsu and Huang (2012) demonstrated behavioural intention as the focal construct of the extended TPB model. According to this model, behavioural intention is the result of the direct effect of motivation, attitude, subjective norms and perceived behavioural control. That study also established the direct positive effect of behavioural intention on actual behaviour. In line with Garbarino and Johnson (1999), Singh et al. (2014) demonstrated intention as the ultimate dependent variable in their research model. Lu et al. (2014) further explored ecotourism intention as the intervening variable which is positively influenced by ecotourism attitude. Ecotourism intention again influences the willingness to pay a premium for ecotourism offerings. The application of intention in the existing research models is not consistent, and the findings of its relationship with other explanatory variables are conflicting. Furthermore, the theoretical underpinning as well as the methodological justification of intention research in ecotourism is limited to the quantitative measures within the premises of the theory of planned behaviour (TPB). Hence, further study of intention is necessary within the different theoretical underpinning and methods that will cover exogenous variables and outcome variables.

2.4.8 **Community's Participation (Actual Behaviour)**

Mohiyeddini, Pauli and Bauer (2009) studied the role of emotion in bridging the intention–participation behavioural gap. That study explored sport participation duration as the dependent variable which is directly influenced by intention and indirectly influenced through emotion. Al-Debei, Al-Lozi and Papazafeiropoulou

(2013) studied participation behaviour on Facebook as the ultimate dependent variable. According to their study, participation behaviour is positively affected by perceived behavioural control, user-perceived value and participation intention. Zhou (2011) examined the determinants of participation behaviour of online community users, and found the significant positive influence of participation intention on participation behaviour. In line with TPB, behavioural intention directly predict actual behaviour. Using TPB, Karki & Hubacek (2015) analysed the relationship between attitudes, intentions and actual involvement of community people in illegal resource extraction from both general and context specific point of views. This study hardly found any influence on the actual behaviour of local residents with regard to illegal resource extraction behaviour but contextual and livelihood factors had direct positive impact on community attitude and resource extraction behaviour, and community's general attitude can only predict behavioural intention. Thus, both general and context specific factors are considered important variables in understanding actual behaviour.

Hsu and Huang (2012) explored tourists' actual participation through visiting the destination as the dependent variable which is influenced by attitude and intention. This study data did not support intention as a predictor of actual behaviour and they concluded that underlying socio-psychological attributes of intention known as hypothetical bias (Ajzen, Brown, & Carvajal, 2004) could be the cause of inaccuracy of the predictive ability of intention for actual behaviour. Similar findings are found in the study of Lai and Nepal (2006) who examined the local response to ecotourism development in Southeastern Taiwan. In this study, authors examined the influence of community attitude and intention on four dimensions of ecotourism participation and found that local people generally show positive view, however, their intentions to participate in ecotourism development do not entirely match their positive views. Thus, supports for ecotourism development depend on local environmental, social, political and economic conditions.

Although previous studies have presented actual participation behaviour, the patterns and application of participation behaviour shortfall to elicit its true outcomes. Moreover, the existing literature has evident the roles different variables on participation behaviour and their findings were also vary which provide scope for further study of community participation behaviour. Specifically, the ecotourism literature lacks research on community participation as the outcome of the

community's intention. Furthermore, theory-driven studies on participation behaviour are scant in the existing literature. Although most of the TPB literature has discussed attitude–intention behaviour, further research needs to emerge to extend the current TPB in the direction of its outcomes, particularly in the study of ecotourism.

2.4.9 Improved Standard of Living

No universally accepted dimensions have been identified for the standard of living (e.g., Andereck, Valentine, Knopf, & Vogt, 2005; Montgomery, Gragnolati, Burke, & Paredes, 2000; Sen & Hawthorn, 1988). Ringen (1991) argued that household income is one of the measures for standard of living. An improved standard of living can be perceived through the creation of income opportunity and tax revenue which, in turn, are spent on services to residents (Andereck & Nyaupane, 2011). According to Montgomery et al. (2000), access to clean water and electricity facilitate the standard of living in some African countries. Skantze, et al. (1992) underlined access to public transport; access to school, books and papers; cheap home-help services; and inexpensive dental and health care as being the preconditions of an improved standard of living. According to Bérenger and Verdier-Chouchane (2007), the standard of health, standard of education and material well-being predict the standard of living. Belisle and Hoy (1980) pointed out that tourism development positively contributes to the average standard of living. Community people perceive both economic and non-economic benefits and costs from tourism which lead to their improved standard of living (Lai & Nepal, 2006). Alternatively, Lankford (1994) and Ouerfelli (2008) found that tourism was not highly desirable by residents because it did not increase expendable income; therefore, it failed to contribute to improving the standard of living. A similar result was also found by Gilbert and Clark (1997) where the tourism benefit did not have a great effect on the improved standard of living of local residents. The literature is scant in relation to actual behaviour and its outcome. It is not apparent if the community's participation in ecotourism generates any sort of outcome, with this not having been revealed in the existing TPB literature. As no consensus exists in terms of establishing the predictors of an improved standard of living in the ecotourism literature, further research is very much in demand to pursue improved standard of living as the ultimate dependent variable.

2.5 RESEARCH GAPS

Based on the above brief review, the current study addresses research gaps in the existing literature that relate to the exchange relationship process and its effects on the standard of living of the local community. The identified research gaps and corresponding research questions are presented as follows:

2.5.1 Theoretical Gaps

Although numerous studies have been conducted on ecotourism and its impacts at the community level, the ideas, antecedents and outcomes of the research in the existing literature are different from the current research context. In fact, no integrated process that can facilitate an improved standard of living for the local community is apparent in the exchange relationship between ecotourism stakeholders (e.g., Ap, 1992; Byrd et al., 2009; Lee & King, 2009; Lee et al., 2010; Nunkoo & Ramkissoon, 2011, 2012; Perdue et al., 1990; Shi & Liao, 2013; Ward & Berno, 2011). The existing literature has barely explored both attraction and motivation as antecedent factors of the exchange relationship linked to exchange initiation. Numerous studies have also argued that power and trust are the basis of the formation of the social exchange relationship and have largely ignored the role of information sharing in the tourism exchange (Ap, 1992; Bachmann, 2001; Nunkoo & Ramkissoon, 2012). If no opportunity or only limited opportunity was available to share information between exchange partners, exchange formation would be inadequate and such a relationship would result in incomplete findings. In addition, the theoretical underpinning of exchange formation and its consequences are not adequate in the literature. The exchange relationship, in fact, is grounded by social exchange theory (SET) which has rarely been examined in the context of ecotourism development at the community level. Thus, evidence in the ecotourism literature is limited on the implementation of the social exchange theory that satisfactorily describes the exchange relationship process and its outcomes (e.g., Brown et al., 2010; Hsu & Huang, 2012; Jóhannesson & Huijbens, 2010; Lu et al., 2014). These limitations of SET has given the opportunity of adding new construct(s) to study antecedents, formation as well as the consequences factors of exchange relationship.

Furthermore, it is evident that the existing TPB literature has explored actual behaviour as the outcome of behavioural intention (Hsu & Huang, 2012; Karki & Hubacek, 2015). However, in previous research, the determination of behavioural outcomes as the ultimate consequences of the exchange relationship process is hard to find (e.g., Gursoy, Chi, & Dyer, 2010; Hsu et al., 2009; Lu et al., 2014; Ward & Berno, 2011). Evidences are also limited in support of adding any consequence of actual behaviour within the TPB framework. It is argued that the exchange process is of utmost importance in ecotourism research; however, no comprehensive theory has been previously used in the ecotourism literature to explore exchange process outcomes. Furthermore, although SET and TPB direct similar outcome, literature is also scant for successful blending of SET and TPB components within a single study framework for achieving unique goals, more specifically where and how in a research setting, this blending of each component will be more logical and meaningful. Thus, the current study has referred to the dimensions of both SET and TPB to develop the research model for addressing the theoretical gaps in the existing ecotourism literature.

2.5.2 **Methodological Gaps**

Apart from the theoretical gaps, this research has identified some methodological issues that have not been addressed in the existing research for evaluating ecotourism outcomes at the local community level. Indeed, although the applications of the mixed-methods approach are not negligible in tourism research (Rittichainuwat & Rattanaphinanchai, 2015; Schofield, 2011), the use of mixed-methods research in the existing ecotourism literature is limited especially to the qual → QUAN approach (e.g., Bentley, Cater, & Page, 2010; MacKay & Campbell, 2004; McGehee et al., 2013; van der Roest, Spaaij, & van Bottenburg, 2015; Walker & Moscardo, 2014). Furthermore, in the methodological literature, limited evidence is available that has satisfactorily defined ecotourism outcomes at the community level using the qual → QUAN approach for both the data collection and data analysis stages. It is, therefore, worthwhile to conduct mixed-methods research especially where community people are primary informants (Liu et al., 2014). This study has set out to address this particular methodological gap by exploring factors and sub-factors with the qualitative investigation and using the quantitative approach to verify the structural relationships between the constructs.

2.5.3 **Contextual Gaps**

Ecotourism is considered as one of the important research agendas in Western society with the realization of environmental conservation and sustainability issues (Butcher, 2011; Hawkins, 2004; Hunt & Stronza, 2009; Vincent & Thompson, 2002). In line with the Western concept, ecotourism has increasingly been considered as an emergent research area in many developing countries (Liu et al., 2014; Pasape et al., 2015a; Sasidharan, Sirakaya, & Kerstetter, 2002; Weaver, 2002). Numerous studies on ecotourism have been conducted in the African context; however, the economic importance and social dimensions of those countries are different from those of Bangladesh as a developing country. In fact, ecotourism research is negligible in the literature, particularly in the context of Bangladesh. Furthermore, the consensus is far-reaching among researchers about ecotourism outcomes in the context of a developing country. Thus, a qual → QUAN-based mixed-methods approach is an ideal methodological approach to assess the contribution of ecotourism in most developing countries.

In summary, this research has addressed the above research gaps and their corresponding research questions in line with social exchange theory (SET) and the theory of planned behaviour (TPB). Despite the wide-scale applicability of SET and the TPB in studying the tourism exchange, the literature has not explicitly examined the standard of living as the outcome of exchange relationship behaviour at the local community level. The current study, thus, intends to use SET to explore how exchange processes function in the ecotourism sector and also to test the applicability of 'information sharing' (included in the research model) as a new dimension of the exchange relationship. The TPB, on the other hand, has been extensively used to conduct tourism research in recent years (Chou, Chen, & Wang, 2012; Karki & Hubacek, 2015; Quintal et al., 2010); however, to date, the literature using the TPB in ecotourism research in line with determining the exchange outcome is scant. Thus, the current study sets out to integrate some relevant components of the TPB within the framework of SET to examined attitude and behavioural aspects of the local community in participating in ecotourism-related activities. This study also sets out to extend the existing TPB model by adding 'improved standard of living' as the behavioural outcome of community participation (actual behaviour) in ecotourism practices.

2.6 THEORETICAL BASIS

Theory explains how and why the variables are related and acts as a bridge between each variable, specifying the relationships between the variables (Creswell, 2013). Researchers collect data with the objective of testing a theory in a particular research context; however, in many instances, extending an existing theory is more appealing than developing a new theory (Creswell, 2013). For the purpose of the current study, a number of theories, for example, actor-network theory (ANT), stakeholder theory, social exchange theory (SET), the theory of planned behaviour (TPB) and some other theory-driven literature were reviewed within broader tourism-related studies. Among all the theories reviewed, the current research has set out to explore the theories most relevant to the study context for investigating the factors and sub-factors discussed in the earlier sections.

Initially, Bruno Latour's **actor-network theory** (ANT) was reviewed with the view to exploring the possibility of using this theory for the current study's purpose. This theory trials the relational approach describing the ordering of the different mobility of social objects (Cohen & Cohen, 2012). The heart of ANT is how objects are associated, ordered and assembled in social networks. From its origin in studying the sociology of science and technology (Rodger, Moore, & Newsome, 2009), ANT has moved to and been applied in different branches of social sciences research, such as organizational studies, anthropology, geography and recently tourism studies (van der Duim, Ren, & Jóhannesson, 2012). In particular, ANT is one of the widely exposed theories in the tourism literature. In fact, ANT was applied in tourism research about 25 years after its inception in 1980. Jóhannesson (2005) argued that ANT is an effective methodological approach to studying tourism for two reasons—firstly, it deals with the rational materiality of the social world in the process of translation and, secondly, it grasps multiple rationales for ordering the objects (Duim & Caalders, 2008; Law, 1992; Rodger et al., 2009). In fact, ANT has been used to identify human and non-human actors, their relationships and roles in tourism (e.g., Arnaboldi & Spiller, 2011; Cohen & Cohen, 2012; Duim & Caalders, 2008; Jóhannesson & Huijbens, 2010; Paget, Dimanche, & Mounet, 2010; Ren, 2011; Ren, Pritchard, & Morgan, 2010; Rodger et al., 2009; Van der Duim, 2007). As the primary focus of ANT is on how objects are ordered in a social network system, this limits the applicability of this theory in the current research context. The reason is that the

patterns of the variables considered in this research are more outcome-oriented. Hence, this research explored other relevant theories to fit the current study's purpose.

With the intention of finding a suitable theory to address the research problem, this study further explored R. Edward Freeman's **stakeholder theory**. Prior to Freeman, the term 'stakeholder' was first defined by the Stanford Research Institute in 1963 which expressed the belief that stakeholders are groups who affect the survival of an organization. Later, in 1984, Freeman broadened this idea, introducing stakeholder theory in his book *'Strategic Management: A Stakeholder Approach'*. This theory outlines that how management of an entity can best satisfy the interests of its stakeholders is by being accountable for holding moral values (Freeman, 2010). The stakeholder concept was inaugurated into the tourism field in the mid-1980s but the application of stakeholder theory in tourism research was not substantial even until the mid-1990s (Ling, 2004). Some scholars have suggested that this theory is only applicable as a planning and management tool in tourism development (Hardy & Beeton, 2001; Sautter & Leisen, 1999). Stakeholder theory has been applied to explore stakeholders' identities and salience in line with their rights and privileges over the destination's resources (e.g., Currie, Seaton, & Wesley, 2009; Sheehan & Ritchie, 2005). By using stakeholder theory, Bornhorst, Ritchie and Sheehan (2010) examined tourism success in the context of destinations and destination marketing organizations (DMOs). Getz and Timur (2005), however, argued that although stakeholder theory has not been widely applied in the tourism planning, policy and strategy literature, it is implicitly a cardinal component for sustainable tourism development. In their study, Kimbu and Ngoasong (2013) used stakeholder theory to explore the nature of the participation of destination stakeholders in formulating and implementing tourism policy. In their tourism study, Jaafar, Noor and Rasoolimanesh (2015) applied this theory to understand the perceptions of community stakeholders with regard to developing a sustainable tourism destination. In the above literature, stakeholder theory has been mostly focused on tourism development in a particular destination context. It is, however, apparent that, most of the tourism literature has used this theory for the purpose of tourism planning and policy-related studies and, in addition, its origin highlights the interests of the stakeholders of an organization. Although relevant in terms of the study of the interests of the local community, for the current research, stakeholder theory is limited to explaining other basic aspects of this research, such as

exchange initiation, and exchange formation and maintenance and behavioural variables as the consequences of the exchange relationship. The current study, therefore, has continued its exploration to find the relevant theory or theories that can satisfactorily explain the variables of the current research's settings.

At this stage, **social exchange theory (SET)** was explored in line with addressing the problem of this study. In fact, SET was derived from behavioural psychology by George C. Homans in his seminal work. This theory states that every exchange has benefits and costs (Homans, 1958). People initiate an exchange primarily to obtain benefits; however, an exchange will be successful and will be reproduced or repeated when the associated benefit is higher than the cost. Homans (1958) highlighted that social behaviour is an exchange of goods, whether material or non-material. According to SET, people engage in an exchange based on their prior evaluation of the potential benefits and costs from that exchange (Andereck et al., 2005; Byrd, Bosley, & Dronberger, 2009). Initially, the application of SET in tourism studies was based on measuring the perceptions and attitudes of local residents (Perdue, Long, & Allen, 1987, 1990). Ap (1992), however, found the relevance of using SET in explaining the social exchange process, that is, exchange initiation, exchange formation and its evaluation (consequences). That study emphasized the inclusion of power in social exchanges for gaining advantages of the exchange outcome (Nunkoo & Ramkissoon, 2012). In developing and testing the support for a tourism development model using SET, McGehee and Andereck (2004) found that personal benefits from tourism did not necessarily result in support for tourism planning. In their further work (McGehee & Andereck, 2009), they found that personal benefits supported the voluntary tourism planning.

Using SET, Nunkoo and Ramkissoon (2012) extended the theory by adding power and trust together as the components of social relationships and found that support for tourism is determined by residents' trust in government actors and perceived benefits. In line with the existing tourism literature on SET, the current study has found the relevance of using SET to explain the exchange process (e.g., exchange initiation, formation and consequences). However, according to Ward and Berno (2011), SET is not adequate to explain and interpret attitudes toward tourists and tourism. They argued that positive attitudes toward tourism activities are predicted by benefits such as employment opportunities, and other positive perceptions of tourism's impacts. As

attitude and intention are placed as the central components of the consequence part of the exchange process, the researcher was convinced of the need to explore other relevant theory or theories that could satisfactorily explain attitude and its antecedent as well as outcome variables.

As part of searching for a suitable theory, the **theory of planned behaviour** (TPB) was evaluated by the current study with the view to explaining the consequence part of the proposed research model (see Figure 2-1). The TPB originated from Ajzen in 1985 when studying attitude and behaviour. As argued by Ajzen (1991), social behaviour is influenced by attitude, subjective norms and perceived behavioural control. According to the TPB, individuals perform certain behaviour: (i) if that behaviour produces the expected outcomes; (ii) if that behaviour is accepted by the social connections of individuals; and (iii) if individuals have the ability, resources and opportunities to produce such behaviour (Lee, Han, & Lockyer, 2012). Using the TPB, Nunkoo and Ramkissoon (2010a) developed a community support model and found that attitude is the function of the perceived economic, social, cultural and environmental impacts of tourism. The study of Quintal, Lee and Soutar (2010) on the TPB in tourism research found that subjective norms and perceived behavioural control impact on intention, whereas perceived risk and perceived uncertainty influence attitude. By adding motivation as a formative construct of behavioural intention, Hsu and Huang (2012) proposed an extended TPB model and found the marginal relationship between behavioural intention and actual behaviour. In investigating households' attitudes, intentions and actual behaviour towards the conservation of park resources, Karki and Hubacek (2015), using the TPB, found that households' positive attitude of protecting park resources was not reflected in their actual behaviour. From the above-mentioned studies, it can be argued that the TPB is adequate for studying attitude and its antecedent and outcome variables relating to the current study's context.

After carefully investigating the applicability of the existing theory or theories in the current research setting, two widely used theories in the recent tourism literature, namely, social exchange theory (SET) (Homans, 1958) and the theory of planned behaviour (TPB) (Ajzen, 1985) were chosen to rationalize the constructs and their relationships. It was also considered to be of interest to blend some components of the TPB within the consequence part of SET to address the research problem of this study.

2.7 SOCIAL EXCHANGE PROCESS

From the discussion in Section 2.4, it is apparent that the variables and constructs considered for the current study are functioning step-by-step in the exchange relationship. In each of the stages, constructs are linked to each other either in the role of antecedent or that of a consequence of the exchange relationship. Thus, the constructs considered for this study can be brought together to design the research framework. The basic idea in designing the research framework about the exchange relationship has been borrowed from the social exchange process of Ap (1992). The social exchange process is the process of negotiating the exchange between the parties within a social framework. According to the concept of social exchange, the exchange of resources must occur between community people and other stakeholders (Andereck et al., 2005; McGehee & Andereck, 2004). It is noteworthy to mention that the current study is focused on the relational exchange through the transactional exchange with the local community to examine the links and relationships between and among the constructs (Saxena, 2005). With reference to the framework of the social exchange process, this study includes three major components: exchange initiation, exchange formation and maintenance, and exchange consequences. Exchange initiation is the first step of the exchange process which occurs during the pre-exchange stage (Ap, 1992; Brown, Cave, Moyle, Croy, & Weiler, 2010). An actor at the early stage starts the process of interaction with other actors of interest. In the current study, the attraction of the ecotourism site and the motivation for ecotourism development are considered two antecedent factors for the exchange relationship. The exchange formation and maintenance stage contains the exchange relationship which is the function of the actors' power, trust and the opportunity for information sharing between the actors. The final stage is about the consequences of the exchange relationship with these related to perceived benefits and perceived costs, attitude, intention and participation of the local community for an improved standard of living. Based on the above views, a conceptual model which facilitates the exploration of further steps of this research has emerged from this study.

2.8 PROPOSED INITIAL MODEL

From the above literature review, it is evident that several components of the exchange process and their internal relationships have been discussed in isolation. Although ecotourism studies have been well represented in the existing literature, the issue of how various factors of ecotourism impact on the exchange process of its stakeholders or how they contribute to the standard of living of the local community are still under-explored (e.g., Hunt, Durham, Driscoll, & Honey, 2015; Nault & Stapleton, 2011; Schellhorn, 2010; Stem, Lassoie, Lee, & Deshler, 2003). It is, therefore, necessary to develop a comprehensive framework. Based on the links and relationships identified from the discussion in Sections 2.4, 2.5 and 2.6, the following research model has been proposed for conducting this study.

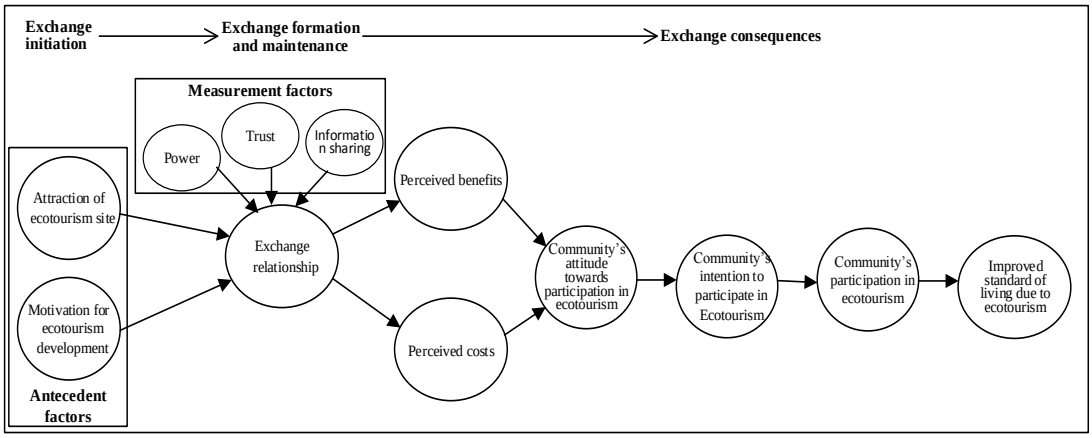


Figure 2-1 Conceptual model

2.8.1 How This Model Works

As mentioned above, the links and relationships between the constructs of this model have been established in isolation in different studies. This model, on the other hand, shows the step-by-step process of the exchange relationship of ecotourism stakeholders at the local community level. According to this model, attraction and motivation factors together initiate the exchange relationship between the local community and outsider stakeholders, including tourists. Thus, attraction and motivation are treated as the antecedents of the exchange relationship. In the second step, the exchange relationship is formed with the combination of its three basic components, that is, power, trust and information sharing. Once the exchange is

performed, the next stage is about the consequences of this exchange. At this stage, the consequences are divided into two basic parts, that is, immediate and ultimate. The immediate consequences belong to the benefits and costs that locals can perceive from the exchange relationship. The evaluation of those benefits and costs contributes to developing the community's attitude (Andereck et al., 2005; Nunkoo & Ramkissoon, 2012). Attitude then influences their intention to participate in ecotourism. Intention accordingly influences the local community towards actual participation in ecotourism-related activities. Finally, this model discusses the ultimate consequences related to the community's improved standard of living due to ecotourism, with this resulting from their participation in ecotourism-related activities. This conceptualisation of the research model now needs to be empirically examined at the community level at the study site.

2.9 CHAPTER SUMMARY

This chapter highlighted the research gaps in the existing literature. In reviewing the literature, the focus was to identify the variables used in the different studies followed by establishing links between the variables considered for the current study. Additional studies in the literature were reviewed to explore theoretical views of the study's context. Once the literature review was completed, this research identified research gaps in line with the theoretical, methodological and contextual perspectives. In fact, this review helped the researcher to identify the existing research gaps and their corresponding research questions in the current research context. Further literature was explored on the SET and TPB in relation to their applicability in addressing the research gaps and the study's purposes. At the very end of this chapter, a conceptual model was proposed based on the variables and links.

Chapter 3 METHODOLOGY

3.1 INTRODUCTION

This chapter starts with a brief discussion of the research paradigm to establish the specific paradigmatic approach for the study. The next part discusses the methodological views of the research. As the research adopts the mixed-methods approach, a significant portion of this chapter illustrates the qualitative procedures followed by the quantitative approaches. The quantitative approach provides the major portion in this chapter, estimating both the measurement model and the structural model. This chapter also discusses the validity and reliability issues of the measurement model. Further discussion focuses on the establishment of the structural relationships in the research model. The chapter then discusses the predictive ability of the latent constructs of the model.

3.2 RESEARCH PARADIGMS

The research paradigm is a kind of methodological as well as philosophical choice for an inquiry (Ramlo, 2016). According to Weaver and Olson (2006), research paradigms are sets of beliefs and practices, shared by the researchers, which regulate an inquiry within disciplines and from which specific research approaches flow. In fact, a research paradigm is also a kind of research culture which is practiced by a group of researchers having similar beliefs and values (Guba & Lincoln, 1994). Johnson and Onwuegbuzie (2004) categorise beliefs, including: ontological beliefs (the nature of reality), epistemological beliefs (how we know what we know), methodological beliefs (the process of research) and axiological beliefs (ethics and values in research). Each of the paradigms speaks about distinct ontology, epistemology, methodology, and axiology. The common research paradigms used in social science research are positivism, post-positivism, critical theory and interpretivism or constructivism.

According to the positivist view, nature is governed by the scientific rules which determine the causal relationships between phenomena. An alternative research paradigm is also well practiced among social science researchers, which is known as the post-positivist paradigm. Post positivists recognise that the real world (reality) is independent of, and external to, the researcher, therefore, an understanding of reality can be derived from the researcher's own conceptual understanding about the phenomena (Bryman, 2008). As a paradigmatic approach, critical theory sees the phenomena from the context of a particular community or group. In line with critical theory, interpretivists, on the other hand, believe the world has multiple realities where reality is defined as the subjective observation of the phenomena. To outline the most relevant paradigm for a research, it is important to look into its underlying ontology, epistemology, methodology, and axiology that articulate qualitative and quantitative approaches to research, as well as their various synonyms (Bryman, 2008). Table 3-1 explains the different paradigmatic views.

Table 3-1: Paradigmatic views

Paradigmatic views	**Positivism**	**Post-positivism**	**Critical theory**	**Interpretivist/Constructivism**
Ontology (nature of reality)	Naïve realism— the existence of reality is due to immutable natural laws and mechanisms.	Critical realism— "real" reality but imperfectly and probabilistically apprehendable.	Historical realism— virtual reality shaped by social and personal values (social, political, cultural, economic, ethnic, and gender values); crystalized over time	Relativism—local and specific constructed realities
Epistemology (nature of knowledge; relation between knower and what would-be known)	Dualist/objectivist; findings are true	Objectivity is important; modified dualist; critical tradition/community; findings probably true	Transactional/Subjectivist; findings are value mediated	Transactional/Subjectivist; findings are created
Methodology (approach to systematic inquiry)	Experimental/manipulative; verification of hypotheses; primarily quantitative methods	Modified experimental/manipulative; critical multiplism; falsification of hypotheses; primarily quantitative ; may include qualitative methods	Hermeneutical/dialectical	Hermeneutical/dialectical
Axiology (nature of ethical behaviour)	Extrinsic to the inquiry process itself	Extrinsic: Respect privacy; informed consent; minimize harm; justice/equal opportunity	Intrinsic: researcher explicitly advocates for facilitating revelation during the investigation	Intrinsic to the inquiry: participants values are integral to the inquiry process

Source: Adapted from (Guba & Lincoln, 1994; Mertens, 2015)

3.2.1 **The Positivist Paradigm**

Positivism has been a dominant research paradigm over the last 400 years (Guba & Lincoln, 1994; Roy, 2014). The positivist paradigm assumes for reality and objectivity (Johnson & Onwuegbuzie, 2004; Smith, 1983). According to the positivist paradigm, reality is apprehendable and findings are considered true (Guba & Lincoln, 1994). The protagonists of the positivist paradigm argue that reality needs to be objectively determined and presented in quantitative measures (Guba & Lincoln, 1994). The positivist paradigm perceives the world as external and objective, thus researchers should focus on facts for identifying the causal relationship between the objects (Golicic & Davis, 2012). According to the positivist view, there is no scientific concept or idea that is beyond measure or observation; rather, every research idea can be objectively measured or examined (Hessler, 1992). Hence, the positivist paradigm is based on experimental or manipulative research which is used for hypothesis testing using quantitative methods (Guba & Lincoln, 1994; Johnson & Onwuegbuzie, 2004). Data is collected by objectively designed questionnaires and statistical tools are applied to analyse that data. So, the data and analysis are value-free and data does not change because it is being observed (Krauss, 2005). In positivism, investigators of objects are independent entities, and the researcher cannot influence the outcomes or findings of the investigation (Guba & Lincoln, 1994). A research guided by the positivist paradigm wraps up with a formal proposition, quantification, and measurement of variables, developing and testing hypotheses and drawing inferences about the phenomenon from the sample of the particular population (Orlikowski & Baroudi, 1991). Thus, the knowledge created by positivist research is empirical, supported by theories and hypothesis testing (Denzin & Lincoln, 2005). Ideally, the positivist paradigm supports a quantitative research method which deals with logically developing and testing hypotheses for a particular research project (Creswell, 2013).

3.2.2 **The Post-positivist Paradigm**

In line with the positivism, the post-positivism paradigm deals with objective reality, thus it is much more critical (Roy, 2014). The ontology here is ‘critical realism’, meaning the inquiry obtains only an imperfect approximation of reality (Guba & Lincoln, 1994; Roy, 2014). Epistemologically, post–positivists believe in modified

objectivity and reject the assumption of neutrality in the inquiry (Roy, 2014). As part of the logical reasoning, post-positivism acknowledges socio-cultural and other relevant aspects around the investigating objects. Methodologically, it prefers natural rather than laboratory-based experiments, and contextual as well as situational data is collected for the investigation. Therefore, the findings are largely context specific. Ideally, the post-positivism paradigm is referred to as the mixed-methods approach, which has grown in popularity among social science researchers (Bryman, 2006). Thus, researchers follow both quantitative and qualitative techniques in order to understand the research problem(s). The ethical standing of post-positivism is extrinsic to the research process itself (Guba & Lincoln, 1994).

3.2.3 **The Interpretivist Paradigm**

Another way of conducting research is known as the interpretivist paradigm. The interpretivist paradigm reflects historical realism where reality is shaped by social, political, cultural, economic and gender values of the participants that are crystalized over time (Guba & Lincoln, 1994). Interpretivist epistemology believes that reality is constructed in an actor's mind (Schwandt, 1994). The interpretivist epistemology ascribes that the relationships among the objects are subjective. Hence, the interpretivist paradigm of research believes in the subjective involvement of a researcher (knower) in the issues that are being investigated (Creswell, 2003; Neuman & Kreuger, as cited in Gummesson, 2005). Therefore, the reality plunges into the actor's mind by hearing, observing and feeling, which in turn affects how the actor interprets an object (Schwandt, 1994). Interpretivist researchers attempt to draw inferences through social interpretation of reality (Neuman & Kreuger, as cited in Chowdhury, 2014, p. 56) since the primary objective of interpretivist research is to understand an object from a social context. In contrast with the positivist approach, an investigation under the interpretivist paradigm is influenced by the investigator and thus, the objects are not independent. In terms of research design, the interpretivist paradigm supports qualitative methods of research. Under this paradigm, data is collected using observation techniques, in-depth interviews and focus group discussions, and qualitative techniques are used to analyse the data.

3.2.4 Critical Theory

According to critical theorists, reality is shaped by the social, cultural, political or economic circumstances of the participant of inquiry (Riege, 2003). Thus, the ontological belief of critical theory refers to historical realism (Guba & Lincoln, 1994; Roy, 2014). As far epistemological belief of the critical theory goes, knowledge is created with the interaction between the investigator and investigating objects. Thus, the findings are subjective and relative to the values of the researcher as the researcher inevitably influences the inquiry (Guba & Lincoln, 1994; Riege, 2003). Methodologically, this research supports the dialogue between the researcher and the participants (Guba & Lincoln, 1994). Both the investigator and the investigating subjects participate in dialogue to discover the history of reality or truth. From an ethical stand point, this research is intrinsic to the inquiry itself. In this process, the investigator can explicitly delve into the phenomena during the inquiry.

3.2.5 Paradigmatic Perspectives of the Current Study

The application of all four research paradigms is context specific and relevant to the aim of the investigator: what is to be investigated in the study. Thus, Hitchcock and Newman (2013) suggest that it is best to think of research as research that should not get caught up in the paradigmatic discussion. The basic concept is that good research is good research, regardless of its paradigm (Hitchcock & Newman, 2013). Research procedures or methods have typically been linked with certain paradigms, however, these need to be independent so that qualitative researchers are free to use quantitative methods and quantitative researchers are free to employ qualitative methods (Gummesson, 2005; Johnson & Onwuegbuzie, 2004). In fact, the application of the mixed-methods approach in social science research is a growing trend in recent methodological studies (Creswell, 2015b; Roy, 2014; Tashakkori & Teddlie, 2003). A mixed-methods approach allows researchers to mix and match design components (Johnson & Onwuegbuzie, 2004) which is likely to facilitate answering specific research questions.

After carefully evaluating the ontology, epistemology, methodology and axiology of all four research paradigms suggested by Guba and Lincoln (1994) and Johnson and Onwuegbuzie (2004), this study adopts the post-positivist research paradigm in order

to address the issues underlying the participation of the local community in different ecotourism-related activities. Ontologically, this study advocates that reality is about what is obtained from the investigation. Thus, the nature of reality may be imperfectly assumed and not universally true. Epistemologically, the knowledge generated from this research is relevant to the local community and the findings are considered true because the data is collected from the people in the local community, using both structured and unstructured interview techniques. Methodologically, this study has followed the mixed-methods approach which is in line with post-positivism. Finally, the axiological view of the research is extrinsic to the investigation process where participants were given all possible information about the investigation in order to obtain their consent to participate. This study also ensured the minimisation of harm to the environment, local culture or property and interests of the participants during the investigation process. As this study uses random sampling technique, equal opportunity was given to all participants. Considering all four paradigmatic views, it can be argued that post-positivism is the best relevant research paradigm to address the research problems of the current study.

To proceed with this research, an initial research model was developed based on the research objectives and the existing literature, which need to be tested in order to justify the applicability and legitimacy in the model. Thus, the semi-structured interview schedule assisted the contextualisation of the field study in the initial research model. Finally, the comprehensive model was tested through quantitative method.

3.3 RESEARCH METHOD

This study follows a mixed-methods approach— a combination of qualitative and quantitative methods— which is considered as one of the most remarkable methodological shifts and a healthy indicator within social science research area in the past 25 years (Biddle & Schafft, 2015; Creswell, 2010, 2015a; Maxwell, 2016). In mixed-methods research, data collection, analysis, and interpretation of results are considered central to the research, and it is claimed that this combined strength gives an informed understanding of a particular research problem (Creswell, 2015a;

Johnson, Onwuegbuzie, & Turner, 2007). The integration of qualitative and quantitative approaches also gives greater opportunity to the researcher to identify and validate the factors associated with the research endeavour, which maximises the strengths and minimises the weaknesses of each individual approach that would not be possible when applying either method alone (Klassen, Creswell, Plano Clark, Smith, & Meissner, 2012; Tashakkori & Teddlie, 2010). After reviewing approximately 19 definitions (including the definition given by Abbas Tashakkori and Charles Teddlie, Burke Johnson and Anthony Onwuegbuzie, Donna Mertens, Isadore Newman, Jennifer Greene, and John Creswell) on mixed-methods research, Johnson et al. (2007) arrive at the following comprehensive conclusion about mixed-methods research:

> Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (*e.g.*, use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration (p. 123).

In his book, Creswell (2015a) defines mixed-methods research as:

> An approach to research in the social, behavioural, and health sciences in which the investigator gathers both quantitative (closed-ended) and qualitative (open-ended) data, integrates the two, and then draws interpretations based on the combined strengths of both sets of data to understand research problems (p. 2).

The mixed-methods approach is a research paradigm which is cognizant, appreciative, and inclusive of local and broader socio-political realities, resources, and needs, and provides the most informative, complete, balanced, and useful research results (Johnson et al., 2007). The mixed-methods research design is undertaken because the results of one method complement the results of another method, which helps the researcher to clarify and interpret the overall findings of the study (Driscoll, Appiah-Yeboah, Salib, & Rupert, 2007; Pasape, Anderson, & Lindi, 2015b). These notions of mixed-methods research are relevant to the objectives of the current study. The current study thus applies a qual → QUAN-based approach, under the umbrella of mixed-methods research (Creswell, 2003) where qualitative methods are employed for contextualising the variables identified in the study (Osterman, Furman, & Sernak, 2014) and quantitative methods are employed to test the research hypotheses. In this context, the 'arrows' used above represent the sequential design of the mixed-methods.

The mixed-methods approach has been expanded as a field of research and methodological writing across different disciplines and journals including the *Journal of Mixed Methods Research* and the *International Journal of Multiple Research Approaches* (Creswell, 2015a). Similarly, the mixed-methods approach is being increasingly used in tourism research (see Table 3-2) with the view to increasing the understanding of the depth and breadth of complex phenomena of a particular research context (Isa & Aziz, 2014; Puhakka, Cottrell, & Siikamäki, 2014; Rittichainuwat & Rattanaphinanchai, 2015). As shown in Table 3-2, Lu and Nepal (2009) identified a noticeable application (6%) of the mixed-methods approach in sustainable tourism research between 1993 and 2007. According to Nunkoo et al. (2013), around 13.5% of the total of 140 articles published between 1984 and 2010 in leading tourism journals (i.e., the *Annals of Tourism Research*, *Journal of Travel Research*, and *Tourism Management*), applied the mixed-methods approach. Furthermore, Molina-Azorín and Font (2016) examined a total of 468 articles published between 2005 and 2014 in the *Journal of Sustainable Tourism* (JST) where 56 (12%) articles followed the mixed-methods approach.

Table 3-2: Comparison of mixed-methods research used in tourism

Study method	**Journal Name**		**Broad Tourism Field**		
	JST 2005-2014 (Molina-Azorín & Font, 2016)	ATR, JTR, and TM 1984-2010 (Nunkoo et al., 2013)	Sustainable tourism 1993-2007 Lu and Nepal (2009)	Tourism (1994-2005) Ballantyne et al (2009)	Pro-Poor Tourism (122) 1999-2013 (Truong, 2014)
Qualitative	38%	13%	41%	19%	70.5%
Quantitative	33%	72%	37%	59%	12.3%
Mixed methods	12%	13.5%	06%	06%	14.7%
Others	17%	1.5%	16%	16%	2.5%

Source: Adopted from (Ballantyne, Packer, & Axelsen, 2009; Lu & Nepal, 2009; Molina-Azorín & Font, 2016; Nunkoo et al., 2013; Truong, 2014)

3.4 RESEARCH PROCESS

This research followed a step-by-step process. The research process adopts two main phases— qualitative and quantitative— to obtain an in-depth understanding of the contribution of ecotourism to the livelihood of the local community (Isa & Aziz, 2014).

The entire process in this research is presented in the following Figure (see Figure 3-1).

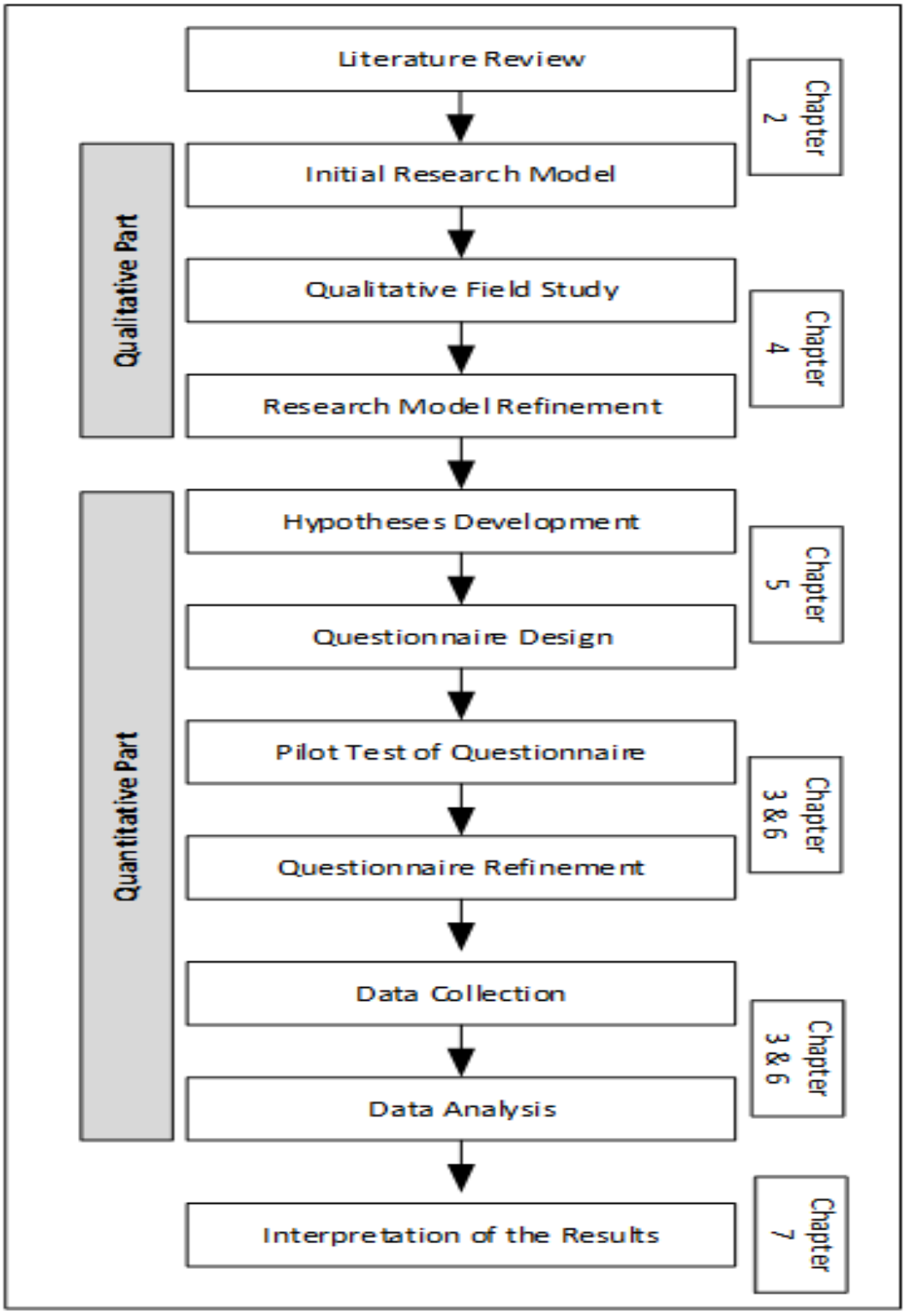


Figure 3-1: Step-by-step presentation of the research

Step 1: Literature Review

This step was conducted to obtain a better understanding of the research problem in the current study. The review was based on ecotourism as well as broad tourism literature. In addition, as the foundation of the current study was based on two theories (i.e., social exchange theory and the theory of planned behaviour) the literature based on these two theories applied in tourism research was also reviewed. The literature search was broadened to include every possible source and available area of knowledge including journal publications, books, conference proceedings and working papers. The exclusive literature search uncovered both current and past work and thereby enabled the researcher to identify existing gaps in the field of exchange relationships in ecotourism and its antecedents and outcomes. The review of the existing literature also facilitated the development of the research objectives and hypotheses. Furthermore, the key variables in this research were conceptualised and grounded from the literature review.

Step 2: Initial Research Model

Based on the review of existing literature, an initial conceptual model was proposed (see Figure 2-1). The variables, constructs, sub-constructs and the links used in the proposed model were supported, rationalised and justified by the existing literature.

Step 3: Qualitative Field Study

Once the initial research model was developed, a semi-structured interview schedule was used to conduct a field study using in-depth interview techniques. The field study was conducted in Sundarbans of Bangladesh which is one of the under developed regions of the country. Week infrastructure and poor education level are characterised in this area. The main purpose of field study was to contextualise and legitimise the concepts applied and relationships found in the literature review. Another purpose of field study was to search and identify the concepts, relationships, and procedures that were not reported and found in the literature review. The entire process of field study is described in detail in Chapter 4.

Step 4: Research Model Refinement

At this stage, the results from the qualitative data were matched with the findings of the literature review to refine the initial research model. The necessary addition and removal of the items and the constructs, as well as the elimination of duplicate constructs and their items, were made at this stage. All selected constructs and dimensions were justified based on theories and literature in the relevant field of study. Finally, the research model was refined and a comprehensive model was developed for conducting the quantitative phase of this study.

Step 5: Hypotheses Development

The hypotheses were developed in line with the links and directions of the constructs of the comprehensive research model that were supported by the theories and their applications in the field of the proposed research setting. Thus, SET and modified TPB were used to guide the hypotheses. A total of 11 hypotheses were developed in order to quantitative verification of the relationships with the view to generalising the findings. The detail of the hypothesis development is discussed in Chapter 5.

Step 6: Quantitative Questionnaire Design

Based on the research model and hypotheses, a preliminary questionnaire was designed for the quantitative survey. All 11 hypotheses were addressed in the questionnaire. The measurement items under each construct in the questionnaire relied heavily on existing literature. Based on the results of the qualitative study, some of the measurement items were found highly contextual and they were accordingly placed in the questionnaire. The combined measurement items are 86 under 14 constructs. A six-point Likert type scale was used in the questionnaire to measure the respondents' judgement for the measurement scale. The detail of designing the quantitative questionnaire can be found in Chapter 5.

Step 7: Questionnaire Pre-testing and Refinement

The initial questionnaire was pre-tested before it was approached to the respondents. The pre-testing procedure was conducted to check for any errors, omissions, or exaggerations of words and themes, as well as to increase the validity and reliability of the questionnaire. A total of 12 respondents were included for this purpose,

comprising academic experts in the study area. All relevant comments and suggestions found in the pre-testing procedure were incorporated in the final questionnaire. The final questionnaire was thus made ready for data collection from wider samples.

Step 8: Pilot Study

After preparing the final questionnaire, a pilot study was conducted to enhance the simplicity, validity, and applicability of the questionnaire. Local people of the ecotourism site who are directly and indirectly involve in ecotourism in the study area were used in the pilot survey. A total of 49 responses were collected and analysed in the pilot study. From the pilot study, some ambiguities were identified in the questionnaire. Most ambiguities belonged to the constructs such as power, trust, community's participation in ecotourism, political instability, and improved standard of living due to ecotourism. According to the feedback from the pilot study, the questionnaire was rephrased and made ready for the final survey.

Step 9: Quantitative Data Collection

Quantitative data was collected during the field survey from the local community of the study site. Local people who are directly or/and indirectly involved in ecotourism activities were used as the respondents for the survey. The respondents were selected based on a random sampling technique from the major localities across the Sundarbans. A portion of the respondents were from Khulna city and Mongla port area, as they are involved in transport and tour operations. In terms of the type of personal interview technique used, all respondents were approached face-to-face.

Step 10: Quantitative Data Analysis

The data was analysed using statistical tools and techniques, specifically Statistical Package for the Social Sciences (SPSS) and PLS-based Structural Equation Modelling (SEM) technique (Gefen, Straub, & Boudreau, 2000; Moores & Chang, 2006). Initially, all the data were posted in the SPSS spreadsheet (i.e., sav file) and was later converted into the comma delimited file (i.e., csv file) for advanced analysis using SmartPLS software to test the validity, reliability, and hypotheses. However, SPSS software was used for the descriptive analysis. The details of the analysis are presented in Chapter 6.

Step 11: Discussion and Interpretation of the Results

The final stage of the research was confined in conjunction with the discussion and interpretation of the results found from both qualitative and quantitative data analysis. The discussion was made both in line with the hypotheses and research objectives.

3.5 QUALITATIVE FIELD STUDY

A qualitative study was conducted to explore the phenomena associated with the exchange relationship process in ecotourism and to examine and validate the factors and variables identified in the literature review of the initial research model. The main purpose of conducting the qualitative study was to contextualise and validate the initial research model. The associations between the factors were also identified in this stage. Hence, the qualitative method was considered the most suitable approach because of its exploratory nature, which gives true insights about the study sample. This approach of the research permits an in-depth evaluation of the phenomena related to the investigation. In line with a post-positivist point of view, the current investigation is free from any predetermined outcomes and relies on the openness of responses which gives the respondents an opportunity to explain their real life experiences in detail (Roy, 2014).

Prior to the field study being conducted, the semi-structured interview schedule was prepared in line with the initial research model which is considered an effective method and is widely used in the qualitative research (Malhotra & Birks, 2007). All the interview scripts were prepared by the researcher with close contact with the principal investigator of the research. Once the interview scripts were ready, they were transcribed by the researcher and submitted to receive ethical approval by the relevant body for the purpose of qualitative data collection. As soon as the permission was granted, 29 in-depth interviews were conducted using an audio recording system. After conducting the interviews, all audio records were written in plain text in the participants own language (i.e., in Bengali) and then transcribed into English (Lee et al., 2010; Zhou, 2011). Content analysis technique was then applied to analyse the data. The transcribed data was analysed into two phases. In the first phase, all

interviews were analysed separately to identify the underlying factors, variables and their associations with certain constructs that were primarily identified from the literature. In the second phase, all identified constructs were combined based on their relationships with each other, with a view to designing a refined research model. Data from the qualitative study revealed some variables and dimensions that were relevant to the current study that had not been used in a similar context in the existing literature. Thus, the initial research model was refined to incorporate those variables and dimensions for quantitative study.

3.5.1 Sample Selection

Samples for a study can be selected through random and non-random methods (Malhotra & Birks, 2007). In this research, a snowball sampling technique was used to find the most representative participants because this type of sampling is consistent with the information needed for the current research (Creswell, 2007). This type of sampling was used to identify the right interview participants in the right location and from right professions. Once the data collection team selected an interview participant with this technique, the following participants were randomly selected from the same profession. In fact, the interview participants were selected based on three main criteria: (i) people living adjacent to the selected ecotourism site, (ii) people who are involved in ecotourism-related activities; and (iii) people who are directly or indirectly impacted by ecotourism. A total of 29 interviews were conducted at which point data saturation was ensured (Guest, Bunce, & Johnson, 2006; Mason, 2010).

3.5.2 Data Collection Methods

Once the prospective samples were identified, the selected participants were approached to provide information about their experiences with ecotourism. Prior to the interview, the individual participant was approached to give consent to having the interview recorded. Once consent was received (i.e., recording in the audio system), the interviews were conducted by the data collection team using the semi-structured interview schedule. All the interviews were taken in the respondents' house and/or in the place of their businesses or professions (Nyaupane, Morais, & Dowler, 2006). The

average duration of the interview was one hour. The interviews were conducted in Bengali and they were later transcribed into English for the purpose of analysis (Nyaupane et al., 2006; Zhao et al., 2008; Zhou, 2011). Sufficient care was taken in the transcription process where importance was given to keeping the original 'meaning of words' the participants used in their interviews.

3.5.3 Data Analysis Techniques

As mentioned above, this research uses content analysis techniques for qualitative data analysis as this allows the study to focus more on context (Merriam & Tisdell, 2015). This is considered one of the most useful tools for measuring the frequencies and variety of messages from relatively unstructured patterns (Merriam & Tisdell, 2015). This research identifies the factors, variables and their associated links from the content analysis using NVivo. NVivo software is one of the suitable analytical tools for content analysis because it helps to search the variables and explores their patterns and associated links. The content analysis technique can be operated in a number of ways including inductive and deductive analysis (Quaddus & Xu, 2005). Thus, the current study applies the two-step process of content analysis to identify the themes and subthemes from the raw data and to refine the research model. The inductive stage was operated to identify the themes, sub-themes and their related factors and variables whereas deductive analysis was used to compare the initial model with the field study model, which helped the researcher to design the final research model.

3.6 QUANTITATIVE STUDY

After finalising the initial research model, the next step was to confirm the factors and variables, and their relationships. As mentioned, this research was more quantitative focused (i.e., qual → QUAN). The qualitative phase was considered as the legitimacy phase in this research which facilitated the acceptability of the research model. The quantitative phase of this research, on the other hand, included hypotheses development based on the research model and tested them by analysing the survey data.

3.6.1 **Questionnaire Development**

Based on the comprehensive research model, the questionnaire was designed for quantitative data collection. All the constructs of the research model were consulted in the questionnaire with the view to measuring the relationships between the constructs. Section A of the questionnaire contained closed-ended questions relating to all of the constructs used in the model, however, some open-ended questions were included relating to the socio-demographic characteristics of the respondents in Section B. The current study adopts a six-point Likert type scale to measure all the variables used in Section A of the questionnaire where 1 = strongly disagree and 6 = strongly agree about the respondents' choice of the measurement items. Likert type scale is one of the suitable approaches for quantitative data collection because respondents have a wide variety of choices for their responses. Furthermore, it is evident that most of the SEM-based empirical studies conducted by past researchers use the Likert scale for measuring the relationships among the variables (Hills & Argyle, 2002; Hossain, Quaddus, & Shanka, 2015; Mourad & Valette-Florence, 2016). The reason behind applying a six-point scale in this study was to avoid any bias of the respondents towards the neutral option commonly referred to as the central tendency error (Hills & Argyle, 2002; Poulton, 1982). This is because choosing a neutral option is a common phenomenon among Asian people although they may not intend to do so (Achjari & Quaddus, 2002; Wibowo, Evans, & Quaddus, 2009). As the current study site is Bangladesh — a developing countries in Asia — the 'neutral' or 'neither agree nor disagree' answer option was not included in the questionnaire and accordingly the questionnaire was designed with a six-point scale.

3.6.2 **Questionnaire Pre-testing**

Prior to the quantitative survey, the initial questionnaire was pre-tested using academic experts in the field of the study area. There are difference of opinions among the scholar about the size of samples for pretesting the questionnaire (Hunt, Sparkman Jr, & Wilcox, 1982). Ferber and Verdoorn recommended 12 as the satisfactory samples for pretesting the questionnaire (as cited in Hunt et al., 1982). As such, the current study considered a total of 12 questionnaires in the pretesting process (i.e., eight to the study sample, three to doctoral students, and one to the academic expert in the field of

tourism) to determine whether the questionnaire contained any difficulties in understanding any items used in it. The study samples were approached randomly from the study site using face-face-interview technique. Most of the feedbacks were related to the words and phrases used in the questionnaire. One important observation of the pre-testing process was that the respondents pointed out the lack of a 'neutral' or 'neither agree nor disagree' option in the questionnaire, which is a common tendency among the most Asian respondents (Achjari & Quaddus, 2002). Based on the feedback and comments from the pre-testing process, necessary edits were made to the questionnaire.

3.6.3 **Pilot Study**

The pilot study was conducted with the final version of the questionnaire which was refined in the pre-testing process. It was piloted to test the applicability of the questionnaire to the broad respondent groups from the study area, as well as to check whether there was any unclear concepts or phrases used in the questionnaire that may affect the respondent ability to answer questions. Primarily, people living across the study site were considered potential respondents for the pilot study, however, people who were related to tour operating businesses and tourism transport services were also included in this stage. The data collection team was sent to the study area for the pilot survey. Face-to-face interview technique was applied to conduct the pilot survey. The pilot study samples were selected on random basis. A total of 49 respondents completed the survey and usable data was collected in the pilot study. The data were then analysed to check the validity of the questionnaire. Descriptive statistics of the data was calculated at this stage. After analysing the pilot study data, the questionnaire was refreshed for the final survey. The results of pilot study were presented in Table 6-1 and Table 6-2.

3.6.4 **Study Population and Sampling Method**

The population of this research included all of the stakeholders in ecotourism of the Sundarbans of Bangladesh. The study aims to examine whether ecotourism is worthwhile for the livelihood of the local community. The target population can be

defined as all local people surrounding the Sundarbans who are directly and/or indirectly involved in ecotourism activities. People of all professions relating to ecotourism were considered in the quantitative data collection process. The most common categories of respondents were people related to transportation, fishing, cultural shows, honey collection and sale, tour guides and tour operators. Initially, this research aimed to obtain 500 responses to be collected from all types of respondents. For this purpose, the data collection team was deployed to conduct the survey in the study area. Purposeful random sampling technique was adopted to find the right sample for this study. In the end, a total of 487 surveys were collected. The entire sampling procedure is explained in the following Table 3-3:

Table 3-3: Sampling procedure

Sampling procedure	Sampling strategy of the study	Comments
Target population	Local people across the Sundarbans of Bangladesh.	To see the impact of ecotourism on the livelihood of local people.
Sampling frame	Areas adjacent to the Sundarbans: Dacope Upazila in Khulna District and Mongla Upazila in Bagerhat District.	These two areas represent the sampling area of the target population
Sampling unit	All industry categories serving for ecotourism.	The sample elements mainly belonged to fishing, honey collection, transport services, tour operators and cultural shows.
Sampling elements	People who are directly and/or indirectly related to ecotourism activities.	Apart from local residents, some individuals providing services for ecotourism were also included.
Sampling strategy	Purposeful random sampling technique.	The particular professional groups were first identified purposefully and then random survey was approached to collect data.
Sample size	Initial sample size was 500 responses	487 responses were collected responses of which 49 responses were considered for pilot study, 406 were useable samples for SEM analysis and unusable responses were 32.

3.6.5 **Sample Size Determination**

This research employed PLS-based SEM techniques to measure the hypotheses of the model. In line with other statistical analysis techniques, PLS as an analytical tool can deal with minimum sample sizes because in PLS, "minimum sample size ensures that the results of statistical methods are robust and the model is generalizable" (Hair, Hult, Ringle, & Sarstedt, 2016, p. 23). Thus, the sample size for this study was determined in a way so that the data can be effectively run with PLS software. The study used a

total of 406 samples for final analysis which is quite substantial with reference to the rule of thumb for the minimum sample size (i.e., 10 times the minimum number of arrowheads pointing at the latent variable anywhere in the PLS path model) requirement developed by Hair et al. (2016). On this basis, the requirement of the minimum sample size for the current study is 110 responses.

3.6.6 **Quantitative Data Collection**

The quantitative data collection was administered by a structured survey instrument. Before the survey began, a team was formed consisting of eight members who were studying their MBA course at the Bangabandhu Science and Technology University, Gopalgonj, Bangladesh. The survey instruments were sent to them to gain an understanding of the theme and purpose of the survey. They were also given verbal training and briefing on how to collect data for the current study by the researcher over Skype. The researcher also personally joined the team for the filed survey. Initially, the team members dropped the questionnaire to the respondents explaining the facts in the questionnaire and purpose of the study, however, the return rate of completed questionnaire was very poor. After consulting with the principal investigator, the face-to-face personal interview (survey) technique was chosen (Kim & Tamborini, 2014). In the face-to-face interview stage, the questionnaire was handed over to each of the respondents who were given approximately 30 minutes to complete the answers. The respondents were also given the option to ask for any queries or further clarification if needed.

3.6.7 **Quantitative Data Analysis**

The responses collected in the first week were immediately placed in the SPSS spread sheet. As some precautionary measures were taken during the survey, the response error was minimal. However, some of the questionnaires were found with missing values; either the respondents refused to the answer or overlooked the question in some sections. To overcome this problem, data examination was conducted in the analysis stage. At this stage, all the response errors were placed in two broad categories, that is: errors with the items within one construct, and errors with the items of more than

one construct. The former was replaced by the mean value of the construct, whereas the latter was discarded from the analysis. This research yielded 406 usable responses for analysis with a response rate of 81.2%. In regard to the data analytical tools, this research adopted a PLS based SEM technique for quantitative data analysis. PLS can deal with large number of factors and variables of a relatively complex model, and can simultaneously run with several regression equations/models (Lowry & Gaskin, 2014; Sarstedt, Hair, Ringle, Thiele, & Gudergan, 2016).

3.6.7.1 Structural equation modelling (SEM)

Structural equation modelling (SEM) is a powerful statistical analysis technique used for analysing structural relationships of a complex whole. It adopts the assumptions of multiple regression and path analysis (Chin, 2010). It is known as second generation analytical tool that can be used to estimate the relationships among latent constructs, and also among latent constructs and the underlying observed variables (Chin, 2010; Hair, Ringle, & Sarstedt, 2011). SEM can comprehensively deal with reliability and validity measures, and measurement errors. Furthermore, it provides the researcher with other benefits (i.e., depth of analysis, creativity in analysis, clarity in analysis) that are not readily available with first-generation analysis tools such as multiple regression, principal component analysis and cluster analysis (Barclay, Higgins, & Thompson, 1995; Lowry & Gaskin, 2014).

Second-generation analytical tools, like SEM, can deal with a number of related research questions in a single, systematic and comprehensive analysis and can model the relationships of many dependent and independent variables (Gefen et al., 2000). Thus, the current study preferred to use PLS-SEM because this research was designed with many constructs and indicators that support SEM based second-generation analysis tools. The current study simultaneously required systematic and comprehensive analysis for both its measurement parts and structural parts. It is also evident that SEM has been increasingly applied in marketing and tourism literature in recent years (Ballestar, Grau-Carles, & Sainz, 2016; Hair, Sarstedt, Ringle, & Mena, 2012; Lee & Kyle, 2012).

3.6.7.2 Partial least squares (PLS)

The two common types of structural equation modelling (SEM) analysis are covariance-based SEM (COV-SEM) and partial least squares-based SEM (PLS-SEM). Of these, PLS-SEM has certain advantages over COV-SEM as it deals with both reflective and formation indicators whereas COV-SEM can only deal with reflective indicators (Chin, 2010; Hulland, 1999). In addition, COV-SEM needs a large volume of data whereas PLS-SEM can run with a comparatively small sample. In COV-SEM analysis, data must be supported by multivariate normal distribution but normality is not the utmost prerequisite for PLS-SEM analysis.

Partial least squares (PLS) has gained popularity in recent times among researchers due to its ability to handle a small number of samples and to model with latent constructs even under unusual conditions (Wilson, 2010). It is also appropriate to use in a new measurement context even with non-established measurement items (Kondo & Ghyas, 2016). Furthermore, PLS has gained popularity due to the availability of this software online free of charge. With all of those benefits in mind, this study uses Smart PLS as an analytical tool.

3.6.7.3 Partial least squares (PLS) procedure

The PLS-based SEM technique requires a two-step analysis procedure of data: (i) assessment of the measurement model and (ii) assessment of the structural model. In the analysis of the measurement model, this study looks at the relationship between the latent variable and its indicators for both formative and reflective models. Further analysis was carried out with the structural model to examine the relationship between the constructs by assessing the *t*-statistics for each path coefficient corresponding to the relevant hypotheses. This analysis also provided results for the explanatory power of the endogenous constructs used in the research model. Table 3-4 represents the step-by-step procedure of the PLS-based SEM analysis of the research model. The analytical procedures are outlined in detail in Chapter 6.

Table 3-4: Step-by-step procedure of SEM analysis

Stages	Type of Indicator	Analysis	Rule of Thumb	Accepted cut off point in this study
Stage 1 Assessment of Measurement Model	Reflective	Reliability		
		Indicator reliability	≥ 0.70; in exploratory studies loadings of 0.40 are acceptable (Hair, Ringle, & Sarstedt, 2013)	≥ 0.60
		Internal consistency reliability	Composite reliability ≥ 0.7 (Hair et al., 2011)	≥ 0.75
		Validity		
		Convergent Validity (Average Variance extracted)	≥ 0.5(Hair et al., 2013)	≥ 0.5
		Discriminant validity- construct level	"Square root" of AVE of each latent variable greater than the correlations among the latent variable (Fornell & Larcker, 1981)	Supported with the rule of thumb
		Discriminant validity- item level	An indicator's loadings should be higher than all of its cross loadings (Hair et al., 2011).	Supported with the rule of thumb
	Formative	Indicators' relative contribution (weights)	Each item weight is > 0.10 (Andreev, Heart, Maoz, & Pliskin, 2009; Peng & Lai, 2012).	≥ 0.27
		Indicators' absolute contribution (loadings)	≥ 0.70; in exploratory studies loadings of 0.40 are acceptable (Hair et al., 2013)	≥ 0.60
		Multi-collinearity	VIF < 5: tolerance > 0.20 (Hair et al., 2013)	VIF ≤ 2.09, Tolerance ≥0.48
Stage 2 Assessment of Structural Model	Reflective and formative	Coefficient of determination		
		Amount of variance explained (R^2)	Substantial=.67, moderate=.33 and weak=.19 (Suhartanto, 2016). Acceptable level depending on the research context (Hair et al., 2013).	≥ 0.18 (0.30 with ultimate dependent variable)
		f^2 effect size	Strong = .35, moderate =.15 and weak = .02 (Hair et al., 2013)	$f^2 \geq 0.001$
		Predictive Relevance		
		- cross-validated redundancy (Q^2)	$Q^2 > 0$ is inductive of predictive relevance (Hair et al., 2013).	$Q^2 \geq 0.08$
		- q^2 effect size	Strong = .35, moderate =.15 and weak = .02 (Hair et al., 2013)	$q^2 \geq 0.001$
		Path coefficient (β) and Statistical significance of *t*-Values	*t*-value, 1.65 @ Significant level 10%, 1.96 @ significant level 5%, and 2.58 @ significant level 1% (Hair et al., 2011)	*t*-value ≥ 2.47
		Nomologicasl validity	The relationship between the formative construct and other theoretically related constructs in the research model should be strong (Peng & Lai, 2012)	All the relationships in within the nomological net found significant.

3.6.7.4 Specification of the reflective and/or formative model

The current study includes both reflective and formative measurement constructs. Thus, it is important to specify whether a particular construct used in the research model is reflective or formative in nature as misspecification of the constructs may cause biased estimations of the relationship in the structural model (Blut, 2016; Jarvis, MacKenzie, & Podsakoff, 2003; Petter, Straub, & Rai, 2007). From that point of view, the constructs used in the research model were categorised as either reflective and/or formative. Primarily, the theoretical direction of causality between each latent variable

and its indicators helps to specify the reflective and/or formative measurement model. These were further contextualised from the field study data.

Conceptually, in the reflective indicator model, the direction of causality is from the construct to the indicators (see Figure 3-2a) meaning that all of the measures reflect the same underlying latent variable. They are highly correlated and are assumed to be interchangeable as all the indicators under a latent construct share a common theme (Jarvis et al., 2003). Due to the inter-correlation among the indicators, any change to an indicator may affect the results of other indicators, however changes to the indicator does not cause changes in the meaning of the latent variable. Therefore, deleting one or more indicators may not alter the conceptual domain of the latent variable (Jarvis et al., 2003). It is also important that all indicators in a reflective model have the same antecedents and consequences.

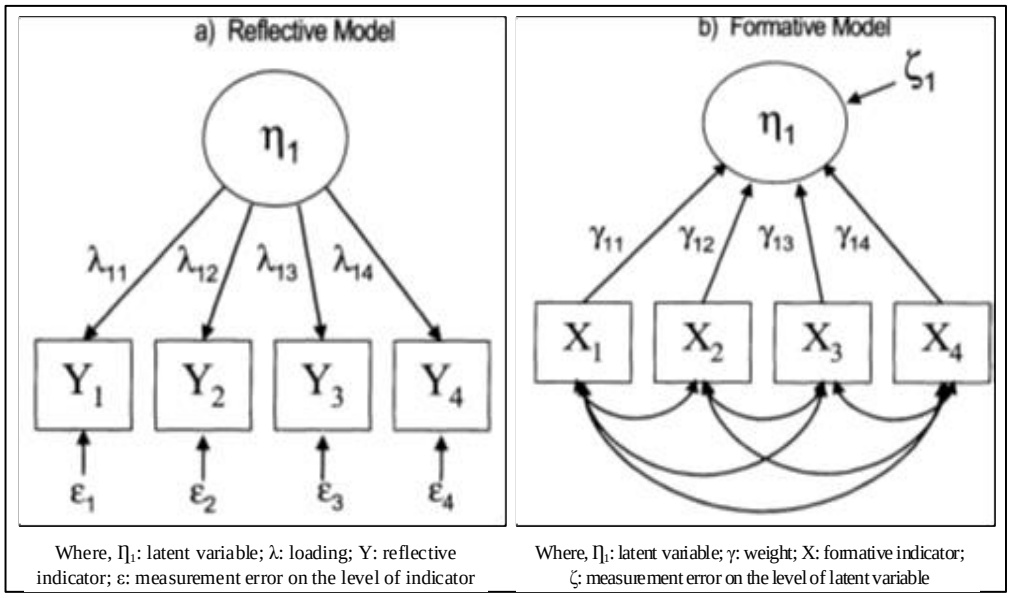


Figure 3-2: Reflective and formative measurement model, Source: Bollen and Lennox (1991)

In formative model, on the other hand, the direction of causality is from the indicators to the latent variable (see Figure 3-2b). Here, the indicators are assumed to be uncorrelated, therefore, elimination of any item may have a serious effect on the latent variable, that is, a change to one item may change the whole meaning of the latent variable (Jarvis et al., 2003). Hence, it is important to specify the type of indicator used in the measurement model which must comply with the theoretical context. Table 3-5

provides the theoretical underpinning of the identification of the reflective and/or the formative nature of constructs.

Table 3-5: Decision rules of specifying construct as reflective or formative (extracted from Table 1 of Jarvis et al. (2003)).

Decision Rules	**Reflective Model**	**Formative Model**
Direction of causality	Construct to indicators; indicators are manifestations of the construct.	Indicators to construct; indicators are defining characteristics of the construct.
Interchangeability of the indicators/items	Indicators should be interchangeable and should have the same and similar content.	Indicators need not be interchangeable and need not have same and similar content.
Co-variation among the indicators	Indicators are expected to co-vary with each other	Not necessary for indicators to co-vary with each other.
Nomological net of the construct indicators	Nomological net for the indicators should not differ, as such all indicators should have the same antecedents and consequences	Nomological net for the indicators may differ, as such indicators are not required to have the same antecedents and consequences.

Both Figure 3-2 and Table 3-5 explain the theoretical ground of the relationship between the latent variable and its underlying constructs with reference to both reflective and formative models. According to the guidelines of prominent PLS based methodological studies, namely, Petter et al. (2007) and Jarvis et al. (2003), the model of the current study was designed with both reflective and formative constructs. With reference to the existing literature and the outcomes of the field study, the constructs relating to the exchange initiation and exchange consequence are reflective whereas the constructs related to exchange formation and maintenance is second-order formative in nature. Indeed, this study is more reflective focused.

3.6.7.5 Assessment of the reflective measurement model

The reflective measurement model was assessed by examining the validity and reliability with reference to the observed variables. The reliability of the reflective model was examined in relation to the indicator reliability and internal consistency reliability, whereas the validity was tested through convergent validity and discriminant validity with reference to the manifest indicators of each reflective construct (Jarvis et al., 2003). The steps of analysing the reflective measurement model are shown in Table 3-4. Furthermore, a brief explanation of the analysis of the reflective model is given below.

Indicator reliability

The assessment of the measurement model started with the measurement of the indicators' reliability. Indicator reliability refers to the loading of each indicator of latent variables and it reveals how well each indicator fits to the corresponding latent variable. The loadings also show how strong the particular indicators are under a construct. Different measures are applied for assessing an indicator's reliability in PLS analysis, that is: (i) indicators' loadings and their significance for the reflective model and (ii) indicators' weights and their significance for the formative model (Hair et al., 2011). According to Hulland (1999), an item with extremely low loading has very little explanatory power to the model. In other words, higher loadings indicate higher correlations among the indicators and vice versa. There are differences in opinion among researchers as to the minimum acceptable score of loadings. Some early studies, for example, Hulland (1999), have suggested that more than 50% of the variance is due to the construct. Chin (1998) suggests that most of the loadings should be at least 0.60 and ideally equal to 0.70 or higher. However, the most recent literature suggests that acceptable loadings are equal to or greater than 0.70, and in the case of exploratory studies, loadings of 0.40 are acceptable (Hair et al., 2011, 2013; Wong, 2013). The above literature provided solid ground for minimum acceptable loading scores for the indicators used in the current study. Thus, this research considered a minimum loading score 0.60 as acceptable. To arrive at the minimum acceptable score of 0.60, some of the indicators were removed from the data set with the view to improving the indicators' reliability, which would likely lead to the improved estimation of the true relationship between the constructs used in the research model.

Internal consistency

The next phase of the reliability analysis concerns the internal consistency which refers to construct reliability. While indicator reliability refers to the measure of indicators within a latent variable, internal consistency on the other hand, indicates the measure of reliability of a latent variable itself. Cronbach's Alpha is known as the traditional form of measuring internal consistency in social science research (Wong, 2013). However, recent literature, for example, Ballestar et al. (2016) argue that Cronbach Alpha provides conservative measures of internal consistency whereas composite reliability scores remain the upper bound of internal consistency. Considering the

growing trend of using composite reliability scores as the measure of internal consistency of the construct, this study uses the same method. In PLS, internal consistency is defined as:

$$\text{Internal consistency} = \frac{(\Sigma\lambda i)^2}{(\Sigma\lambda_i)^2+\Sigma\text{Var}\,(\varepsilon i)}$$

where, λ_i represents factor loadings (simple correction between the items and its construct); and Var (ε_i) = 1 – λi^2, means the unique/error variance.

There are also differences in opinion among scholars regarding the cut-off point of composite reliability and Cronbach's Alpha scores in social science research. According to Bagozzi and Yi (1988), scores greater than 0.60 are desirable, however, the authors used LISREL in this study. In PLS-SEM, the cut-off value of both composite reliability and Cronbach's Alpha scores are equals to or greater than 0.70 (Hair et al., 2013) and 0.60 (Ballestar et al., 2016) respectively. In line with the existing literature, this study considered composite reliability scores of 0.70 as the cut-off point for each of the latent variables.

Convergent validity

Convergent validity refers to the correlation among the indicators of the same latent variable. In PLS-SEM, average variance explained (AVE) is the criteria for measuring the convergent validity of the latent variables with scores of 0.5 or greater (Ballestar et al., 2016; Hair et al., 2013; Wong, 2013). A score of 0.5 means the latent variable is able to explain 50% of the variance of its indicators, hence, the convergent validity is confirmed at this point or above (Wong, 2013). In line with existing PLS literature, this study accepts 0.5 as the cut-off point of AVE. According to Chin (2010), AVE is calculated as:

$$\text{AVE} = \frac{(\Sigma\lambda_i^2)\ \text{var}\ F}{(\Sigma\lambda_i^2)\ \text{var}\ F + \Sigma\Theta_{ii}}$$

where λ_i, F, and Θii represent factor loading, factor variance, and unique/error variance respectively.

Discriminant validity

The third criteria for validation of the measurement model is the assessment of 'discriminant validity'. Discriminant validity refers to how and to what extent latent constructs differ from each other meaning that each of the constructs can explain a different scenario in the same research model (Ballestar et al., 2016). Two methods are commonly used to assess discriminant validity: cross-loadings matrix and Fornell-Larcker's criteria of diagonal inter-construct correlation for comparing the square root (SQRT) of AVE of a particular latent variable with the corresponding diagonal latent variables (Ballestar et al., 2016; Hair et al., 2013). In line with the existing literature, this study applies both criteria to assess the discriminant validity. To do this, the study first examines the cross loading matrix; where if the correlation of a certain item does not score higher than the correlations of other items in both the row and column line, this particular item is removed from the analysis. For the indicators that satisfied the cross loading assessment criteria, their representative latent constructs were taken into the Fornell-Larcker's assessment criteria. At this stage, all the latent constructs of current research model were supported by the Fornell-Larcker's criteria for assessing discriminant validity.

3.6.7.6 Assessment of the formative measurement model

Like the reflective model, the formative model requires thorough evaluation criteria to satisfy PLS-SEM analysis. Although some literature suggests that internal consistency, reliability and convergent validity are not so important, theoretical justification and expert opinion are more effective for evaluating the formative model (Hair et al., 2011). Thus, the formative model is expected to be better able to explain the true relationship (Ringle, Sarstedt, & Straub, 2012). PLS requires some statistical analyses for assessing the quality of formative model (Hair et al., 2011). The evaluation procedure of the formative measurement model includes: (i) the indicators' relative contribution (weights), (ii) the indicators' absolute contribution (loadings), and (iii) redundancy and multi-collinearity analysis. If these are not carefully assessed, the results of the entire analysis will be in doubt (Hair et al., 2013). The indicator's weight and loading are the primary criteria for the inclusion of that particular indicator in the formative model. Without having a strong theoretical grounding, a significant score of both weights and loading of an indicator provides strong grounding of the inclusion of

that indicator in the formative measurement model. However, having strong theoretical support, non-significant indicator(s) should be kept in the formative model (Hair et al., 2011).

This study includes only one formative construct (i.e., exchange relationship) with three indicators; two of them (i.e., power and trust) are explained as formative items in the existing tourism literature (Ap, 1992; Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2012). The other item, namely, information sharing, secured significant weight and loading scores together with the other two indicators. Hence, they are considered as formative items of the exchange relationship. This study further explores the indicators' redundancy and multi-collinearity analysis as part of the assessment of the formative measurement model (Hair et al., 2011, 2013; Ringle et al., 2012). To examine the redundancy of the formative indicators, it is imperative that the researcher assesses any multicollinearity issues of the formative indicators (Hair et al., 2011). According to Hair et al. (2013), in multi-collinearity analysis, the scores of variance influence factor (VIF) and tolerance level are expected to be < 5 and > 0.20, respectively. For example, in PLS-SEM, when the VIF score of one indicator is above 5, this means that the other indicators of the same construct hold 80% of the variance, which in turn indicates multicollinearity problems with that particular formative construct (Hair et al., 2011). It is recommended that an indicator is removed if it has a VIF score higher than 5 (Hair et al., 2011). In line with the suggested cut-off point for VIF and tolerance level, this study found quite substantial results with all three indicators of the formative model.

3.6.7.7 Assessment of the hierarchical component

Once the focal constructs of the research model were defined, the next step was to examine whether each of the constructs fits within the hierarchical order as well as any multidimensional aspects. According to the hierarchical component model, constructs are hierarchical in nature and they contain more than one dimension in the research model (Jarvis et al., 2003; Wetzels, Odekerken-Schröder, & Van Oppen, 2009). To form multidimensional constructs in the research model, there needs to be a strong theoretical background in favour of using those constructs, because that theory can explain how the constructs are multi-connected and can also demonstrate their relationship with the higher-order constructs (MacKenzie, Podsakoff, & Podsakoff,

2011; Wetzels et al., 2009). Thus, a failure to rationalise the inclusion of a multidimensional construct in the research model may result in poor model fit (Jarvis et al., 2003). Each dimension of a multidimensional construct can be measured using either formative or reflective measurement items (Petter et al., 2007). Regardless of the forms of the constructs, each of the sub-dimensions needs to be defined carefully to ensure that the measurement relationship appropriately models the research context (Jarvis et al., 2003).

Levels and modes of the hierarchical construct

There is an increasing popularity for using hierarchical constructs in PLS-SEM models (Becker, Klein, & Wetzels, 2012; Jarvis et al., 2003; Ringle et al., 2012). According to Johnson, Rosen, Djurdjevic, and Taing (2012), the multidimensionality of the latent variables and their dimensions are assumed to have a higher predictive power of the situational criteria. The hierarchical model is defined as: (i) the number of levels (e.g., second-order) and (ii) the types of relationship (e.g., formative-reflective or reflective-formative) between the latent variables (Becker et al., 2012; Ringle et al., 2012; Wilson, 2010). There are different levels in the hierarchical model (see Figure 3-3)—(i) second-order, (ii) third-order, (iii) fourth-order, and may be more, however, second-order latent variables are the most common in the existing PLS-SEM literature (Ringle et al., 2012; Wetzels et al., 2009). Apart from the various levels, the hierarchical and multidimensional model also has different types of relationship (see Figure 3-3) among the latent variables. These relationships may be (i) reflective-reflective, (ii) reflective-formative, (iii) formative-reflective, and (iv) formative-formative (Becker et al., 2012; Ringle et al., 2012).

In the **reflective–reflective: Type I** mode, the lower-level constructs are reflectively measured and can be differentiated from each other but they are correlated (Becker et al., 2012). Some controversy arises regarding the underlying meanings and usefulness of lower-level constructs under the Type I relationship because these latent variables are identical according to the reflective logic and therefore, they can be modelled as formative leading to the reflective-formative kind of hierarchical latent variables model (Lee & Cadogan, 2013). In the **reflective-formative: Type II** mode, the lower-level latent variables are measured reflectively where they are not results of the similar cause but form a general understanding that has an effect on the subsequent

endogenous variable (Becker et al., 2012). According to the **formative-reflective: Type III** mode, higher-level latent variables are a common theme of several lower-level latent variables which in fact, measure the same phenomenon in different dimensions (Becker et al., 2012). For example, firm performance can be the common part of several formative types of latent variables, such as profitability efficiency and production efficiency, where profitability can be the cause of volume of sales and costs; and production efficiency can be the cause of staff qualification, staff training, and supply efficiency. Finally, in the **formative-formative: Type IV** mode, the lower-level latent variables are formatively measured variables that generate stronger groundings of the higher-level latent variable (Becker et al., 2012). For example, to measure government performance as a higher-level latent variable, political stability, fulfilment of the regime, and economic development can be used as the lower-level formative latent variables (Becker et al., 2012; Jarvis et al., 2003). Considering the above theoretical understandings, the reflective-formative (Type II) model (see Figure 3-3) is most relevant to the current study.

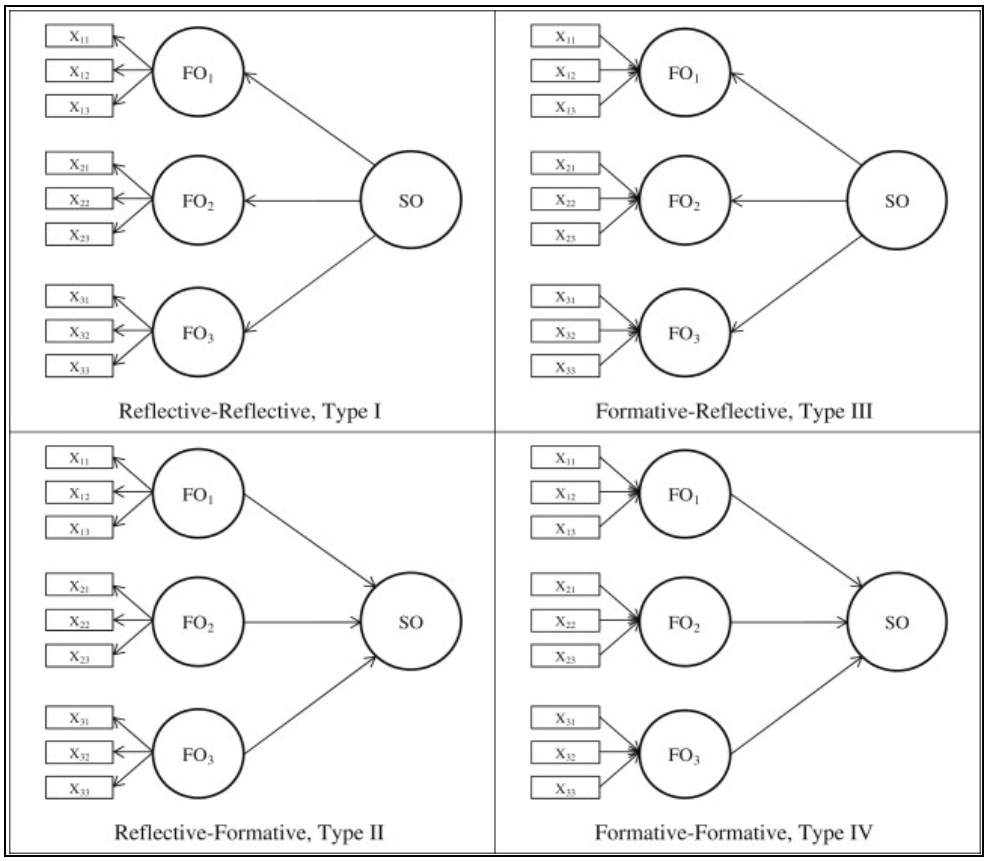


Figure 3-3: Hierarchical latent variable models in PLS-SEM, Source: (Becker et al., 2012)

Higher-order formative latent variables in the research model

With reference to the existing literature and outcomes from the field study, the exchange relationship reveals a multidimensional construct which can be operationalised as a formative type latent construct at the higher-order level, with lower-order reflective type latent variables (Ap, 1992; Becker et al., 2012; Nunkoo & Ramkissoon, 2012). In line with the logic of reflective-formative hierarchical latent variable model, this study assessed the exchange relationship using power, trust and information sharing, each having their own reflective indicators (Jarvis et al., 2003). These lower-order latent variables are independent and uncorrelated, and vary according to changes in the subject matter.

The literature suggests that there are three approaches for assessing the parameters in a hierarchical latent variable model: (i) the repeated indicator approach (Lohmöller, 1989), (ii) the two-stage approach (Becker et al., 2012; Ringle et al., 2012), and (iii) a hybrid approach (Wilson & Henseler, 2007). The former two approaches are widely used while the latter is less common in PLS-SEM analysis (Becker et al., 2012). In the **repeated indicator approach**, the higher-order latent variable is constructed from a lower-order latent variable that represents all of its manifested indicators (Becker et al., 2012; Lohmöller, 1989; Wetzels et al., 2009). This can be operationalised by: (i) using loadings/weights of the indicators of first-order latent variable and then (ii) using loadings/weights of the latent variable scores for assessing the second-order latent variable (Becker et al., 2012). In the **two-stage approach**, the scores of the first-order constructs are measured at the first-stage without including the second-order construct, and further analysis is then conducted with the first-stage construct scores as the indicators of the second-order latent variable (Becker et al., 2012). The **hybrid approach** is operationalised in line with the repeated indicator approach, however, it uses the manifest variables once in the model splits the indicators of first-order latent variables and uses one half to estimate those variables and the other half uses for assessing second-order construct which helps to avoid artificially generated correlation issue (Becker et al., 2012; Wilson & Henseler, 2007). Although all three approaches can be used in the present research, the two-stage approach was ultimately used to estimate the hierarchical model with reflective latent variables in the first-order level

and formative latent variable in the second-order level to minimise bias in the analysis of the measurements (Becker et al., 2012).

3.6.7.8 Assessment of the structural model

The assessment of the structural model was performed after obtaining satisfactory outcomes from the measurement model, indicating that the measurement indicators are reliable and valid (Ballestar et al., 2016). In PLS-SEM, the assessment of a structural model refers to measuring the significance of the hypothesised relationships between the constructs of the research model and examining the path statistics; for example, the loadings and path coefficients (Ballestar et al., 2016; Hair et al., 2013; Ringle et al., 2012). The assessment of the structural model is one of the best analytical approaches due to its ability to predict and estimate relationships among the constructs of the research model (Ballestar et al., 2016; Hair et al., 2011; Ringle et al., 2012). The measurement criteria for the structural model is (i) the coefficient of determination (R^2 and f^2 effect size), (ii) predictive relevance (cross-validation redundancy-Q^2, and q^2 effect size), and (iii) path coefficients (β) and the significance (*t*) level (Ballestar et al., 2016; Ringle et al., 2012). However, literature suggest that R^2 and the significance of the path coefficient are the primary evaluation criteria of the structural model (Hair et al., 2011). The following sections discusses the assessment criteria of the structural model.

(i) The coefficient of determination

The coefficient of determination characterises the power of the model to explain and predict the endogenous constructs (Ringle et al., 2012). The empirical test criteria for the coefficient of determination refers to R^2 values and f^2 effect size scores (Ringle et al., 2012). $\mathbf{R^2}$ explains the percentage of variance of the latent endogenous constructs which is the cause of the latent exogenous constructs (Ballestar et al., 2016). The R^2 value of each endogenous latent construct indicates the explanatory power of its exogenous latent construct(s). In PLS, the R^2 value is obtained by running the algorithm procedure. According to Suhartanto (2016), the suggested R^2 values for the endogenous latent constructs in a structural model are 0.67 (substantial), 0.33 (moderate), or 0.19 (weak). In their study, Ballestar et al. (2016) mention that an R^2 value of 0.20 for a particular endogenous latent construct indicates a high value. Hair

et al. (2013), on the other hand, opines that the acceptable level of the R^2 value depends on the research context.

As mentioned above, the effect size is another parameter for the estimation of the coefficient of determination. In fact, effect size (f^2) measures the relevance of each exogenous latent variable to explain their respective endogenous latent variables, hence, it is considered to be complementary to the R^2 (Ballestar et al., 2016). This allows the researcher to evaluate the incremental explanatory power of the independent exogenous latent construct on a dependent endogenous latent construct (Ringle et al., 2012). Hair et al. (2013) suggest that an f^2 of 0.02, 0.15 or 0.35 is a weak, moderate or strong effect respectively. Ringle et al. (2012) on the other hand, have opined that an f^2 of 0.30 and lower is expected. According to Chin (2010), the effect size (f^2) is calculated as:

$$f^2 = \frac{R^2 \text{ (included)} - R^2 \text{ (excluded)}}{1 - R^2 \text{ (included)}}$$

(ii) Predictive relevance

The assessment of predictive relevance refers to the estimation of cross-validated redundancy (Q^2), and q^2 effect size. Both of the measurement criteria are complementary to R^2 and also supplement to the statistical significance of the propositions (Ballestar et al., 2016). Some researchers used PLS-SEM for the predictive purpose of their studies and consider a low R^2 value but do not analyse the predictive relevance of Q^2 which limits the prediction ability of the structural relationship (Hair et al., 2013). Predictive relevance as a measurement tool examines how each exogenous latent variable explains their corresponding endogenous latent variables (Ballestar et al., 2016). Predictive sample reuse technique was developed by Geisser (1975) and Stone (1974), and is also suggested by Chin (2010) to be used for estimating predictive relevance. In PLS, the blindfolding procedure is used to obtain Q^2 values for each construct (Ballestar et al., 2016; Hair et al., 2011, 2013). Ballestar et al. (2016) suggest that an acceptable Q^2 value is ≥ 0.5, which means that exogenous latent constructs have a higher predictive relevance for the endogenous latent constructs. Some literature, on the other hand, recommends $Q^2 \geq 0$ as the accepted value using blindfolding procedure in PLS analysis; which means a value less than 0

indicates the deficit of predictive relevance of the model (Hair et al., 2011, 2013). According to Chin (2010), the cross-validated redundancy (Q^2) is defined as-

$$Q^2 = \frac{\sum_D E_D}{\sum_D O_D}$$

Where D indicates omission distance, E represents the sum of the squares of prediction error, and O defines the mean for prediction.

q^2 effect size also supplements the statistical significance of the relationships between the exogenous and endogenous latent constructs and is used for sound decision making (Fan, 2001). Assessment of the q^2 effect size is applicable when any changes in Q^2 requires an examination of the relative impact of the structural relationship for predicting the indicators of an endogenous latent construct (Ringle et al., 2012). In PLS, the blindfolding procedure is used to measure the q^2 effect size using Q^2 value. Hair et al. (2013) recommend q^2 values of 0.02, 0.15, and 0.35 are weak, moderate and strong degree of predictive relevance of each effect respectively. According to Chin (2010), q^2 effect size can be calculated as:

$$q^2 = \frac{Q^2 \text{ included} - Q^2 \text{ excluded}}{1 - Q^2 \text{ included}}$$

(iii) Path coefficients (β)

Path coefficient in the structural model explains the relationships between the latent variables (Ballestar et al., 2016). The absolute value of the path coefficient explains that 0.1 is a small effect, 0.3 is a medium effect, and a value higher than 0.5 is a large effect in the relationship (Ballestar et al., 2016). A path between two latent variables can take any numeric p-value from 0.000 to 1.000 for defining the significance level of the relationship which is usually defined as *$p < 0.05$, **$p < 0.01$, and ***$p < 0.001$ (Lowry & Gaskin, 2014). In PLS, the bootstrapping procedures results in the value of the path coefficient (β) and its significance (*t*) levels (Ballestar et al., 2016; Hair et al., 2013).

(iv) Nomological validity

Nomological validity refers to the assessment of whether there is any relation between the items of the focal construct and the items of others constructs within the nomological network specified in the research model (MacKenzie et al., 2011). Thus, nomological networks addresses the significance of the relationships between the constructs of interest (Dowling & Orlitzky, 2016; Rutherford & Kuratko, 2016). The measurement of the nomological relationship is important when the research model consists of higher-order constructs (Ringle et al., 2012). For example, if a nomological net is designed with exogenous multidirectional focal constructs having formative indicators, and if it is found that the direct effect on the sub-constructs of the focal construct is higher than the indirect effect, there is a significant direct path that indicates that the hypothesised multidimensional relationship is inconsistent with the data (MacKenzie et al., 2011). In fact, the goal of measuring nomological validity refers to how the immediate neighbourhood constructs (both in the antecedent and/or consequence side) in the structural level are closely related (Chin, 2010; Wetzels et al., 2009). The statistical significance of path coefficient in either side of focal construct defines the degree of the nomological relationship of its indicators (MacKenzie et al., 2011). The significant path relationship indicates that the focal construct is related to the all other constructs specified in the nomological net of the research model, which increases confidence in the validity of the indicators (MacKenzie et al., 2011).

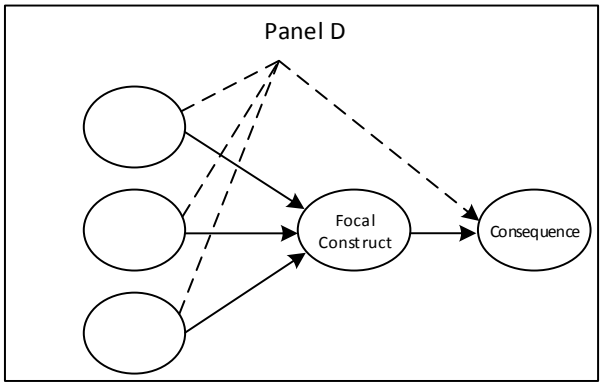


Figure 3-4: Relationship between a multidimensional focal construct.
Source: MacKenzie et al. (2011)

(v) Power analysis

Power analysis leads the researcher to reach a correct conclusion about the null hypothesis as it is argued that high levels of statistical power can estimate the effects of treatments (Murphy, Myors, & Wolach, 2014). In fact, power analysis helps the researcher to accept the alternative hypothesis (H_1) and to reject the null hypothesis (H_0) in order to avoid the risk of Type I and Type II errors (Mazen, Graf, Kellogg, & Hemmasi, 1987). Power is the function of three parameters: (i) sample size (N), (ii) effect size, and (iii) statistical significance level or alpha (α) level (Cohen, 1988; Murphy et al., 2014). Cohen (1988) suggests that a relatively high sample size increases the negligibility of the effect size, while manipulating the treatments. The hypothesised relationship is expected to be adequate when the statistical test of power is more than 0.80 (Cohen, 1988).

3.7 CHAPTER SUMMARY

The chapter aimed to explain a sound methodological approach of this research. This chapter sequentially described each of the steps taken in the study, from the research paradigm to the analysis procedures. To do this, each of the arguments is established with the support of the existing literature. In fact, the in-depth discussion of the methodology has guided the researcher in the remaining tasks of the research.

Chapter 4 FIELD STUDY

4.1 INTRODUCTION

The field study was conducted within close proximity of the study site, with a view to gathering data from the appropriate sample. Respondents from local communities were approached to provide data about their own experiences in ecotourism-related activities. A semi-structured interview schedule was used, which addressed the various constructs of the proposed model to facilitate the interview. The primary purpose of initiating the field study was to identify factors and sub-factors for verifying the proposed research model. In fact, the constructs and variables of the initial research model were borrowed from existing literature, and required conceptualisation and legitimised in the current study's settings.

This chapter outlines the process of the field study followed by the findings of the field study data. Based on this analysis, a model has been developed in the later section of this chapter and a comparison is made between the initial research model and the field study based model. Further review of the literature was also conducted which resulted in the inclusion of all the factors and sub-factors in the final research model that are identified from the field study data. Finally, this chapter concludes by developing a comprehensive research model with the support of field study findings and existing literature.

4.2 FIELD STUDY PROCESS

As this research adopts the mixed-methods approach, the field study was conducted at the first step to obtain qualitative data from the respondents. To facilitate the field study, a semi-structured interview schedule was used. The collected data was then analysed using the NVivo software package. The following sections describe the study's field study process.

4.2.1 **Designing an Interview Schedule**

The semi-structured interview schedule was designed to highlight the key aspects of the initial research model. The interview schedule included socio-demographic variables such as the respondents' age, gender, number of years living in the area, level of education, occupation, period of current occupation, and previous occupation (if any) in its first part. The second part contains questions relating to the respondents' ecotourism-related experience (see Table 4-1). A total of 13 questions were included in this interview schedule. Some variables of the interview schedule were borrowed from the initial model, and others were complementary to the study context (see Appendix B). The first question relates to the respondents' overall understanding of ecotourism. The second question concerns the ecotourism attractions in the study area which is the part of the initial research model. Then there were a few questions relating to ecotourism activities and the parties' involvement in them. The fifth question related to the different motivations of the local community to be involved in ecotourism in the study area which was part of the initial research model. The sixth aspect of the interview schedule concerned the exchange relationship focusing on power, trust and information sharing as the components of exchange formation and maintenance, which was highlighted in the initial research model. The following two questions related to the benefits and costs as the outcome of the exchange relationship that community people perceive. This was also part of the initial research model.

Table 4-1: Pattern of semi-structured interview schedule for field study

Aspect	Question	Description
Ecotourism definition	1	Understanding of ecotourism
Attractions	2	Key attractions in this area for ecotourism
Ecotourism activities	3	Activities related to ecotourism in this area
Parties involved	4	Different parties involved in ecotourism-related activities in this area
Motivation	5	People in this area get involved in ecotourism-related activities
Exchange relationship	6	Issues that are important to facilitate exchange relation between and among the parties involved in ecotourism-related activities
Perceived benefits	7	Local people get benefits from their relation with ecotourism activities
Perceived costs	8	Ecotourism harmful (in any way) to local people
Attitude	9	Local people's attitude towards ecotourism in this area
Intention	10	Willingness to get involved more in ecotourism activities in this area
Participation	11	Participation in ecotourism-related activities at present
Standard of living	12	Local people enjoy additional income and consumption abilities due to ecotourism
Referral	13	Name of any individual or organization who is directly or indirectly involved in ecotourism activities in this area

There were three questions relating to behavioural components including attitude, intention and actual behaviour for the participation of local communities in ecotourism-related activities. These behavioural components were included in the initial model. Question 12 focuses on the ultimate dependent variable of the initial research model which relates to how participation in ecotourism improves the standard of living of the local community. The final question was a referral; the answer of this question helped the interviewer to identify the next participant for the in-depth interview process as the study applied a snowball sampling technique.

4.2.2 Sample Selection

The Sundarbans of Bangladesh was selected as an operational ecotourism site based on the judgment of the researcher and taking into consideration the economic, social and environmental importance of the site. The local residents of the selected ecotourism site who are directly or indirectly related to the ecotourism activities (including small businesses, service providers and local governments) made up the sample of this study. The first interview participant was selected on a random basis; however, all other subsequent interview participants were selected based on the referral from each preceding participant (i.e., the snowball sampling technique). A set of interview kits, including the study objectives, was provided to the participants to guide their understanding prior to the in-depth interview. In the beginning of the interview, each participant was asked to give consent to take part in the interview process. After obtaining voluntary consent from the respondents, the formal interview was conducted, which was recorded using an audio recording device.

4.2.3 Conducting the Interview and Data Collection

Initially, the researcher planned to conduct 20 in-depth interviews; it was later decided to conduct 30 due to the heterogeneous professions of the respondents. However, there was a total of 29 in-depth interviews conducted in the remote area of the selected site. The researcher was happy with the 29 in-depth interviews as data redundancy was ensured at this stage (Guest et al., 2006; Mason, 2010). In fact, data saturation was reached at the 27th interview. For confirmation of the saturation of the data, two more interviews were conducted; no new data was found from the extended interviews. Hence, the number of interviews conducted is considered sufficient as there is no consensus about the rule of thumb of minimum number of interview (sample size) in qualitative study, and in fact, this issue is under controversy (Collins, Onwuegbuzie, & Jiao, 2007). Generally, a small sample size is associated with qualitative study and large samples are linked with quantitative study (Onwuegbuzie & Collins, 2007). Furthermore, some literature suggests that the minimum acceptable sample size is 12 for research conducted using interview methods (Guest et al., 2006; Onwuegbuzie & Collins, 2007).

As mentioned, all of the in-depth interviews were audio recorded with due consent from the participants. The interview length was between 40 minutes and 1 hour and 30 minutes. During the interview, the respondents were asked about their experience and perception on the various components of the antecedents and consequences of the exchange relationships between the parties involved in ecotourism-related activities in the study area.

4.2.4 Qualitative Data Analysis

Following the conclusion of the interviews, the researcher carefully listened to each of the interviews and wrote them down in the participants' own language (Zhou, 2011). Then, all 29 in-depth interviews were transcribed into English for the purpose of data analysis. The reason behind the involvement of the researcher in the data transcribed process was that researcher did not want to lose any theme or meaning of the interview texts (as the researcher and the interview participants' have the same mother tongue). NVivo software was used for content analysis of the interview data. Since this study intends to contextualise the initial model, content analysis was considered more

appropriate than other analytical tools (Siman, Cunha, & Brito, 2016). The analysis was confined to: (i) identifying the factors and sub-factors from each of the in-depth interviews related to the exchange relationship process of ecotourism, and (ii) estimating the relationship between the factors. An open coding method was performed to identify all of the factors and sub-factors (Jeong et al., 2016). There was a total of 85 sub-factors identified under 14 different factors. Each of the sub-factors was found as a "Node" from exploring 'Text Search' command of NVivo and then the related themes of the particular sub-factor were marked under "coded text". In this process, all 85 sub-factors were identified together with their corresponding constructs. Following this, the relationships between the constructs were identified. Figure 4-1 shows the process of analysing the qualitative data.

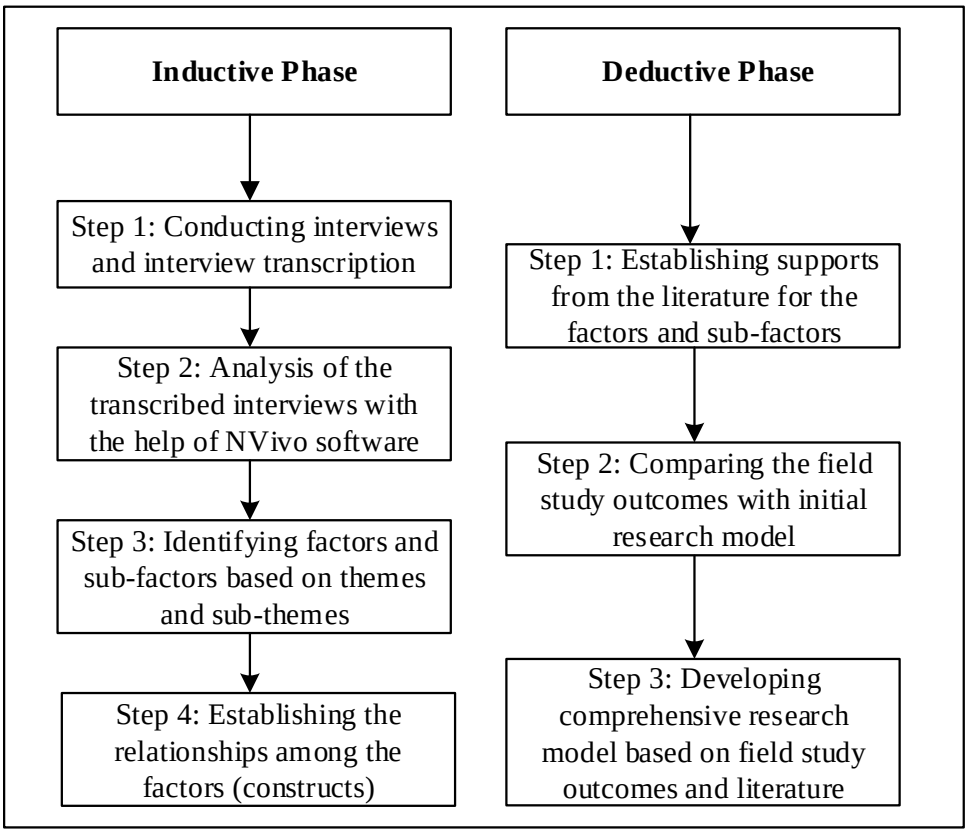


Figure 4-1: Qualitative data analysis process (inductive and deductive models)

4.3 FINDINGS FROM THE FIELD STUDY (Inductive Process)

4.3.1 Socio-demographic Profile of the Interview Participants

The socio-demographic profile of each of the interview participants was taken prior to the audio recording of the interview. Socio-demographic variables of this study addressed participants' age, gender, year of living in this area, level of education, period of current occupation, and the respondents' previous occupation. It was found that 28 out of 29 interview participants were male and most of them were 26 years old and over (28 out of 29). Of the 29 participants, 26 had lived in the area adjacent to the Sundarbans for more than a 10-year period.

25 participants were directly involved in ecotourism-related activities whereas 65% of the total participants had been in their current occupation for more than 10 years. It was also found that approximately 68% of the participants chose ecotourism-related activities as their first career and they were continuing with it, however, 32% of the participants had moved into ecotourism-related professions from their previous occupations. With regards to education, most of the interview participants had only obtained primary level education (48%), and only 20% the participants had undertaken tertiary education. Table 4-2 shows details of the socio-demographic profiles of the participants.

Table 4-2: Socio-demographic profile of the participants

Demographic Profile	Dimensions	Number of Interviewee	Percentage (%)
Age	18-25 yrs	1	3.44
	26-40 yrs	14	48.28
	Avove 40 yrs	14	48.28
	Total	**29**	**100**
Gender	Male	28	96.55
	Female	1	3.45
	Total	**29**	**100**
Year of Living	Below 5 yrs	2	6.9
	5-10 yrs	1	3.45
	Above 10 yrs	26	89.65
	Total	**29**	**100**
Level of Education	Primary	14	48.28
	Secondary	6	20.69
	Higher secondary	3	10.34
	Tertiary	6	20.69
	Total	**29**	**100**
Occupation	Tourism related business	25	86.21
	Others	4	13.79
	Total	**29**	**100**
Period of current occupation	Below 5 Years	5	17.24
	5-10 yrs	5	17.24
	Above 10 yrs	19	65.52
	Total	**29**	**100**
Previous occupation	Day labour	3	10.34
	Farmer	1	3.45
	Fish business	1	3.45
	Grocery shop	1	3.45
	Wood chopper	1	3.45
	Boatman	1	3.45
	Contractor	1	3.45
	No previous occupation	20	68.45
	Total	**29**	**100**

Source: Field study

4.3.2 Identifying Factors and Sub-factors

As mentioned, all of the factors and sub-factors were identified with the 'Text Search" tool of NVivo. The factors and sub-factors identified from the interviews are discussed below.

Attraction of the ecotourism site

The interview data reveals that there were six sub-factors (child nodes) under the main factor (parent node), that is, ecotourism attractions in the study area. These sub-factors are: beautiful landscapes, easy access, ecotourism services, personal safety and security, available visiting spots and the presence of wild animals in the forest. However, wild animals as a key attraction in this forest was overwhelmingly mentioned (see Table 4-3) by all the interview participants (100%). One of the interview participants also mentioned the attraction of the Sundarbans as "The main

attraction of visiting the Sundarbans is to see the forest itself and the wild animals such as tiger, deer, monkey, crocodile and different types of birds" (extracted from Interview 21). The second most significant concern when visiting this forest was the personal safety and security issue. Table 4-3 presents interview details regarding the ecotourism attractions of the study site.

Table 4-3: Ecotourism attraction sub-factors

Parent node	Child nodes	Interview														
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Ecotourism Attraction	Beautiful landscape			X		x		x	x							
	Easy access	x	x		x		x				x	x				x
	Ecotourism services			X		x					x	x	x	x		x
	Personal safety and security	x	x	X		x	x	x	x	x	x			x		x
	Visiting spots	x	x			x	x	x				x	x	x		
	Wild animals	x	x	X	x	x	x	x	x	x	x	x	x	x	x	x
Parent node	**Child nodes**	**Interview**														**%**
		16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**100**
Ecotourism Attraction	Beautiful landscape	x				x		x		x			x		x	34.5
	Easy access		x		x	x	x	x	x	x	x		x	x		58.6
	Ecotourism services	x	x		x		x			x		x				44.8
	Personal safety and security		x	X	x	x	x		x	x	x	x		x	x	75.9
	Visiting spots			X	x	x	x	x	x		x	x				55.2
	Wild animals	x	x	X	x	x	x	x	x	x	x	x	x	x	x	100

Source: Field study

Motivation for ecotourism development

There were six sub-factors (child nodes) found under the motivation of local community for ecotourism development, as the main factor (parent node). The data reveals that local people commonly associated with ecotourism development due to its ability to increase international understanding of the area, protect natural environment, acquire new knowledge, engage in a novel profession, build partnerships between locals and outsiders (tourists), and improve socio-economic conditions. All of these aspects inspire local people to take part in ecotourism-related activities. One of the participants expressed his views for being with ecotourism as: "personally I feel it is a novelty profession providing guide service. I am doing for the sake of my country and the Sundarbans as well" (quoted from Interview- 26).Table 4-4 presents details of the interview output of various sub-factors relating to the motivation of the local community in ecotourism development.

Table 4-4:Sub-factors of motivation for ecotourism development

Parent node	Child nodes	Interview														
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Motivation for ecotourism development	International understanding	x				x	x				x	x		x		x
	Natural environment undamaged				x	x		x	x	x	x	x	x	x	x	x
	New knowledge		x	X		x	x		x	x	x					
	Novel profession	x	x	x		x		x			x	x	x			x
	Partnership					x			x			x				
	Socio-economic condition		x						x	x	x					

Parent node	Child nodes	Interview														%
		16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**100**
Motivation for ecotourism development	International understanding					x					x			x		34.5
	Natural environment undamaged		x						x	x	x		x			55.2
	New knowledge								x			x		x	x	37.9
	Novel profession				x		x		x			x			x	48.3
	Partnership		x						x							17.2
	Socio-economic condition								x			x				20.7

Source: Field study

Exchange relationship

The interview was conducted based on power, trust, and information sharing as the components of the exchange relationship between the parties. The interview data reveals six sub-factors of the power variable which are: cooperativeness, getting favours from others, obtaining good advice, mutual assistance, quality of advice, and withdrawal from the relationship. When interview participants were asked about the trust in their relationship, they focused on the factors of: believing information, even-handed negotiation, honesty, keeping promises, ability to trust people, reliable relationships and taking care of one another. Data related to information sharing mainly concerned customised information, confidence in sharing information with others, sharing information in detail, finding information sharing helpful, learning new things, and timely information sharing. All of these components of the exchange relationship are presented in Table 4-5.

Table 4-5: Components of exchange relationship and their sub-factors

Parent node	Child nodes	Interview														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Power	Cooperativeness	x				x	X		x		x	x		x	x	x
	Getting favour	x												x		
	Getting good advice		x				X		x		x	x	x	x		x
	Mutual assistance	x	x							x	x	x		x		
	Quality of advice					x					x	x		x		x
	Withdrawal of relationship					x			x				x	x		

Parent node	Child nodes	Interview														%
		16	17	18	19	20	21	22	23	24	25	26	27	28	29	100
Power	Cooperativeness	x	x	x	X	x			x	x	x	x	x	x	x	72.4
	Getting favour							x						x		13.8
	Getting good advice					x		x	x			x			x	44.8
	Mutual assistance			x		x	x	x	x					x	x	44.8
	Quality of advice	x		x		x	x	x	x	x	x	x			x	51.7
	Withdrawal of relationship		x	x												20.7

Parent node	Child nodes	Interview														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Trust	Believe in the information		x			x	x	x	x		x					
	Even-handed in negotiation								x		x	x	x	x		
	Honesty	x		x			x		x		x				x	
	Keeping promises								x					x		x
	Not difficult to trust people	x	x			x		x	x	x		x				
	Reliable relations										x	x				x
	Take care	x			X		x		x	x	x	x		x	x	

Parent node	Child nodes	Interview														%
		16	17	18	19	20	21	22	23	24	25	26	27	28	29	100
Trust	Believe in the information											x		x		27.6
	Even-handed in negotiation														x	20.7
	Honesty				X	x		x	x				x	x	x	44.8
	Keeping promises	x	x	x		x		x	x	x		x		x	x	44.8
	Not difficult to trust people		x					x	x							34.5
	Reliable relations		x		X										x	20.7
	Take care					x	x	x			x	x				48.3

Parent node	Child nodes	Interview														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Information sharing	Customized information			x			x			x		x		x	x	x
	Feel good to sharing			x		x			x	x		x	x			
	Sharing in details			x		x	x			x		x	x	x		
	Helpful		x	x	X				x			x	x	x		
	Learn many things	x	x						x			x		x		
	Timely			x		x	x		x	x					x	x

Parent node	Child nodes	Interview														%
		16	17	18	19	20	21	22	23	24	25	26	27	28	29	100
Information sharing	Customized information			x	X	x	x	x			x	x		x		51.7
	Feel good to sharing		x		X					x	x		x			37.9
	Sharing in details				X					x	x	x			x	41.4
	Helpful							x		x	x				x	37.9
	Learn many things					x	x		x			x	x			34.5
	Timely		x	x			x			x	x		x	x		48.3

Source: Field study

Perceived benefits

The interview data reveals that there were seven variables (sub-factors) for measuring the perceived benefits from the exchange relationship. They were associated with local infrastructure, community benefits in general, community spirit and image, employment opportunities, environmental preservation, sources of government revenue, and increased business opportunity. Among all the variables, most of the participants focused employment opportunities (82.8%) and sources of government revenue (79.3%) as the main benefits from ecotourism. One of the participants explained the benefits of ecotourism in this area as: "We get benefits from the Sundarbans. We are dependent on it, it gives us income and employment opportunity for huge population. Our family even earlier generations were dependent on the Sundarbans" (quoted from Interview- 22). Another participant added that: "Due to ecotourism in this area, local people are now getting employment opportunity for example, people are engaged in transportation (e.g., troller, small boat, etc.)" (Quoted from Interview- 10). However, there were reverse opinions found from the analysis of interview data about the benefits of ecotourism. One of the participants mentioned that "Local people do not get significant benefit from this relationship with tourists. They come by boat in the river and go back. There is no such scope to increase employment opportunity due to them" (quoted from Interview- 02). From this perspective, it can be seen that a very little number of tourists visit the local villages during their trip to the Sundarbans. However, data from other interviews support the view that a good number of tourists visit local villages. Table 4-6 outlines the different types of benefits associated with ecotourism in the area.

Table 4-6: Perceived benefits of exchange relationship in ecotourism

Parent node	Child nodes	Interview														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Perceived benefits	Better infrastructure		x	x					x			x				x
	Community benefits in general		x	x			x	x	x		x		x	x		x
	Community spirit and image						x				x	x	x	x		x
	Employment opportunities	x	x			x	x	x	x	x	x	x		x		x
	Environmental preservation			x							x	x	x	x		x
	Government revenue		x	x	x	x	x	x	x	x		x	x	x		
	More business opportunities	x							x					x		

Parent node	Child nodes	Interview														%
		16	17	18	19	20	21	22	23	24	25	26	27	28	29	100
Perceived benefits	Better infrastructure	x	x	x					x		x	x		x		41.4
	Community benefits in general		x	x			x	x	x			x		x	x	58.6
	Community spirit and image								x		x	x	x	x		37.9
	Employment opportunities	x	x	x	x		x	x	x	x	x	x	x	x	x	82.8
	Environmental preservation												x			24.1
	Government revenue	x	x	x		x	x	x	x	x	x		x	x	x	79.3
	More business opportunities													x		13.8

Source: Field study

Perceived costs

In contrast to the benefits of ecotourism, the local community also experiences disadvantageous costs from ecotourism in the Sundarbans that affects their regular way of life. The interview data reveals that local people are concerned about how the exchange relationship causes some costs to their livelihood. Different types of costs are drawn to their attention such as the cost of living, crime rates in this area, the exploitation of local people from ecotourism activities, the price of land and property, the price of others goods and services, and changes in the overall way of life. However, most participants focuses their concerns about increasing crime rate in their area due to ecotourism. One of the participants stated that "as compare to other regions of Bangladesh, the crime rate is less in this area. Crime was highly increased in the past because there were many pirates based on the Sundarbans" (quoted from Interview-11). Table 4-7 presents the interview findings about the perceived costs of ecotourism for the local community.

Table 4-7: Perceived costs of exchange relationship in ecotourism

Parent node	Child nodes	Interview														
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Perceived costs	Cost of living	x									x	x	x			
	Crime rate	x		x				x		x	x	x	x	x	x	x
	Exploitation				x											
	Prices of land and property	x	x	x			x			x				x		
	Prices of other goods and services	x	x	x			x	x			x		x	x	x	
	Way of life		x	x								x		x		

Parent node	Child nodes	Interview														%
		16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**100**
Perceived costs	Cost of living	x			x	x		x	x	x	x	x	x		x	48.3
	Crime rate			x	x	x	x	x	x		x	x	x		x	69.0
	Exploitation				x			x					x			13.8
	Prices of land and property		x		x			x	x		x		x			41.4
	Prices of other goods and services		x	x	x	x	x		x		x					55.2
	Way of life														x	17.2

Source: Field study

Community's attitudes towards participation in ecotourism

On the basis of evaluating the perceived benefits and the perceived costs from ecotourism, local people develop different attitudes towards ecotourism. Generally, local people demonstrated a positive attitude towards ecotourism during the interview. The data reveals that ecotourism is enjoyable, pleasant, has a foreseeable future, provides great promise for them, has substantially beneficial effects, and offers worthwhile employment opportunities for the local community. Around half of the participants (48.3%) were happy with the ecotourism activities in their area. From the interview data, an interesting comment was extracted: "We feel pleasant due to tourists' arrival because they are educated person, we love to talk with them. We can learn about how to keep clean. If we can maintain family with clean atmosphere we feel good. We feel pleasant in our mind for that" (quoted from Interview-02). Table 4-8 presents the interview outcomes regarding the attitudes of the local community towards ecotourism.

Table 4-8: Attitudes of local community towards ecotourism

Parent node	Child nodes	Interview														
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Community attitude	Enjoyable							x						x		x
	Feel pleasant	X	x	x					x		x	x	x	x	x	x
	Foreseeable future						x			x			x			x
	Great promise			x						x			x			
	Outweigh the negative impacts		x		x					x	x	x	x	x	x	
	Worthwhile employment			x									x	x		x
Parent node	**Child nodes**	**Interview**														**%**
		16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**100**
Community attitude	Enjoyable							x		x	x		x			24.1
	Feel pleasant				x			x		x	x					48.3
	Foreseeable future									x		x				20.7
	Great promise		x							x						17.2
	Outweigh the negative impacts															27.6
	Worthwhile employment								x			x				20.7

Source: Field study

Community's intention towards participation in ecotourism

The interview was used to learn about the intentions of local people to participate in more ecotourism-related activities in the future. As shown by the data, local people have a positive intention to participate more in ecotourism as it benefits their livelihood. The data reveals that the local people intended to attend, to contribute, to expect, to try and to want to participate in various ecotourism-related activities in the future. One of the participants expressed his intention as: "I want to follow any planning for ecotourism in future. I want to stop people from illegally cutting plants in the forest and stop people from doing poisoning into the canal water which causes destroying breeding for the fishes" (quoted from Interview- 23). Table 4-9 presents the interview outcomes regarding the intention of local people towards ecotourism.

Table 4-9: Attitudes of local community towards ecotourism

Parent node	Child nodes	Interview														
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Community intention	Intend to										x					
	To attend										x			x		
	Contribute to															
	Expect to			x												
	Try to							x	x					x		
	Want to			x					x						x	
Parent node	**Child nodes**	**Interview**														**%**
		16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**100**
Community intention	Intend to			x										x		10.3
	To attend		x					x		x	x	x		x	x	31.0
	Contribute to			x			x									6.9
	Expect to									x				x		10.3
	Try to		x	x				x			x			x	x	31.0
	Want to			x		x	x	x	x	x	x	x	x	x	x	48.3

Source: Field study

Community's participation in ecotourism

It was also found that the local community has different forms of participation in ecotourism. The data reveals that community people participated in ecotourism-related planning, decision making, employment, making and selling ecotourism-related goods and services, ownership and management of ecotourism ventures, and overall conservation of the ecotourism sites. Most of the participants (37.9%) spoke about their participation in the conservation of ecotourism sites, which indicates that local people are well aware of the environmental impact of this forest on their livelihood and therefore, they are motivated to save the forest. One of the participants explained his roles for the conservation of this site as: "I am not directly participated in any activities with the Sundarbans. However, I do participate in the conservation of the forest. For example, if someone collects any plant from the Sundarbans, I do protest [against] it" (quoted from Interview- 18). Table 4-10 presents the interview results regarding the participation of local people in ecotourism.

Table 4-10: Community's participation in ecotourism

Parent node	Child nodes	Interview														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Community participation	Decision making			x						x			x			
	Ecotourism planning			x			x		x				x			
	Ecotourism-related employment								x			x				
	Making and selling goods and services		x							x	x					
	Ownership and management			x		x			x	x	x			x		
	Participation in conservation			x							x		x	x	x	x
Parent node	**Child nodes**	**Interview**														**%**
		16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**100**
Community participation	Decision making							x		x				x		20.7
	Ecotourism planning							x	x			x		x		27.6
	Ecotourism-related employment					x										10.3
	Making and selling goods and services															10.3
	Ownership and management							x					x		x	31.0
	Participation in conservation			x					x			x	x	x		37.9

Source: Field study

Improved standard of living due to ecotourism

The interview participants also addressed how their participation in ecotourism improves their standard of living. The participants highlighted some of the important factors for this, including: access to better health services, access to clean water, access to electricity, access to the public transportation, higher household income, increased standard of education, and average standard of living. These variables are different from the measures of standard of living that are widely applied in Economics (Bérenger & Verdier-Chouchane, 2007), however the local people in this area felt that those variables affected their living standard and way of life in this area. Existing literature also advocates for those indicators in measuring standard of living (see Table 4-16). However, the interview data reveals that this area is lacking in fresh drinking water because of its close proximity to the sea. Similarly, it is an extremely remote area of the country, therefore, transport, electricity, health, and education facilities are still largely inadequate to meet the needs of the community. If the community had access to these facilities, they would feel as though they have a better life, which indicates an improved standard of living for them. In this particular factor, the participants' average response rate is higher. Table 4-11 shows the interview outcomes which illustrates that most of the participants (69%) believe that their average standard of living is improved as a result of ecotourism. One of the participants opined that:

"To me, the standard of living is getting much better because the businesses have been increasing due to increasing trend of tourists visit in this area" (quoted from Interview-05). Another participant disagreed with the increasing standard of living due to ecotourism stating: "The standard of living is remained normal in this area. There is not much improvement due to ecotourism" (quoted from Interview 26).

Table 4-11: Improved standard of living due to ecotourism

Parent node	Child nodes	Interview														
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Improved standard of living	Access to better health services	x	x	x		x				X	x			x		x
	Access to clean water	x	x	x		x	x		x		x			x		x
	Access to the electricity	x	x	x	x	x	x		x	x	x	x		x	x	x
	Access to the public transportation		x	x		x	x		x			x				x
	Average standard of living	x		x		x		x	x			x		x	x	x
	Household income	x					x		x	x	x	x			x	
	Standard of education			x		x			x	x	x	x	x	x		x
Parent node	**Child nodes**	**Interview**														**%**
		16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**100**
Improved standard of living	Access to better health services	x			x	x		x	x					x	x	51.7
	Access to clean water															31.0
	Access to the electricity		x	x				x	x				x	x		65.5
	Access to the public transportation		x	x									x	x		37.9
	Average standard of living	x		x		x	x	x	x		x	x	x	x	x	69.0
	Household income		x	x					x	x	x		x	x	x	51.7
	Standard of education	x	x			x	x	x	x		x		x	x	x	65.5

Source: Field study

Corruption

Corruption was not a part of the interview schedule however the interview participants spoke of various aspects of corruption by government appointed officials in this forest and the pirate groups who exist in the forest. The most common factors related to corruption were: bribery practices, taking enticement, illegal resource removal, kidnaping, taking ransom, and torture by the pirate groups. Tour operators and local people who are involved in fishing and honey collection are significantly affected by those corruption-related activities. One of the participants mentioned that: "Foresters allow poisoning in the canal with taking bribe. As a result, the fish eggs and small fishes are destroyed from the canals" (quoted from Interview- 03). Table 4-12 outlines the interview results regarding the various components of corruption that the local

people experience. These corruption activities have a negative effect on tour operators as well as local people who depend on the forest as a source of income. Another significant consideration is that this type of corruption allows the illegal removal of forest resources such as extraction of forest plants and poisoning of water for illegal fishing which has a severe environmental impact.

Table 4-12: Corruption activities

Parent node	Child nodes	Interview														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Corruption	Bribery practices			x	x					x						
	Enticements			x					x							
	Illegal resource removal	x	x	x			x					x				
	Kidnaping	x				x			x							
	Ransom	x	x		x			x		x					x	
	Torture															

Parent node	Child nodes	Interview														%
		16	17	18	19	20	21	22	23	24	25	26	27	28	29	100
Corruption	Bribery practices			x												13.8
	Enticements	x		x									x		x	20.7
	Illegal resource removal								x						x	24.1
	Kidnaps						x				x		x			20.7
	Ransom					x	x						x			31.0
	Torture				x		x						x			10.3

Source: Field study

Government policy

Government policy is another factor for ecotourism development in the study area which was explored by the interview participants and was not part of the semi-structured interview schedule. However, there was only a small response rate for this factor which indicates that the interview participants are not aware of the importance of government policy for the development of ecotourism in their area. The poor perception of locals about the role government policy can be correlated to the poor education level in this area.

A small number of the participants also mentioned the components of government policy that could facilitate ecotourism development in the study area such as, caring and maintenance of local interests, the provision of guidelines and training, infrastructural development, overall ecotourism development, public awareness building programs, and improving security systems. One of the respondents mentioned that: “There are some developments in connection with the pure water supply, health services, etc. due to ecotourism development in this area” (quoted from Interview- 19). However, another respondent provided a different opinion commenting that:

"Although it is not because of ecotourism, but government has taken some initiatives for electricity, health and education" (quoted from Interview- 05). Table 4-13 shows the interview outcomes regarding government policy.

Table 4-13: Government policy

Parent node	Child nodes	Interview														
		1	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**
Government policy	Caring & maintenance of local interest															
	Guidelines and training				x	x										
	Infrastructural development															
	Overall ecotourism development		x													x
	Public awareness building programs															
	Security system												x			
Parent node	**Child nodes**	**Interview**														**%**
		16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**100**
Government policy	Caring & maintenance of local interest	x														3.4
	Guidelines and training				x						x	x				17.2
	Infrastructural development			x				x				x			x	13.8
	Overall ecotourism development				x						x				x	17.2
	Public awareness building programs				x											3.4
	Security system		x													6.9

Source: Field study

Political instability

Political instability is another important factor associated with the expansion of ecotourism in the study area. Interview participants added this issue while talking about their businesses by stating that political issues were negatively affecting their businesses. It is noteworthy to mention that, during the data collection (in 2015) and the preceding few years, the study site (Bangladesh) was particularly politically vulnerable. The specific factors that affect the tourism industry in general are: blockade by the movement groups, conflict among the political parties, government stability, and frequent hartal and strike. Table 4-14 shows the interview outcomes regarding political instability, however, the overall response rate was poor in this area. A possible reason for this is the fact that people are highly disappointed with the political violence at that time and were not particularly interested in talking about it.

Table 4-14: Political instability

Parent node	Child nodes	Interview														
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Political instability	Blockade by movement groups															
	Conflict among political parties					x						x				x
	Government stability															
	Hartal and strike													x		
Parent node	**Child nodes**	**Interview**														**%**
		16	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**100**
Political instability	Blockade by movement groups									x	x					6.9
	Conflict among political parties															10.3
	Government stability			X		x										6.9
	Hartal and strike					x					x					10.3

Source: Field study

4.3.3 **Identifying the Relationships between the Factors**

From the analysis of the interview data, it was found that tourists visit this forest due to its attractions and availability of tourism services provided by local people. As a result, there was a form of an exchange relationship developed between the parties. Hence, attractions of this ecotourism site leads to the exchange relationship. One of the interviewees expressed his opinion as "Ecotourism attractions in fact have been developing relationship between the people of different areas, even between the countries. Because our identity is 'we have Sundarbans'. So people from different countries come to visit it with interest." (Quoted from interview 06). Similarly, the local people provide tourism services with certain motives. These motives are related to economic, social and psychological aspects (Ruskin, Seymour, & Webster, 2016). As a result of these motives, they become involved in offering tourism supplies which again facilitates the exchange relationship between the parties. Hence, it can be said that motivation leads to exchange relations.

The local people posit that such exchange relationship generates benefits for them in relation to employment, business creation, and infrastructural development. As quoted from interview 02, "We are mutually dependent because we have self-confidence to them. We will get money from them. We are coming to the forest depending on to them with the view that they will provide us benefits and facilities." On the other hand, local people also perceive some costs from these exchange relationships, for example, increasing costs of land, property and other goods, increased criminal activity and

changes in their traditional way of life. Therefore, the exchange relationship leads to further costs for local people. From the analysis of the interview data, it was found that local people can form certain attitudes towards ecotourism in this area by evaluating its benefits and costs. Therefore, the perceived benefits of ecotourism have an influence on their attitudes. One of the interview participants mentioned in this connection as "Regarding attitudes towards ecotourism, it is difficult to say what people bear in their mind. But I take it positively. Because Sundarbans in our area enhance the prestige and image to the outside world. We think about how we can make it more attractive and gorgeous. This will be good for the country. This will increase the employment opportunity. Its benefits outweigh the disadvantages." (Quoted from interview 10). Similarly, the perceived costs of ecotourism have an influence on their attitude. The positive attitude of the local community towards ecotourism leads to their intention to participate in ecotourism; which means that if local people find more benefits from ecotourism they will participate more in ecotourism in the future. Hence, intention leads to the actual participation of local people in ecotourism. The data also reveals that, due to active participation in different ecotourism-related activities, local people have more income opportunities, which increases their ability to consume more commodities such as transports, health, and education that are related to the standard of living (Bérenger & Verdier-Chouchane, 2007). As mentioned in the interview 21, "The standard of living of the people in this area has been developed due to ecotourism. Local people are now able to get facility for engine troller which save their time in Sundarbans. The problem of drinking water is still in here. However, we arrange drinking water for the tourists. Company are providing facility for training on ecotourism for their staffs. So they are providing better guides to the tourists. We who are earning from this sector can send our children for education. So this area has now developed. Thus, it was found that community participation in ecotourism leads to an improved standard of living.

From the analysis of interview data, it was also found that community attitudes are also affected by corruption in the study area, political instability, and overall government policy. One of the interview participants opined as "Pirates create problem. They torture us and grasp our money. They kidnap us and take ransom from us." (Quoted from interview 27. Furthermore, the interview data reveals that the perceived benefits and costs of ecotourism are directly linked to an improved standard of living. Perceived benefits have a positive influence on improved standard of living;

similarly perceived costs also have a positive influence on improved standard of living. Interview participants also pointed out that ecotourism itself generates more income opportunities for them, which increase their ability to spend more money on facilities such as transport, electricity, education, and health. Table 4-15 presents details of the relationships identified from the interview data.

Table 4-15: Relationships between the factors

Relationship dimensions	Interview																												%
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	100
Attr → ExR					x	x		x	x	x		x	x	x											x	x				34.5
Attr→ ExR → PB										x	x	x											x							13.8
Mot → ExR			x						x			x									x					x				17.3
Mot→ExR→ PB							x																							3.4
ExR → PB		x			x					x	x		x		x			x	x			x			x	x				37.9
ExR → PC		x			x														x	x						x				17.3
ExR→ PB→CAtti		x							x																					6.9
PB → CAtti										x	x	x			x				x				x			x				20.7
PB → ISLE					x											x		x												10.3
PC → CAtti											x				x						x		x							13.8
PC → ISLE	x		x											x				x										x		17.2
CAtti → CInt		x			x																x					x	x			17.3
CInt → CPart																x														3.4
CPart → ISLE					x								x	x						x	x		x		x	x		x		27.6
Cor → CAtti		x	x	x				x	x							x		x							x		x		x	34.5
Cor→CAtti→CPart								x																						3.4
PIns → CAtti															x															3.4
PIns→CAtti→ CPart																				x				x	x					10.3
GP → CAtti				x												x		x		x										13.4

Source: Field study

4.3.4 Developing a Model Based on the Field Study Findings

Once the content analysis was complete, the identified themes and sub-themes were extracted for the purpose of matching them with the most suitable factors and sub-factors. A total of 14 factors were identified, with 85 sub-factors (mentioned in Table 4-3 to Table 4-14). All identified sub-factors were placed under 14 factors containing four to seven sub-factors within each factor. Among all fourteen factors, two were antecedent factors, three were measurement factors, three were influencing factors and the remaining six were consequence and outcome factors.

The next step of the qualitative data analysis focused on linking the factors with the view to identifying relationships among them, followed by the development of a field study model (see Figure 4-2). The field study data supports all of the links of the initial conceptual model (see Table 4-15). In addition, some new links and factors were consulted in the field study model. The interview participants mentioned that the perceived benefits and costs can directly influence their standard of living. So, two new links were established from perceived benefits to improved standard of living due to ecotourism and perceived costs to improved standard of living due to ecotourism respectively. Interview participants also mentioned that corruption related factors themselves, and together with government policy related factors and political instability factors, influence the attitudes of the local community to their participation in ecotourism. Based on all of the factors from the field interview data, a model was developed. This model established the dimensionalities of the constructs that were valid and reliable from both theoretical and contextual standpoints.

In this study, questionnaire was prepared in participants' native language where local dialects were included. Participants were also given opportunity to raise any questions for further clarification where any ambiguity arises. In this way, researcher ensured validity of qualitative survey data. In addition, the usage of common method with audio recording system in data collection can ensure the validity of data in this study (Roberts, Priest, & Traynor, 2006). This study followed content analysis technique using 'codes' to describe data which increases the reliability particularly when using computerised data analysis packages, such as NVivo (Roberts et al., 2006).Thus, the findings of the current study are reliable and as such repeatable in similar other conditions.

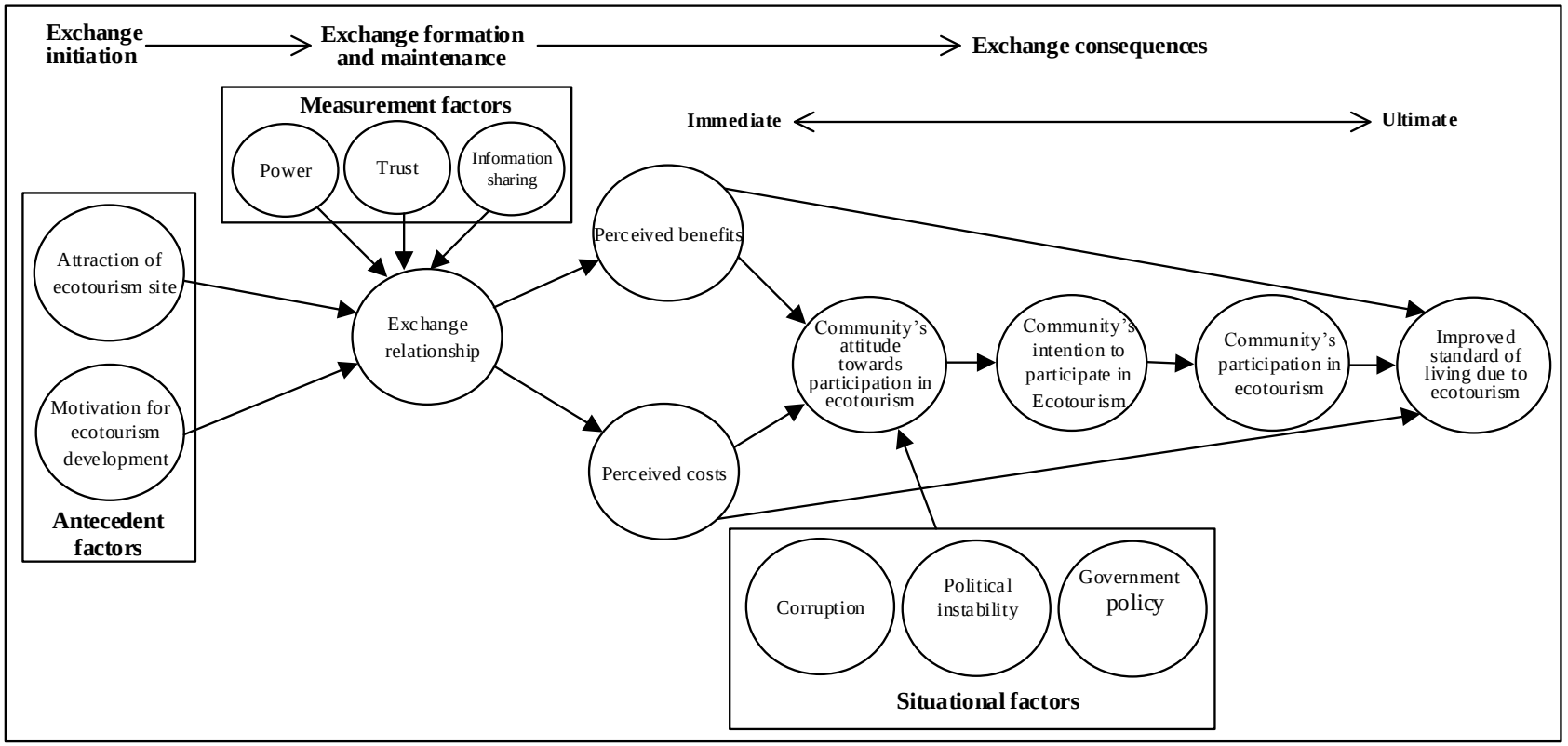


Figure 4-2: Field study model

4.4 COMPARING THE FIELD STUDY-BASED MODEL WITH INITIAL (CONCEPTUAL) MODEL (Deductive Process)

A comparative analysis of the field study-based model and initial model was explored in this stage. Initially, all of the indicators identified from the field study data was assessed based on the constructs used in the conceptual model. All of the indicators were found suitably attached with their explained construct in the conceptual model. Thus, a further step was taken in line with comparing the dimensionalities and the relationships of the constructs. At this stage, the relationships and links (from and to) of the constructs (factors) were assessed. It was observed that established links of the initial model were ideally supported by the interview data. Hence, no constructs were deleted at this stage. In addition, the interview participants indicated some new relationship directions that are discussed with reference to the existing literature (see Section 5.2.6 and Section 5.2.7). Furthermore, the interview participants elevated the scope of the study area, addressing some new factors (see Figure 4-2) that were included in the research model. However, the inclusion of new constructs in the comprehensive research model must have strong theoretical support, as this study model contextualises the concept of social exchange theory and the theory of planned behaviour. Furthermore, based on the single study findings, the inclusion of a new variable in the research model may limit the applicability of the model.

4.5 SUPPORTING THE FACTORS AND SUB-FACTORS WITH THE LITERATURE

The factors and sub-factors identified from field study are justified by the existing literature. The justification process was performed in two stages: (i) by supporting the constructs and dimensions of the conceptual model with the factors and sub-factors found from the interview data; and (ii) by supporting the new factors and sub-factors within the existing literature (i.e., additional literature need to be consulted). In a similar vein, the links and dimensionalities have been established. This entire process results in the justification of the comprehensive research model. Table 4-16 provides

evidence from the literature concerning the inclusion of the indicators into their corresponding constructs.

Table 4-16: Supporting factors and sub-factors

Variables (indicators)	Percentage	Sources	Variables (indicators)	Percentage	Sources
Attraction of ecotourism site (Attr)			**Motivation for ecotourism development (Mot)**		
Beautiful landscape	34.5	(Kim, 2014)	International understanding	34.5	(Ap, 1992)
Easy accessible	58.6	(Kim, 2014)	Natural environment undamaged	55.2	(Ap, 1992)
Ecotourism-related services	44.8	(Weidenfeld & Leask, 2013)	New knowledge	37.9	(Kim, 2014)
Personal safety and security	75.9	(Jang & Cai, 2002; Kim, 2014; Lee et al., 2010)	Novel profession	48.3	(Kim, 2014)
Visiting spots	55.2	(Kim, 2014; Leask, 2010; Lee et al., 2010)	Partnership	17.2	(Nault & Stapleton, 2011)
Presence of wild animals	100	(Connell et al., 2015; Weidenfeld & Leask, 2013)	Socio-economic condition	20.7	(Ap, 1992)
Power (Po)			**Trust (Tr)**		
Cooperativeness	72.4	(Frazier, 1983b)	Believe in the information	27.6	(Jain et al., 2014)
Getting favour	13.8	(Brown et al., 1996; Zhao et al., 2008)	Even-handed in negotiation	20.7	(Zaheer et al., 1998)
Getting good advice	44.8	(Zhao et al., 2008)	Honesty	44.8	(Jain et al., 2014)
Mutual assistance	44.8	(Frazier, 1983b)	Keeping promises	44.8	(Jain et al., 2014)
Quality of advice	51.7	(Frazier, 1983b)	Not difficult to trust people	34.5	(Lee & Turban, 2001)
Withdrawal of relationship	20.7	(Jain et al., 2014)	Reliable relations	20.7	(Garbarino & Johnson, 1999)
Information sharing (InfoS)			Take care	48.3	(Caceres & Paparoidamis, 2007)
Customized information	51.7	(Kembro & Näslund, 2014)	**Perceived benefits (PB)**		
Feel good to sharing	37.9	(Paridon et al., 2006)	Better infrastructure	41.4	(Nunkoo & Ramkissoon, 2011, 2012)
Sharing in details	41.4	(Carr & Kaynak, 2007; Kembro & Näslund, 2014)	Community benefits in general	58.6	(Lee et al., 2010)
Helpful	37.9	(Cheng, 2011)	Community spirit and image	37.9	(McGehee & Andereck, 2004)
Learn many things	34.5	(Mills et al., 2014)	Employment opportunities	82.8	(Gursoy & Rutherford, 2004; Nunkoo & Ramkissoon, 2011, 2012)
Timely	48.3	(Carr & Kaynak, 2007; Kembro & Näslund, 2014)	Environmental preservation	24.1	(Nault & Stapleton, 2011; Nunkoo & Ramkissoon, 2011, 2012)
Perceived costs (PC)			Government revenue	79.3	(Gursoy & Rutherford, 2004; McGehee & Andereck, 2004)
Cost of living	48.3	(Lee et al., 2010; McGehee & Andereck, 2004)	More business opportunities	13.8	(Gursoy & Rutherford, 2004; Nunkoo & Ramkissoon, 2011)
Crime rate	69.0	(Gursoy et al., 2002; Gursoy & Rutherford, 2004; Nunkoo & Ramkissoon, 2012)	**Community's attitude towards participation in ecotourism (CAtti)**		

Exploitation	13.8	(McGehee & Andereck, 2004)	Enjoyable	24.1	(Lu et al., 2014)
Prices of land and property	41.4	(Nunkoo & Ramkissoon, 2011, 2012)	Feel pleasant	48.3	(Andereck & Vogt, 2000; McCool & Martin, 1994)
Prices of other goods and services	55.2	(Gursoy & Rutherford, 2004; Nunkoo & Ramkissoon, 2011, 2012; Pizam, 1978)	Foreseeable future	20.7	(Andereck & Vogt, 2000; McCool & Martin, 1994)
Way of life	17.2	(McGehee & Andereck, 2004)	Great promise	17.2	(Andereck & Vogt, 2000; Hsu et al., 2009; McCool & Martin, 1994)
Community's intention to participate in ecotourism (CInt)			Outweigh the negative impacts	27.6	(Hsu et al., 2009; Lu et al., 2014)
To intend	10.3	(Lam & Hsu, 2006)	Worthwhile employment	20.7	(Hsu et al., 2009; Lu et al., 2014)
To attend	31.0	(Garbarino & Johnson, 1999)	**Community's participation in ecotourism (CPart)**		
To contribute	6.9	(Garbarino & Johnson, 1999)	Decision making	20.7	(Scheyvens, 1999)
To expect	10.3	(Singh et al., 2014)	Ecotourism planning	27.6	(Lai & Nepal, 2006; Stronza & Gordillo, 2008)
To try	31.0	(Al-Rafee & Dashti, 2012)	Ecotourism-related employment	10.3	(Lai & Nepal, 2006; Ramos & Prideaux, 2014)
To want	48.3	(Lam & Hsu, 2006)	Making and selling goods and services	10.3	(Ramos & Prideaux, 2014)
Improved standard of living due to ecotourism (ISLE)			Ownership and management	31.0	(Stronza & Gordillo, 2008)
Access to better health services	51.7	(Bérenger & Verdier-Chouchane, 2007)	Participation in conservation	37.9	(Lai & Nepal, 2006; Stronza & Gordillo, 2008)
Access to clean water	31.0	(Montgomery et al., 2000)	**Corruption (Cor)**		
Access to the electricity	65.5	(Montgomery et al., 2000)	Bribery practices	13.8	(Lawler & Hipp, 2010; León, Arana, & de León, 2013)
Access to the public transportation	37.9	(Skantze et al., 1992)	Enticements	20.7	(Lawler & Hipp, 2010)
Average standard of living	69.0	(Belisle & Hoy, 1980)	Illegal resource removal	24.1	(Karki & Hubacek, 2015)
Household income	51.7	(Ringen, 1991)	Kidnaping	20.7	-
Standard of education	65.5	(Bérenger & Verdier-Chouchane, 2007)	Ransom	31.0	-
Political instability (PIns)			Torture	10.3	-
Blockade by movement groups	6.9	-	**Government policy (GP)**		
Conflict among political parties	10.3	(Yap & Saha, 2013)	Caring & maintenance of local interest	3.4	(Wan, Shen, & Yu, 2014)
Government stability	6.9	(Yap & Saha, 2013)	Guidelines and training	17.2	(Wan et al., 2014)
Hartal and strike	10.3	-	Infrastructural development	13.8	(Nunkoo & Smith, 2013; Wan et al., 2014)
Religion in politics	-	(Yap & Saha, 2013)	Overall ecotourism development	17.2	(Wan et al., 2014)
			Public awareness building programs	3.4	(Wan et al., 2014)
			Security system	6.9	-

4.6 DEVELOPING A COMPREHENSIVE RESEARCH MODEL

As mentioned above, additional information was extracted from the field study data which signifies the need to change the initial (conception) model. With a view to incorporating the field study findings in the comprehensive research model, further analysis was conducted to match the interview data with the literature (see Table 4-16). Most of the factors and sub-factors identified from field study data were supported by the existing literature. In addition, two new relationship links were established in the comprehensive research model (for details, see Sections 5.2.6 and 5.2.7). However, the additional factors (i.e., corruption, political instability and government policy) found in field study data were not included in the comprehensive research model due to limited support from the existing literature. Another reason for its exclusion was the generalisation issue of the field study findings, as the findings were generated from a single study context conducted in one area of Bangladesh, which limits its applicability in the research model (Meredith, 1998). Hence, those three factors were not included in the comprehensive research model.

Thus, in line with the initial model, the comprehensive research model was developed with the help of existing literature and the field study findings. The model establishes the norms of the social exchange theory starting, with exchange initiation, followed by exchange formation and maintenance, and concludes with exchange consequences. Some TPB components were also blended within the exchange consequences section of the model. Thus, the model is named the behavioural exchange model. It can be argued that this model provides an understanding to readers of the factors (antecedent factors) initiate exchange relationship, how they are formed and maintained, and the consequences— both immediate and ultimate consequences— of such exchange in terms of benefits, costs, developing attitudes, intentions, participation in ecotourism related activities and how participation influences the standard of living of the local community. Figure 4-3 presents the behavioural exchange model that is influenced by the objectives and purposes of this study.

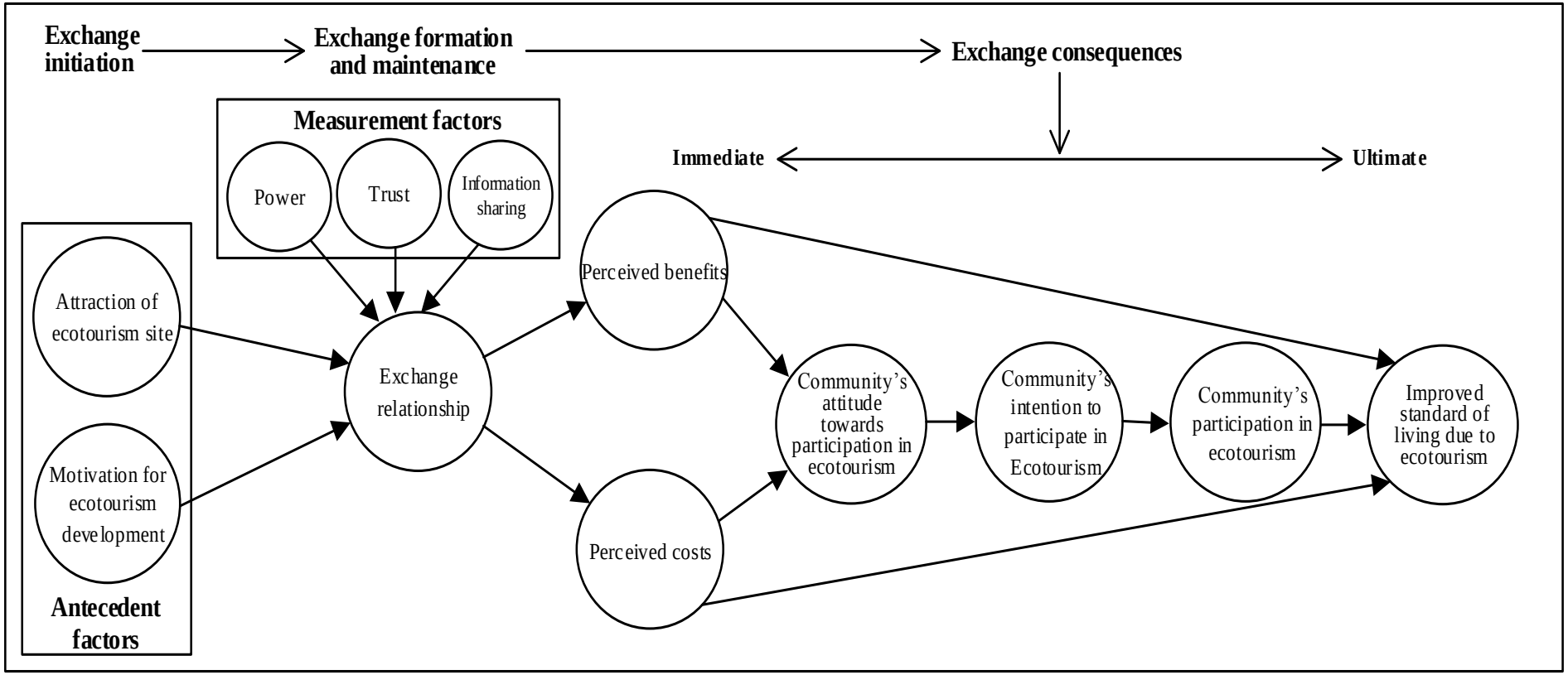


Figure 4-3: Behavioural exchange model

4.7 CHAPTER SUMMARY

This chapter presents the entire field study process and the applicability of field study findings in the current research. The main objective of the field study is to contextualise the initial research model which was developed from the literature review. This chapter comprises two phases: the inductive phase and the deductive phase. The inductive phase includes conducting interviews, analysing data, identifying variables and factors and establishing the relationships between the factors. Following on from the inductive analysis, the deductive phase explores the literature in support of the identified variables and factors, comparing the conceptual model with field study findings and establishing the comprehensive research model. From the content analysis, a total of 85 variables were identified under 14 factors. Among all, some of the variables and factors were found highly contextual however they were not included as part of the initial model. To validate all of the factors and variables, additional literature was consulted. However, the factors were only minimally supported by the literature. Based on the comparative analysis of both models, the behavioural exchange model was developed to conduct this research.

Chapter 5 HYPOTHESES AND QUESTIIONNAIRE

5.1 INTRODUCTION

The primary focus of this chapter is the development of the hypotheses based on the relationships established in the research model, which is reproduced in
Figure 5-1. The hypothesis development is confined to the identification of the relationship between the antecedent factors to the focal construct, and the focal construct to the consequence factors, and their interactions in the model. In addition, this chapter identifies and confirms the measurement instruments for each of the constructs of the research model, to facilitate the survey instrument.

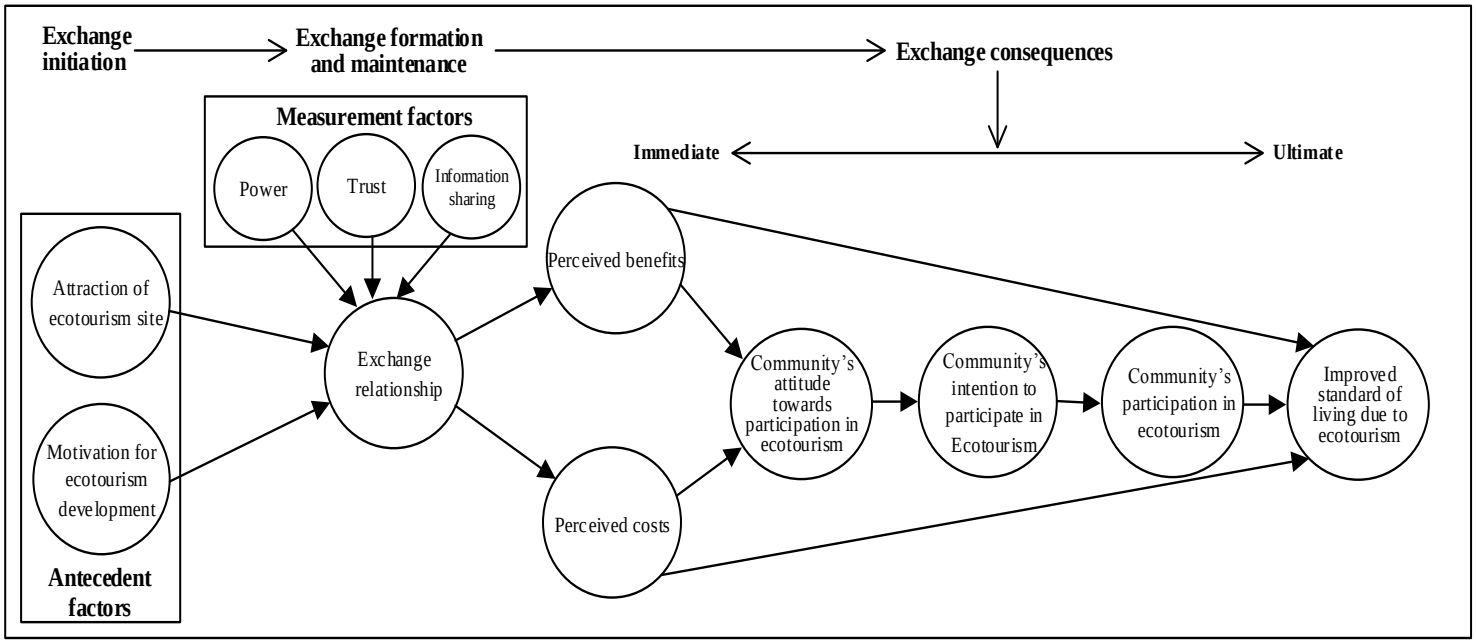


Figure 5-1: Behavioural exchange model (duplicate of Figure 4-3)

5.2 HYPOTHESES DEVELOPMENT

5.2.1 The Effect of the Attraction of an Ecotourism Site to the Exchange Relationship

The attraction of an ecotourism site is an important predictor of whether or not a tourist will visit a tourism destination (Leask, 2010). Attraction can be defined in the context of cultural and historical factors, nightlife and entertainment, shopping facilities and natural attractions (Hsu et al., 2009; Jang & Cai, 2002; Kim, 2014; Rid et al., 2014; Stylidis, Biran, Sit, & Szivas, 2014). Conceptually, attractions are considered as supply-side (pull) factors (Holloway & Humphreys, 2012; Jang & Cai, 2002). Pavlovich (2003) points out that, with the inclusion of new attraction (pull) factors in the destination context (i.e., Waitomo Caves, New Zealand), multiple exchange relationships may be formed between visitors and tourism suppliers. According to MacCannell (1976) "a tourist attraction as an empirical relationship between a tourist, a sight and a marker" (see p. 41). Here, 'sight' is somewhat related to the attraction nucleus while 'marker' indicates pieces of information about the site (Jacobsen, 1997). The status of attraction of a tourist destination elevates the patterns of human relationships with the attraction's components (MacCannell, 1976). Attractions are destination-bound, based on the different facilities and services that are provided at the destination (Formica & Uysal, 2006). As a result, an exchange relationship is generated between the tourists and tourism supply providers. Attraction, in fact, initiates the formation of the exchange relationship. Thus, the following hypothesis is proposed:

Hypothesis 1 (H_1): The attraction of an ecotourism site has a direct positive influence on the formation and maintenance of the exchange relationship between the parties.

5.2.2 The Effect of Motivation for Ecotourism Development on the Exchange Relationship

Motivation, on the other hand, is a demand (push) related factor which comes from tourists or other stakeholders who have a certain interest in the destination (Holloway

& Humphreys, 2012; Jang & Cai, 2002). Motivation refers to the reasons for an individual's behaviour or actions (Dann, 1981). Ap (1992) posits that the motives for need satisfaction is the key to the formation of an exchange relationship between the actors. Motivation has been studied extensively in tourism research (see Gursoy et al., 2002; Hsu et al., 2009; Jang & Cai, 2002; Kim, 2014). Hsu et al. (2009) discuss behavioural aspects of tourists and argues that motivation is linked with the particular tourism destination, which in turn influences the attitude of tourists when visiting the destination. Kim (2014) argues that different types of destination factors may motivate an individual to travel to a destination. Locals participate in tourism exchange for a number of motives which are highlighted in previous studies. These include motivation based on ecotourism services, improving economic and social conditions, education of indigenous citizens and restoration of cultural properties (Nault & Stapleton, 2011). Moyle et al. (2010) identify a number of motivational factors which encourage locals to enter into exchange relationship with tourists. Other studies have found that potential economic gain provides some motivation for local people to enter into the exchange relationship (Gursoy & Rutherford, 2004; Nunkoo & Gursoy, 2012). The study of Ap (1992) refers to the social exchange process where the author presents particular motives as the component of exchange initiation. In line with previous studies, this study considers motivation for ecotourism development as an important predictor of the exchange relationship. Based on the relationship between motivation and the exchange relationship, the following hypothesis is proposed:

Hypothesis 2 (H_2): Community motivation for ecotourism development has a direct positive influence on the formation and maintenance of the exchange relationship between the parties.

5.2.3 The Effect of the Exchange Relationship on the Perceived Benefits

The exchange relationship refers to how actors participate in exchange, continue with the exchange and repeat or become disengaged in exchange (Ap, 1992). Every exchange relationship has consequences, which may be either positive or negative. Benefits from an exchange relationship are considered as positive consequences, while costs incurred from an exchange relationship are seen as negative consequences. Thus, locals participate in an exchange following an evaluation of the potential benefits and

costs that may result from the exchange (Ap, 1992; Gursoy & Rutherford, 2004; Nunkoo & Ramkissoon, 2011, 2012). It is likely that community locals will participate in the exchange if the exchange results in a significant benefits to them (Gursoy & Rutherford, 2004; McGehee & Andereck, 2004). The exchange relationship is also defined in terms of maintenance of an existing relationship. The maintenance of an exchange relationship has different dimensions in different discipline areas. For example, in economics, an evaluation of benefits and costs determines the requirements of exchange relationship maintenance, while in psychology, satisfaction, identification and attitudinal commitment are important for the maintenance of the exchange relationship (Bendapudi & Berry, 1997). Gursoy and Rutherford (2004) categorise the benefits of the tourism exchange relationship as economic, social and cultural. Hence, the benefits of tourism exchange have two main implications: the individual benefits to the parties engaged in the exchange, and the benefits at the community level from participation in the exchange relationship. Based on SET, if the local community receives substantial benefits without incurring unwanted costs from the exchange, they become engaged in, and continue engaging in, exchange with tourists and other parties (Lee, 2013). Locals take part in tourism exchange as long as the benefits from exchange exceed the incurred costs (Chen & Chen, 2010; Coulson, MacLaren, McKenzie, & O'Gorman, 2014). Thus, the following hypothesis is proposed:

Hypothesis 3 (H_3): Exchange relationship between the parties has significant positive influence on perceived benefits to the local community.

5.2.4 The Effect of the Exchange Relationship on the Perceived Costs

As mentioned above, every exchange is evaluated based on the perceived benefits and perceived costs (Ap, 1992; Lee, 2013; Zamani-Farahani & Musa, 2012). Benefits and costs can be perceived in terms of economic, social, cultural and environmental outcomes (Gursoy & Rutherford, 2004; Ward & Berno, 2011). Perceived positive impacts of tourism encourage a community to participate in exchange while perceived negative impacts may cause them to withdraw from the relationship which in turn affects the future success of the tourist destination (Rasoolimanesh, Jaafar, Kock, & Ramayah, 2015; Sharpley, 2014). The exchange relationship may also result in

undesirable costs (Nunkoo & Ramkissoon, 2011, 2012). Individuals engage in exchange relationships to maximise the benefits and minimise the costs of such an exchange (Choi & Murray, 2010). Thus, there is a direct negative relationship between the perceived costs and an individuals' participation in exchange. This is in line with the SET perspective (Látková & Vogt, 2012; Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2011; Nunkoo & Smith, 2013). The study of Nunkoo and Smith (2013) measures the relationship of power and trust (as the component of the exchange relationship) with the perceived costs and has found that there is an insignificant relationship between power and the perceived costs of tourism, and there is no significant relationship between trust and perceived costs. However, most of the literature support the finding that the perceived costs (negative impacts) of tourism may cause withdrawal from tourism exchange relationships. On this backdrop, the following hypothesis is proposed:

Hypothesis 4 (H_4): Exchange relationship between the parties has significant negative influence on perceived costs of the local community.

5.2.5 The Influence of the Perceived Benefits and/or Perceived Costs of Ecotourism on Community's Attitudes towards Participation in Ecotourism

Attitudes are largely influenced by the benefits and costs that a community perceives from the ecotourism exchange (de los Angeles Somarriba-Chang & Gunnarsdotter, 2012). People who observe higher benefits from tourism have stronger positive attitudes toward it (Ward & Berno, 2011; Woo, Kim, & Uysal, 2015). The relationship between the perceived benefits and the perceived costs are the basis of resident attitude development (Jennings & Nickerson, 2006). Zamani-Farahani and Musa (2012) suggest that the benefits and costs of tourism be studied within a single study setting for a better understanding of community attitudes towards tourism, as tourism generates significant socioeconomic benefits as well as disadvantageous costs for the local community. According to Wang and Pfister (2008), the benefits and costs need to be carefully evaluated in order to measure attitude; if the costs exceed the benefits, attitudes toward tourism become more negative and vice versa. According to McCool and Martin (1994), the benefits of tourism are more positive to individuals who are more involved in tourism activities than those are less involved. Haralambopoulos and

Pizam (1996) also found that higher levels of household income affects a person's attitudes towards tourism. In fact, when local communities perceive several benefits from tourism, for example to education or income and employment opportunities, that may influence their attitudes toward tourism (Andriotis & Vaughan, 2003). Similarly, locals may perceive certain costs from tourism activities, such as the deterioration of nature, pollution, increased crime, increased threat to indigenous culture and many others (see Gursoy & Kendall, 2006; Jurowski & Gursoy, 2004; Lee, 2013; McGehee & Andereck, 2004; Nunkoo & Ramkissoon, 2012).

Lu et al. (2014) focus on the attitudes of an ecotourist demonstrating that materialism, which is linked with benefits, influences attitudes toward ecotourism. Gursoy and Kendall (2006) examine the relationship between ecocentric attitudes of locals and perceived benefits. In this study, the authors identify that residents with high ecocentric values perceive less benefits than costs, which is similar to the study of Nunkoo and Ramkissoon (2010b). The study of Nunkoo and Ramkissoon (2010b) identified a direct negative relationship between eccentric attitudes and benefits, and a direct positive relationship between ecocentric attitudes and costs. Thus, the nature of the benefits also has an effect on the attitudes of a community. For example, when locals see that there are more shopping and dining options as a result of tourism, they perceive tourism as very positive (Wang & Pfister, 2008). In fact, perceived benefits are a predictor of the residents' attitude toward tourism. The existence of somewhat conflicting findings regarding the relationship between the benefits and/or the costs of tourism and attitudes in previous studies has influenced the development of the following two hypotheses:

Hypothesis 5 (H_5): There is a direct positive relationship between the perceived benefits of ecotourism and a community's positive attitude towards participation in ecotourism.

Hypothesis 6 (H_6): There is a direct negative relationship between the perceived costs of ecotourism and a community's positive attitude towards participation in ecotourism.

5.2.6 The Effect of Perceived Benefits on Improved Standard of Living due to Ecotourism

The direct relationship between the perceived benefits of tourism and improved standard of living was not discovered from the initial literature review. This link was established from the field study findings of the current research. Considering the highly contextualised relationship between the perceived benefits and improved standard of living due to ecotourism, this study further explored the literature to find support for the newly established link. The literature suggests that tourism has been practiced by communities to improve their standard of living (Gabriel Brida, Osti, & Faccioli, 2011). In fact, the injection of tourism income increases the standard of living of local residents (Johnson, Snepenger, & Akis, 1994). In a comparative study of resident perceptions of tourism impacts, Tosun (2002) found interesting results: Urgup residents perceived no significant impact of tourism on traffic congestion, income, and standard of living; on the other hand, residents of Central Florida found that tourism resulted in increased income and standard of living.

Numerous studies, in fact, have found that tourism helps to improve the standard of living at the community level (Belisle & Hoy, 1980; Kim, Uysal, & Sirgy, 2013; Tosun, 2002). Fernandes (2013) argues that the development of tourism activities increases investment, which results in increased job opportunities and more business for local residents. This in turn leads to improved living standards. The literature also reveals conflicting findings regarding the ultimate benefits of tourism for improving the standard of living of the local community. This highlights the need for further study on the relationship between the perceived benefits of ecotourism and the standard of living for the local community. Thus, the following hypothesis is proposed:

Hypothesis 7 (H_7): There is a direct significant relationship between the perceived benefits of ecotourism and improved standard of living due to ecotourism for the local community.

5.2.7 The Effect of Perceived Costs on Improved Standard of Living due to Ecotourism

In line with H_7, the field study findings also suggest that there is a direct relationship between perceived costs and improved standard of living due to ecotourism which was

not identified in the initial literature review. As part of the hypothesis development, this study explored further literature focusing the relationship between these two variables. It was found that, although the injection of tourism income into the local economy increases the standard of living, community people, on the other hand, feel that tourism also causes an increase in the price of land, housing, transportation, and other necessary goods and services which affects their standard of living (Abdollahzadeh & Sharifzadeh, 2014; Belisle & Hoy, 1980; Johnson et al., 1994; Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2010b; Perdue et al., 1990; Stylidis et al., 2014; Tovar & Lockwood, 2008). Local communities may also experience other types of costs from tourism, such as environmental pollution, traffic congestion, increased crime and changes to the local culture (Gursoy & Rutherford, 2004; Nunkoo & Ramkissoon, 2012; Woo et al., 2015).

Thus, an individual's standard of living should be determined not only by the income benefits derived from tourism but the costs incurred from this sector in a given period of time (Kim et al., 2013; Konüs, 1939). In fact, the cost of goods consumed by an individual is associated with his/her standard of living (Konüs, 1939). However, the influence of such cost factors on the standard of living is negative (Frechtling, 1994). In contrast, Blackorby and Russell (1978) argue that the cost of consumable goods such as food, travel, owning property and many others are signs of person's standard of living. Thus, the standard of living should not be measured by the cost of fulfilling basic needs (Sen & Hawthorn, 1988). It also refers to the ability of an individual or community to pay for additional and higher quality commodities. So, perceived costs are apparently associated with standard of living and as such, the quality of consumer goods and services defines an individual's standard of living. This important phenomenon is not well presented in the literature, particularly in ecotourism literature. Thus, this study intends to explore the relationship between the perceived costs of tourism and improved standard of living. This can be hypothesised as:

Hypothesis 8 (H_8): There is a direct positive relationship between perceived costs and improved standard of living due to ecotourism for the local community.

5.2.8 The Effect of Community's Attitudes on Community's Intention to Participate in Ecotourism

Attitude and intention are two primary influencing factors on an individuals' behaviour (Frey & George, 2010). Attitudes prompt an individual to act or perform in a certain way (Sparks, 2007). Thus, attitude is a major predictor of behavioural intention (Ajzen, 1985, 1991). A favourable attitude increases the propensity of an intention to perform a certain behaviour (Jalilvand, Samiei, Dini, & Manzari, 2012). A community's intention to participate in ecotourism activities is influenced by economic as well as non-economic benefits and costs (Stronza & Gordillo, 2008). Beneficial exchange relationships help to develop positive attitudes of local citizens toward ecotourism. Existing literature establishes the relationship between attitudes and intention (e.g., Karki & Hubacek, 2015; Singh et al., 2014; Zhang & Lei, 2012). Positive attitudes of a community influences their intention to participate in ecotourism activities (Andereck & Vogt, 2000). Although the influence of attitudes on intention has been widely studied in past literature, Zhang and Lei (2012) argue that the relationship between ecotourism attitudes and intention can be mediated by other factor (i.e., landscape likeability). In line with TPB, Casaló et al. (2010) opine that attitude influences the intention to behave in a particular way. The above discussion on the relationship between attitude and intention supported the development of the following hypothesis:

Hypothesis 9 (H_9): There is a direct positive relationship between community attitude towards participation in ecotourism and the community's intention to participate in ecotourism.

5.2.9 The Effect of Community's Intention on a Community's Participation in Ecotourism

Community involvement and participation in various ecotourism-related activities is important for the success of any ecotourism venture (Ormsby & Mannle, 2006). Participation is a reflection of the community's behavioural intention towards ecotourism activities. Favourable policies and available funds from the government may encourage community participation in ecotourism-related activities (Ramos & Prideaux, 2014; Saufi, O'Brien, & Wilkins, 2014). Community members can

participate in ecotourism activities in different forms, such as involvement in conservation processes, management, planning, and decision making roles (Lai & Nepal, 2006; Ormsby & Mannle, 2006; Ramos & Prideaux, 2014; Stronza & Gordillo, 2008; Zhang & Lei, 2012). There is a high correlation between behavioural intention and subsequent behaviour as the participation intention of an individual instructs their actual behaviour (Zhang & Lei, 2012). Kaplanidou and Vogt (2007) studied the relationship between behavioural intention and actual behaviour in the participation of sports tourism and found that intention is a significant predictor of actual behaviour. The more positive an intention is, the more likely that an individual will perform the desired behaviour because, at the intention level, they estimate all possible factors that could influence their actual behaviour (Sheppard, Hartwick, & Warshaw, 1988). Hagger, Chatzisarantis, and Biddle (2002) found that intention is the only predictor of actual behaviour which mediates the influence of subjective norms and attitude. Existing studies produce inconsistent findings on the relationship between intention and actual behaviour for ecotourism development at the community level (Hsu & Huang, 2012; Karki & Hubacek, 2015; Zhang & Lei, 2012; Zhou, 2011). The current research thus intends to explore the relationship between a community's intention and their actual participation in ecotourism. This is hypothesised as:

Hypothesis 10 (H_{10}): There is a direct positive relationship between a community's intention to participate in ecotourism and that community's actual participation in ecotourism.

5.2.10 The Relationship between a Community's Participation in Ecotourism and Improved Standard of Living due to Ecotourism

The social exchange process between ecotourism stakeholders has the ability to impact the standard of living of a local community. As is shown in the research model, the benefits and costs of ecotourism are the immediate consequences of the exchange relationship that can influence the attitude of the local community. These attitudes affect their intention to participate in various ecotourism-related activities. Participation of local community influences the standard of living by facilitating employment and income-generating activities, as well as other social benefits (Milman & Pizam, 1988; Pasape et al., 2015a). The improved standard of living can be measured in terms of economic, social and basic infrastructural development at the

community level (Coria & Calfucura, 2012). Kangas, Shave, and Shave (1995) posit that ecotourism should strive to increase the standard of living of local people with the view of improving the natural environment. Ecotourism has made many positive changes for the local community particularly in relation to the creation of more jobs and income opportunities, leading to an improved standard of living (Weinberg, Bellows, & Ekster, 2002). Studies on the standard of living in ecotourism are limited and fragmented. Literature that has satisfactorily examined the relationship between actual participation and its outcomes is also scarce in ecotourism academia. The current study thus intends to explore the outcome of actual behaviour, establishing the link between a community's participation in ecotourism and improved standard of living due to ecotourism. In line with the above discussion, the following hypothesis is proposed:

Hypothesis 11 (H_{11}): There is a direct positive relationship between a community's participation in ecotourism and improved standard of living due to ecotourism.

5.2.11 Hypotheses Relating to the Mediating Variables

As mentioned earlier, existing literature suggests there is a direct link between perceived benefits and improved standard of living and/or perceived costs and improved standard of living (Blackorby & Russell, 1978; Johnson et al., 1994; Konüs, 1939; Lai & Nepal, 2006). The current model also shows an indirect relationship between those two sets of variables through community attitudes, community intentions and community participation as the mediating variables. The post-hoc analysis (Narayanan, Narasimhan, & Schoenherr, 2015) created the opportunity for the researcher to look into the effects of those variables as mediator(s). Thus, this study intends to empirically examine the indirect effect of the relationship between perceived benefits, and improved standard of living due to ecotourism, and/or between perceived costs and improved standard of living due to ecotourism through community attitudes, community intention, and community participation in ecotourism. To examine the mediating effects of those variables, the following hypotheses have been developed in line with the recommendations of Rungtusanatham, Miller, and Boyer (2014):

Hypothesis 12 (H_{12}): Perceived benefits have a significant indirect effect on improved standard of living due to ecotourism through community attitude, community intention

and community participation.

Hypothesis 13 (H_{13}): Perceived costs have a significant indirect effect on improved standard of living due to ecotourism through community attitude, community intention and community participation.

Table 5-1*:* Sources of hypothesised relationships

Hypothesis	Statement	Link	Sources	
			Interview No	Main Literature
H_1	*The attraction of an ecotourism site has a direct positive influence on the formation and maintenance of the exchange relationship between the parties.*	Attr → ExR	5, 6, 8, 9, 10, 11, 12, 13, 14, 25, 26	(MacCannell, 1976)
H_2	*Community motivation for ecotourism development has a direct positive influence on the formation and maintenance of the exchange relationship between the parties.*	Mot → ExR	3, 9, 12, 21, 26	(Ap, 1992; Moyle et al., 2010)
H_3	*Exchange relationship between the parties has significant positive influence on perceived benefits to the local community.*	ExR → PB	2, 5, 10, 11, 13, 15, 18, 19, 22, 25, 26	(Chen & Chen, 2010; Lee, 2013)
H_4	*Exchange relationship between the parties has significant negative influence on perceived costs of the local community.*	ExR → PC	2, 5, 19, 20, 26	(Nunkoo & Gursoy, 2012; Nunkoo & Smith, 2013)
H_5	*There is a direct positive relationship between the perceived benefits of ecotourism and a community's positive attitude towards participation in ecotourism.*	PB → CAtti	11, 12, 15, 19, 26	(Lu et al., 2014; Wang & Pfister, 2008) (Látková & Vogt, 2012)
H_6	*There is a direct negative relationship between the perceived costs of ecotourism and a community's positive attitude towards participation in ecotourism.*	PC → CAtti	11, 15, 21, 23	(Nunkoo & Ramkissoon, 2010b)
H_7	*There is a direct significant relationship between the perceived benefits of ecotourism and improved standard of living due to ecotourism for the local community.*	PB → ISLE	5, 16, 17	(Fernandes, 2013; Ouerfelli, 2008)
H_8	*There is a direct positive relationship between perceived costs and improved standard of living due to ecotourism for the local community.*	PC → ISLE	1, 3, 14, 18, 28	(Blackorby & Russell, 1978; Frechtling, 1994)
H_9	*There is a direct positive relationship between community attitude towards participation in ecotourism and the community's intention to participate in ecotourism.*	CAtti → CInt	2, 5, 21, 26, 27	(Casaló et al., 2010; Jalilvand et al., 2012; Zhang & Lei, 2012)
H_{10}	*There is a direct positive relationship between a community's intention to participate in ecotourism and that community's actual participation in ecotourism*	CInt → CPart	16	(Hsu & Huang, 2012; Karki & Hubacek, 2015; Zhou, 2011)
H_{11}	*There is a direct positive relationship between a community's participation in ecotourism and improved standard of living due to ecotourism.*	CPart → ISLE	5, 13, 14, 20, 21, 23, 25, 26	(Milman & Pizam, 1988)
H_{12}	*Perceived benefits have a significant indirect effect on improved standard of living due to ecotourism through community attitude, community intention and community participation.*	PB→ CAtti→ CInt→ CPart→ ISLE	-	-
H_{13}	*Perceived costs have a significant indirect effect on improved standard of living due to ecotourism through community attitude, community intention and community participation.*	PC→ CAtti→ CInt→ CPart→ ISLE	-	-

Table 5-1 summarises the hypotheses developed for the current study that are supported by the interview findings as well as existing literature. However, the supporting sources for H_{12} and H_{13} were not provided in the Table 5-1 as they were developed as part of post-hoc analysis (Narayanan et al., 2015) during the data analysis.

5.3 MEASUREMENT OF THE CONSTRUCTS

As mentioned in Chapter 3, the constructs of the research model were measured with reflective and formative indicators, depending on the nature of the constructs. The indicators under each construct were set by a six point Likert type scale where 1 indicates the negative extreme and 6 indicates the positive extreme of the scale. The applications of the constructs in the different research contexts has been discussed in the literature review. The following section describes the measurement items of the constructs in the context of the current study.

5.3.1 Attraction of the Ecotourism Site (Attr)

Attractions vary across the study topic and discipline area. Similarly, tourism attractions can be different across various branches of the tourism industry. Thus, tourism attractions are the subjective evaluation of tourists regarding the destination components. Attraction has been studied in tourism literature from various different contextual perspectives (see Jang & Cai, 2002; Juric et al., 2002; Kim, 2014; Milman, 2001; Pesonen & Komppula, 2010; Weidenfeld & Leask, 2013). However, this study conceptualises ecotourism attraction as the combination of the existence of visiting spots and natural scenery, wild animals, ecotourism-related services, safety and security, and accessibility. These indicators were borrowed from existing tourism literature (see Table 5-2). Among all six indicators, 'visiting spots and natural scenery' is taken from Juric et al. (2002), and Kim (2014). The second indicator, 'wild animals', is taken from Milman (2001), Juric et al. (2002), and Weidenfeld and Leask (2013). 'Beautiful landscape' is borrowed from Pesonen and Komppula (2010), and Kim (2014). 'Ecotourism services' is further taken from Milman (2001), and Weidenfeld

and Leask (2013). Personal 'safety and security' is taken from Jang and Cai (2002), and Kim (2014). Finally, 'accessibility' to the visiting spots is borrowed from Jang and Cai (2002). Field study respondents also expressed their views of ecotourism attraction with reference to these dimensions for the selected ecotourism site. The empirically validated integrated measures of attraction are scarce in the ecotourism literature. Thus, further research is needed to explore the meaning of attraction, particularly with reference to the above dimensions in the field of ecotourism research.

Table 5-2: Dimensions of attraction and motivation

Constructs	Measures	References
Attraction of ecotourism site	beautiful landscape	(Kim, 2014; Pesonen & Komppula, 2010)
	visiting spots	(Kim, 2014)
	Shopping opportunities	(Kim, 2014)
	cultural exchange	(Kim, 2014)
	infrastructure	(Kim, 2014)
	safety	(Jang & Cai, 2002; Kim, 2014)
	activities	(Kim, 2014)
	food services	(Milman, 2001; Weidenfeld & Leask, 2013)
	picnic areas	(Milman, 2001; Weidenfeld & Leask, 2013)
	animal attractions	(Milman, 2001; Weidenfeld & Leask, 2013)
	wilderness and undisturbed nature	(Juric et al., 2002)
	tropical forests and indigenous bush	(Juric et al., 2002)
	accessibility	(Jang & Cai, 2002)
Motivation for ecotourism development	to experience and learn more about nature	(Chen & Jim, 2012)
	to keep healthy and physically fit	(Chen & Jim, 2012)
	to rest and relax in pleasant settings	(Chen & Jim, 2012)
	to pursue special interest and skills	(Chen & Jim, 2012)
	satisfying financial or economic benefits	(Moyle et al., 2010)
	novelty seeking	(Chandralal & Valenzuela, 2013; Kim, 2014)
	environmental conservation	(Stem, Lassoie, Lee, Deshler, et al., 2003)
	promoting ecotourism internationally	(Chiutsi et al., 2011)
	long-term partnership	(Nault & Stapleton, 2011)
	widen the knowledge of community	(Tran & Walter, 2014)

5.3.2 **Motivation for Ecotourism Development (Mot)**

The concept of motivation is derived from Psychology and behavioural science (Bertolino, Truxillo, & Fraccaroli, 2011; Kiel, 1999; Sadri & Bowen, 2011). Motivation is the key driving force behind an individual's behaviour (Jang & Cai, 2002; Rid et al., 2014). In tourism, motivation is linked to the destination components that 'pull' the tourists into a particular choice of destination (Jang & Cai, 2002). Table 5-2 outlines different indicators of motivation of local communities to engage in ecotourism-related activities. In the current research, the motivation for ecotourism development (Mot) of the local community is defined by six indicators. The indicator,

‘not damaging natural environment’, which is related to environmental conservation, is attributed to Stem, Lassoie, Lee, and Deshler (2003). The next indicator for measuring motivation is ‘improve socio-economic condition’, which is taken from Moyle et al. (2010). The third indicator is ‘international understanding’, taken from Chiutsi et al. (2011). The subsequent indicator is ‘novel profession’, which is borrowed from Chandralal and Valenzuela (2013), and Kim (2014). The indicator regarding motivation for ‘new knowledge’ is taken from Chen and Jim (2012), and Tran and Walter (2014). The indicator related to motivation for ‘creating partnerships’ is imported from Nault and Stapleton (2011). Field study data also supports these indicators in explaining community motivation for ecotourism development.

5.3.3 **Exchange Relationship (ExR)**

The exchange relationship is one of the important focal constructs in the current research model. According to the existing literature, the exchange relationship is formed by power, trust (Ap, 1992; Nunkoo & Ramkissoon, 2012) and information sharing between the actors. This study does not consider the exchange relationship for collecting responses in the survey. Rather, the data relating to power, trust and information sharing are considered in defining the exchange relationship. Thus, the following sections discuss the measures of power, trust and information sharing as the first order latent constructs.

Power (Po)

Ap (1992) posits that power is an integral part of the exchange relationship which is also supported by Nunkoo and Ramkissoon (2012). Power relates to the ability of an actor in an exchange situation. Ability depends on the actor’s resources that are shared (exchanged) between the actors (Ap, 1992). Power has been defined in diverse contexts in operations management (see Zhao et al., 2008). Table 5-3 shows 16 different indicators of power, however, the current study measures power with reference to six indicators which are borrowed from existing tourism and marketing literature (e.g., Frazier, 1983a; Jain et al., 2014; Kayat, 2002; Zhao et al., 2008).

Table 5-3: Dimensions of exchange relationship

Constructs	Measures	References
Power	personal influence over decisions	(Frazier, 1983a; Nunkoo & Ramkissoon, 2011, 2012)
	political influence in decision-making process	(Nunkoo & Ramkissoon, 2011, 2012)
	opportunity to participate in tourism planning and development	(Nunkoo & Smith, 2013)
	own land	(Kayat, 2002)
	access to capital	(Kayat, 2002)
	hold positions	(Kayat, 2002)
	have high education/experience	(Kayat, 2002)
	younger age	(Kayat, 2002)
	cooperation	(Frazier, 1983a; Jain, Khalil, Johnston, & Cheng, 2014)
	mutual assistance	(Frazier, 1983b)
	quality of advice	(Frazier, 1983b)
	getting good advice	(Brown, Lusch, & Nicholson, 1996; Zhao, Huo, Flynn, & Yeung, 2008)
	getting favour	(Zhao et al., 2008)
	compliance	(Jain et al., 2014)
	competence	(Jain et al., 2014)
	withdrawal	(Jain et al., 2014; Zhao et al., 2008)
Trust	keep promises	(Jain et al., 2014)
	believe in information	(Jain et al., 2014)
	considers welfare	(Jain et al., 2014)
	trustworthy	(Jain et al., 2014; Zaheer, McEvily, & Perrone, 1998)
	honesty	(Jain et al., 2014)
	trust the government	(Nunkoo & Ramkissoon, 2012; Park, Lee, Choi, & Yoon, 2012)
	social morality	(Park et al., 2012)
	easy to trust	(Lee & Turban, 2001)
	high tendency to trust	(Lee & Turban, 2001)
	trust a person with having even little knowledge	(Lee & Turban, 2001)
	trusting someone not difficult	(Lee & Turban, 2001)
	even-handed in negotiation	(Zaheer et al., 1998)
	act as expectation	(Zaheer et al., 1998)
	faith	(Zaheer et al., 1998)
	sense of betrayal	(Zaheer et al., 1998)
	take care	(Caceres & Paparoidamis, 2007)
	trust completely	(Caceres & Paparoidamis, 2007)
	always meet expectations	(Garbarino & Johnson, 1999)
	can be counted to be good	(Garbarino & Johnson, 1999)
	reliable	(Garbarino & Johnson, 1999)
	cannot always be trusted	(Garbarino & Johnson, 1999)
Information sharing	share information on inventory	(Cook, Heiser, & Sengupta, 2011)
	forecast of customer demand	(Cook et al., 2011)
	share information on price	(Cook et al., 2011)
	share information electronically	(Cook et al., 2011)
	detailed enough	(Carr & Kaynak, 2007)
	frequent enough	(Carr & Kaynak, 2007; Cheng, 2011)
	timely enough	(Carr & Kaynak, 2007)
	share proprietary information	(Cheng, 2011)
	information help our partner	(Cheng, 2011)
	learn many things	(Mills, Knezek, & Khaddage, 2014)
	customised information	(Kembro & Näslund, 2014; Nakano, 2009)
	timely	(Wang, Ye, & Tan, 2014)
	accurate	(Wang et al., 2014)
	complete	(Wang et al., 2014)
	adequate	(Wang et al., 2014)
	reliable	(Wang et al., 2014)
	feel good telling about an experience to the other parties	(Paridon, Carraher, & Carraher, 2006)

‘Cooperation’ among the parties as an indicator of power is taken from Frazier (1983a), and Jain et al. (2014). The second and third measures, ‘quality of advice’ provided by the parties and ‘mutual assistance’ of the parties, are borrowed from Frazier (1983b). The fourth measure of power is ‘getting favour’ from other parties by going along with them, which is taken from Zhao et al. (2008). Another important measure of power, ‘getting good advice’ from relationships with other parties, is taken from Brown et al. (1996), and Zhao et al. (2008). The final measure of power is ‘withdrawal’ from the relationship if the parties fail to comply with the tourist requests, which is also taken Zhao et al. (2008), and Jain et al. (2014). All six indicators of power selected for this study are considered relevant from the analysis of the field study data.

Trust (Tr)

In the current study, trust is considered an important component for examining the exchange relationship. Table 5-3 shows 21 different indicators of trust that have been used in several studies. However, seven indicators were used to measure trust in the exchange relationship in the present research. The first three indicators of trust used in this study, ‘keep promises’, ‘believe in information’, and ‘honesty’ in the exchange are borrowed from Jain et al. (2014). The fourth indicator, ‘not difficult to trust’ someone, is taken from Lee and Turban (2001). The fifth measure of trust in this study, ‘even-handed in negotiation’, is taken from Zaheer et al. (1998). Another important indicator of trust, ‘take care’ of the parties’ needs, is taken from Chumpitaz Caceres and Paparoidamis (2007). Finally, the seventh measure of trust in this study is ‘reliable’ toward each other, which is taken from Garbarino and Johnson (1999). Field study participants also mentioned these measures when explaining trust in their relationships with others.

Information Sharing (InfoS)

This study proposes that, along with power and trust, information sharing is another important component for the formation of an exchange relationship between the parties. Information sharing has been measured using several indicators in existing literature, particularly in the supply chain literature (see Carr & Kaynak, 2007; Cheng, 2011; Cook et al., 2011). Table 5-3 shows 17 different measures of information sharing, however, six of the most relevant measures of information sharing were chosen for the current study. The first measure, ‘share information in details’, is taken from Carr and Kaynak (2007). The second measure, ‘timely’, is taken from Wang et

al. (2014). The next indicator, ‘learn many things’, is taken from Mills et al. (2014). The fourth indicator relates to sharing ‘customised information’, which is taken from Nakano (2009), and Kembro and Näslund (2014). The fifth indicator is ‘information help’ our partner, which is borrowed from Cheng (2011). The last measure is ‘feel good’ when describing an experience to other parties, which is taken from Paridon et al. (2006). Field study data also reveals all of these indicators as appropriate measures of information sharing among parties engaged in ecotourism-related activities.

5.3.4 **Perceived Benefits (PB)**

Benefits are seen as the outcome of an exchange relationship (Gursoy & Rutherford, 2004; Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2011). Several indicators are used in tourism literature to measure the perceived benefits of tourism (see Gursoy & Rutherford, 2004; Jeon et al., 2016; Lee, 2013; McGehee & Andereck, 2004; Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2011). Table 5-4 contains 11 different items used to measure the perceived benefits of tourism development. This study, however, uses seven of the most relevant indicators for measuring perceived benefits of ecotourism at the community level. ‘Employment opportunities’ is considered one of the important indicators of benefits from ecotourism, which is taken from Gursoy and Rutherford (2004), Nunkoo and Gursoy (2012), Nunkoo and Ramkissoon (2011, 2012); Lee (2013), and Jeon et al. (2016). The second measure, ‘more businesses’ opportunity for local people, is borrowed from Gursoy and Rutherford (2004); Nunkoo and Ramkissoon (2011, 2012), and Lee (2013). The next indicator is ‘better infrastructure’ development in the local area, which is taken from Gursoy and Rutherford (2004), and Nunkoo and Ramkissoon (2011, 2012). The source of ‘government revenue’ as the fourth measure is borrowed from McGehee and Andereck (2004); Lee (2013), and Jeon et al. (2016). The fifth measure relates to the contribution of ecotourism to ‘environmental preservation’, which is taken from Gursoy and Rutherford (2004), and Nunkoo and Ramkissoon (2011, 2012). The sixth measure, enhancing the ‘spirit and image’ of the local community, is borrowed from McGehee and Andereck (2004). The last measure used in this study relates to ‘benefits in general’, which is borrowed from McGehee and Andereck (2004) and Lee et al. (2010). All measures were considered relevant for the study to measure the perceived benefits that were also found relevant in the field study findings.

Table 5-4: Dimensions of perceived benefits and perceived costs of tourism

Constructs	Measures	References
Perceived benefits	Employment opportunities	(Gursoy & Rutherford, 2004; Jeon, Kang, & Desmarais, 2016; Lee, 2013; Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2011, 2012)
	More businesses for local people	(Gursoy & Rutherford, 2004; Lee, 2013; Nunkoo & Ramkissoon, 2011, 2012)
	Better infrastructure	(Gursoy & Rutherford, 2004; Lee, 2013; Nunkoo & Ramkissoon, 2011, 2012)
	Increase in standard of living	(Gursoy & Rutherford, 2004; Nunkoo & Ramkissoon, 2011, 2012)
	Investment opportunities	(Gursoy & Rutherford, 2004; Jeon et al., 2016; Nunkoo & Ramkissoon, 2011, 2012)
	cultural exchange	(Gursoy & Rutherford, 2004; Lee, 2013); Nunkoo and Ramkissoon (2012)
	environmental preservation	(Gursoy & Rutherford, 2004); Nunkoo and Ramkissoon (2012)
	Community spirit and image	(McGehee & Andereck, 2004)
	Revenues for local governments	(Jeon et al., 2016; Lee, 2013; McGehee & Andereck, 2004)
	The casino development benefits myself	(Lee et al., 2010; McGehee & Andereck, 2004)
	The casino development benefits local residents	(Lee et al., 2010; McGehee & Andereck, 2004)
Perceived costs	Increase in environmental pollution	(Gursoy & Rutherford, 2004; Lee, 2013; McGehee & Andereck, 2004; Nunkoo & Ramkissoon, 2011, 2012)
	Increase in alcoholism and prostitution	(Nunkoo & Ramkissoon, 2011, 2012)
	Increase in the prices of goods and services	(Gursoy & Rutherford, 2004; Lee, 2013; Nunkoo & Ramkissoon, 2011, 2012)
	Increase in the price of land and property	(Nunkoo & Ramkissoon, 2011, 2012)
	Increase in crime rate	(Gursoy & Rutherford, 2004; Jurowski & Gursoy, 2004; McGehee & Andereck, 2004; Nunkoo & Ramkissoon, 2012)
	Change in culture	(Gursoy & Rutherford, 2004; McGehee & Andereck, 2004; Nunkoo & Ramkissoon, 2012)
	Increase in traffic congestion	(Gursoy & Rutherford, 2004; Jurowski & Gursoy, 2004)
	Increase cost of living	(Lee et al., 2010; McGehee & Andereck, 2004)
	Affect the community's way of life	(Gursoy & Rutherford, 2004; McGehee & Andereck, 2004)
	Native people are being exploited by tourism	(McGehee & Andereck, 2004)

5.3.5 **Perceived Costs (P C)**

Perceived benefits and perceived costs are mutually exclusive but interrelated components of measuring the outcomes of ecotourism development. Ecotourism development has the potential to cause harm to the society in various different ways. Table 5-4 outlines 10 different dimensions of PC. This study, however, uses only six indicators to measure PC. The first measure of PC relates to 'increase in the prices of

land and property' that is taken from Nunkoo and Ramkissoon (2011, 2012). The next measure of PC relates to the 'increase in the prices of other goods and services' which is taken from Gursoy and Rutherford (2004), Nunkoo and Ramkissoon (2011, 2012), and Lee (2013). Another indicator relates to overall 'cost of living' which is taken from McGehee and Andereck (2004), and Lee et al. (2010). The fourth measure is the increase of 'crime rate' in the local area, which is borrowed from Gursoy and Rutherford (2004), Jurowski and Gursoy (2004), McGehee and Andereck (2004), and Nunkoo and Ramkissoon (2012). The fifth measure relates to how ecotourism development changes the traditional 'way of life', which is borrowed from Gursoy and Rutherford (2004), and McGehee and Andereck (2004). The last measurement item used in this study for PC relates to the community 'being exploited' due to ecotourism development, which is also borrowed from McGehee and Andereck (2004). Field study interviews also revealed these dimensions as relevant to the perceived costs for the local community resulting from ecotourism development.

5.3.6 **Community's Attitudes towards Participation in Ecotourism (CAtti)**

Community attitude is developed from the evaluation of benefits and costs incurred from the relationship among the parties (Ap, 1992). Attitude has been measured with different indicators in many different conditions. Table 5-5 presents 12 different indicators of attitude, however, the application of those indicators varies across the study areas. For the purposes of the current study, six indicators were consciously chosen to measure community attitudes towards their participation in various ecotourism-related activities. The first measurement item relates to 'worthwhile employment opportunities' which is taken from Hsu et al. (2009), Hsu and Huang (2012), and McCool and Martin (1994). The second indicator of attitude, 'benefits outweigh negative impacts', is borrowed from McCool and Martin (1994). The third indicator of attitude used in this study, 'great promise', is also taken from McCool and Martin (1994). The next indicator of attitude 'enjoyable', is taken from Hsu et al. (2009), Hsu and Huang (2012), Lam and Hsu (2006), and Lu et al. (2014). Another indicator of measuring attitude in the current study is 'feel pleasant', which is taken from Hsu et al. (2009), Hsu and Huang (2012), Lam and Hsu (2006), Lu et al. (2014), and Singh et al. (2014). The last indicator is 'foreseeable future', which is taken from Weaver (2002). All six indicators used in this study were determined to be theoretically

relevant to measurement of community attitudes and were also supported by the field study data.

Table 5-5: Dimensions of attitude, intention and behaviour

Constructs	Measures	References
Community attitude	satisfying	(Hsu et al., 2009; Hsu & Huang, 2012)
	pleasant	(Hsu et al., 2009; Hsu & Huang, 2012; Lam & Hsu, 2006; Lu et al., 2014; Singh, De Grave, Ganjiwale, Muijtjens, & van der Vleuten, 2014)
	enjoyable	(Hsu et al., 2009; Hsu & Huang, 2012; Lam & Hsu, 2006; Lu et al., 2014)
	worthwhile	(Hsu et al., 2009; Hsu & Huang, 2012; McCool & Martin, 1994)
	fascinating	(Hsu et al., 2009; Hsu & Huang, 2012)
	rewarding	(Hsu & Huang, 2012)
	great promise	(McCool & Martin, 1994)
	overall benefits outweigh negative impacts	(McCool & Martin, 1994)
	positive	(Lam & Hsu, 2006; Lu et al., 2014)
	foreseeable future	(Weaver, 2002)
	fun	(Lam & Hsu, 2006; Lu et al., 2014)
	favourable	(Lam & Hsu, 2006; Lu et al., 2014)
Community intention	to attend	(Garbarino & Johnson, 1999)
	to subscribe	(Garbarino & Johnson, 1999)
	to donate	(Garbarino & Johnson, 1999)
	to intend	(Hsu & Huang, 2012; Lam & Hsu, 2006; Lu et al., 2014; Singh et al., 2014)
	to plan	(Hsu & Huang, 2012)
	to want	(Hsu & Huang, 2012; Lam & Hsu, 2006; Lu et al., 2014)
	probably will	(Hsu & Huang, 2012; Lu et al., 2014)
	to expect	(Singh et al., 2014)
	likelihood	(Lam & Hsu, 2006; Lu et al., 2014)
Community participation	communicating with local government	(Lai & Nepal, 2006)
	participation in ecotourism planning	(Belisle & Hoy, 1980; Lai & Nepal, 2006)
	increasing ecotourism-related employment	(Lai & Nepal, 2006; Ramos & Prideaux, 2014)
	participation in ownership and management	(Stronza & Gordillo, 2008)
	participation in conservation	(Stronza & Gordillo, 2008)
	making and selling local goods	(Ramos & Prideaux, 2014)
	participation in decision-making	(Ramos & Prideaux, 2014)

5.3.7 Community's Intentions to Participate in Ecotourism (CInt)

Behavioural intentions represents the probability of an actual behaviour occurring by an individual in a given situation (Hsu & Huang, 2012). Scholars measure intention using different indicators depending on the context of their study. Table 5-5 outlines nine different measures of behavioural intention. This study, however, borrowed six indicators from the existing literature to measure community intentions. The first measure is 'attend to', which is borrowed from Garbarino and Johnson (1999). The second measure used in this study is 'contribute to', which is also taken from Garbarino and Johnson (1999). Another relevant measure is 'expect to', which is borrowed from Singh et al. (2014). The fourth measurement item, 'intend to', is borrowed from Hsu and Huang (2012), Lam and Hsu (2006), Lu et al. (2014), and Singh et al. (2014). The fifth measure of intention is 'want to', which is borrowed from Hsu and Huang (2012), Lam and Hsu (2006), and Lu et al. (2014). The last measure of intention used in this study, 'will try to', is taken from Hsu and Huang (2012), and Lu et al. (2014). The above items were determined to be relevant because the purpose of this study is to measure the intention of the local community toward their participation in various ecotourism-related activities. The field study data also supported these measures for assessing community intention to participate in ecotourism-related activities.

5.3.8 Community's Participation in Ecotourism (CPart)

According to TPB, community participation refers to actual behaviour in the current research, which is influenced by community intentions. Community participation has been measured in different ways in previous tourism literature. Table 5-5 presents examples of different measures of participation in tourism related activities. Borrowing ideas from tourism literature, six different indicators are used in the current study to measure the community's participation in ecotourism. The first measure relates to the participation in 'ownership and management' of ecotourism ventures which is borrowed from Stronza and Gordillo (2008). The second measure regarding participation in ecotourism 'planning' is borrowed from Belisle and Hoy (1980), and Lai and Nepal (2006). The third indicator is participation in 'decision making', which is taken from Ramos and Prideaux (2014). The fourth indicator of community

participation, in 'conservation' of the ecotourism site, is taken from Stronza and Gordillo (2008). The fifth indicator of community participation relates to 'making and selling' goods and services, which is borrowed from Ramos and Prideaux (2014). The last measure of community participation regarding the involvement in ecotourism-related 'employment' is taken from Lai and Nepal (2006), and Ramos and Prideaux (2014). The participations of the local community in all six forms were also identified in the analysis of the field study data.

5.3.9 **Improved Standard of Living due to Ecotourism (ISLE)**

The final outcome variable of this research is ISLE. ISLE has both economic as well as social implications. The economic measures of standard of living are related to an individual's income and their ability to spend money on higher commodities (Bérenger & Verdier-Chouchane, 2007; Rahman, Mittelhammer, & Wandscheider, 2005). Borrowing ideas from existing literature, the current study combines different dimensions of improved standard of living.

There is no universally accepted dimensions of standard of living (see Andereck, Valentine, Knopf, & Vogt, 2005; Montgomery, Gragnolati, Burke, & Paredes, 2000; Sen & Hawthorn, 1988). According to Ringen (1991), household income is one of the indicators for the standard of living. Belisle and Hoy (1980) opine that tourism development of a destination has positive impact to the average standard of living of local residents. Individuals' standard of living can be improved through employment generation and tax income for the government which in turn is allocated for the development of the services for the local residents (Andereck & Nyaupane, 2011). Montgomery et al. (2000), illustrated the standard of living in some African countries with reference to the access to clean water and electricity. As mentioned earlier, Skantze, et al. (1992), suggested that access to public transport, school, books and papers, cheap home-help services, and inexpensive dental and health care are the pre-conditions of improved standard of living. According to Bérenger and Verdier-Chouchane (2007) standard of health, education and material well-being are the important predictors of the standard of living. Hence, there is no consensus on the predictors of standard of living in tourism literature. The current study therefore studies the improved standard of living as the ultimate dependent variable.

Table 5-6 presents many different indicators of improved standard of living. This research, however, uses seven indicators to measure ISLE. The first measure is the increase of 'household income', which is borrowed from Ringen (1991). The second measure of ISLE, 'access to public transport', is taken from Skantze et al. (1992). The third and fourth measures are 'access to clean water' and 'access to electricity' respectively, which are taken from Montgomery et al. (2000). The fifth and sixth measures of ISLE are 'access to better health services' and 'standard of education' respectively, which are borrowed from Skantze et al. (1992), and Bérenger and Verdier-Chouchane (2007). The last measurement item, 'average standard of living', is taken from Belisle and Hoy (1980). Field study participants also addressed all seven measures of ISLE during their interviews.

Table 5-6: Dimensions of standard of living

Construct	Measures	References
Improved standard of living	household income	(Ringen, 1991)
	access to clean water	(Montgomery et al., 2000)
	access to electricity	(Montgomery et al., 2000)
	access to public transport	(Skantze et al., 1992)
	access to school/education	(Bérenger & Verdier-Chouchane, 2007; Skantze et al., 1992)
	access to books and papers	(Skantze et al., 1992)
	access to cheap home-help services	(Skantze et al., 1992)
	access to inexpensive dental and health care	(Bérenger & Verdier-Chouchane, 2007; Skantze et al., 1992)
	material well-being	(Bérenger & Verdier-Chouchane, 2007)
	average standard of living	(Belisle & Hoy, 1980)

5.3.10 **Corruption (Cor)**

The field study data points to the existence of corruption by government officials and pirate groups who are attached to the forest. This research identifies different dimensions of corruption that were mentioned by the interview participants as the indicators of corruption in this study. As mentioned in Chapter 4, the most common indicators of corruption are bribery practices, taking enticement, illegal resource removal, kidnaping, taking ransom, and torture by the pirate groups. After identifying those factors from the interview data, related literature was examined in order to conceptualise the indicators of corruption. Literature suggests that bribery practices, illegal resource removal and taking enticement are the main indicators of corruption

(Karki & Hubacek, 2015; Lawler & Hipp, 2010; León et al., 2013). The other three indicators, namely, kidnapping, taking ransom, and torture were hardly supported by corruption literature. However, they were still considered as the indicators of corruption, as the interview participants found them highly contextual and relevant.

5.3.11 **Government Policy (GP)**

Government policy is an additional but important construct identified from the analysis of the field study data. Interview participants defined government policy in terms of infrastructure development policy, policy toward security, policy for caring and maintenance, guidelines and training, awareness building programs, and overall government policy for ecotourism development. These aspects were identified as the indicators of government policy in the existing literature (Nunkoo & Smith, 2013; Wan et al., 2014), however, policy toward security not a major indicator of government policy. As security is one of the most common factors in tourism decision marking, this indicator was included in the current research to examine government policy.

5.3.12 **Political Instability (PIns)**

The third additional construct identified from field study data was political instability. Several aspects of political instability were mentioned by the interview participants namely: government stability, conflict among the political parties, blockade by the movement groups, frequent hartal and strike, and religion in politics. Since the analysis of the field study data found that all of these factors cause political instability of the destination country and thus, affect tourism, this study considered them as important dimensions which needed to be explored further in line with the existing literature. Existing literature supports the finding that government stability, conflict among the political parties and religion in politics reflects the political instability of a country (Wan et al., 2014; Yap & Saha, 2013). As is a common phenomenon in Bangladesh, blockade and frequent hartal and strike make a political environment vulnerable which affects tourism development of the country. Thus, this study considers all five indicators to determine the influence of political instability in the current research.

5.4 QUESTIONNAIRE DEVELOPMENT FROM THE MEASUREMENT ITEMS

As mentioned in Chapter 3, the quantitative data was collected for testing the hypotheses of this research. Thus, structured questionnaires were used as a quantitative survey. The questionnaire reflects the objectives as well as hypotheses of the research, and contains two main sections; Section A includes the variables used in the research model and Section B relates to the socio-demographic variables of the respondents. The data collected in Section A was used to test the hypothetical relationships among the constructs of the research model. To prepare Section A of the questionnaire, all the theoretically justified and contextualised constructs were included. Similarly, the measurement items used in the questionnaire under each of the constructs were also conceptualised and contextualised based on existing literature and the field study findings. The key words for each measurement item are borrowed from the existing literature as well as from the field study data. Once all the measurement items were set within their relevant construct, they were used in the questionnaire. To make the questionnaire easier to understand, all the measurement items were expanded with suitable statements. Local dialects were also included in designing the questionnaire statements.

Furthermore, different socio-demographic variables were included in Section B of the questionnaire. These variables were included in the questionnaire in order to understand the socio-demographic profile of the respondents as well as to determine if there is any need to compare the results derived from the analysis of Section A variables or to use either of the variables as the control variable. Finally, the quantitative questionnaire comprised of 14 different dimensions (constructs) in Section A and eight socio-demographic variables in Section B. Under each of the constructs, five to seven measurement items were addressed to obtain data. As mentioned earlier in the methodology, the initial questionnaire was refined through pre-testing procedures. The comments and suggestions given by the pre-testing participants were addressed when preparing the final version of the questionnaire (see Appendix C). The final questionnaire was approved by the corresponding authority of Curtin University. Once all the prerequisites for designing the quantitative questionnaire for this research were complete, the final version of the questionnaire was prepared for data collection.

5.5 CHAPTER SUMMARY

This chapter developed the hypotheses in line with the research model. The basis and justification of the hypotheses development was supported by the existing literature and the field study findings. There were 11 different hypotheses in this research which describe the relationship between the constructs of the research model. Two additional hypotheses were designed in this chapter to estimate the mediation effect. This chapter further explained the measurement items for each of the constructs. The measurement items were also selected from the existing literature and the field study data. Finally, this chapter highlights the process for developing the final questionnaire.

Chapter 6 DATA ANALYSIS AND RESULTS

6.1 INTRODUCTION

This chapter presents the analysis and results of the survey data. The chapter begins with an analysis of the pilot study data, which reveals the trend of the gathered data. The data analysis contains two parts: descriptive statistics for understanding the socio-demographic profile of the respondents and SEM analysis for assessing the structural relationships. Prior to the data analysis, data screening procedures are discussed such as (i) treatment of incomplete responses and missing data, (ii) test of non-response bias, and (iii) test of common method bias. After the data preparation is complete, the refined data set is considered for both socio-demographic analysis and SEM analysis. Data relating to the socio-demographic variables is analysed using SPSS software whereas the SEM is analysed using Smart PLS software (www.smartpls.com). SEM analysis is comprised of two parts: (i) the measurement part and (ii) the structural part. In the structural part of the SEM analysis, this study tests the hypothesised relationships of the constructs of the research model.

6.2 PILOT STUDY

The pilot study was conducted to minimise the ambiguity of the questionnaire. Face-to-face interview techniques were administered in the pilot study survey. In all, 49 responses were collected from the study area for the purpose of data analysis. In the pilot study survey, respondents were encouraged to comment on any complexity in the questionnaire either about the content or the formation of the response category. It was observed that respondents identified some ambiguities in the questionnaire, particularly regarding the use of words as well as the overall structure of the question. The ambiguities related predominantly to the power, trust, community participation, political instability, and improved standard of living variables. Another comment was

made regarding the length of the questionnaire; the average answering time for each questionnaire was around 30 minutes, which was a concern for the respondents. As part of the statistical analysis of the pilot study data, the descriptive statistics (i.e., the mean and standard deviation) were calculated to determine the trend of data gathered. The results reveal comparatively higher mean scores and lower SD scores for several variables (see Table 6-1). These results highlight pitfalls with the questionnaire that likely limit the ability of the respondents to make informed judgements. Thus, necessary adjustments were made by rewording and rephrasing the question sentences based on the remarks of the respondents and the results of the descriptive statistics. However, nothing was done to reduce the content (length) of the questionnaire as all the parts of the questionnaire were essential to the study. To overcome the time constraint on answering all questions, the respondents were asked to allocate additional time to their participation in the final survey.

6.2.1 Descriptive Statistics

Besides checking the ambiguities in the questionnaire, the pilot study served another integral purpose. The pilot survey was also administered to determine the trend of the gathered data. For this purpose, the data was analysed using descriptive statistical tools, such as mean and standard deviation (SD). As mentioned in the earlier section, the overall results show a high trend of mean scores and low SD scores for almost half of the measurement items (see Table 6-1). Hence, it was assumed that the trend of the data might not produce significant results for further analysis. Therefore, the researcher further reviewed the questionnaire and made some adjustments to the question sentences such as changing active sentences to passive form or changing positive sentences to negative statements, or vice versa, to overcome any bias responses (Arndt & Crane, 1975).

Table 6-1: Descriptive statistics of pilot study data

Constructs	Items	Mean	SD	Constructs	Items	Mean	SD
Attraction of Ecotourism site (Attr)	Attr1	5.92	0.40	Motivation for ecotourism development (Mot)	Mot1	5.27	0.88
	Attr2	5.57	0.74		Mot2	5.41	0.93
	Attr3	5.84	0.43		Mot3	5.88	0.44
	Attr4	4.76	1.13		Mot4	5.65	0.66
	Attr5	4.67	1.35		Mot5	5.33	1.01
	Attr 6	4.59	1.17		Mot6	5.18	0.97
Power (Po)	Po1	5.18	0.83	Trust (Tr)	Tr1	5.78	0.69
	Po2	5.35	0.78		Tr2	5.49	0.71
	Po3	5.10	0.90		Tr3	5.63	0.78
	Po4	5.04	0.94		Tr4	4.90	0.94
	Po5	5.31	0.87		Tr5	5.22	0.92
	Po6	4.98	1.36		Tr6	5.55	0.79
Information sharing (InfoS)	InfoS1	5.63	0.67		Tr7	5.61	0.61
	InfoS2	5.51	0.77	Perceived benefits (PB)	PB1	5.49	0.89
	InfoS3	5.41	1.00		PB2	5.49	0.85
	InfoS4	5.45	0.77		PB3	4.90	1.14
	InfoS5	5.67	0.56		PB4	5.80	0.54
	InfoS6	5.71	0.54		PB5	5.41	0.93
Perceived costs (PC)	PC1	4.35	1.38		PB6	5.67	0.63
	PC2	4.06	1.42		PB7	5.55	0.74
	PC3	4.20	1.44	Community's attitude towards participation in ecotourism (CAtti)	CAtti1	5.31	0.92
	PC4	2.37	1.27		CAtti2	5.10	0.87
	PC5	4.78	1.12		CAtti3	5.57	0.82
	PC6	1.82	1.13		CAtti4	5.53	0.87
Community's intention to participation in ecotourism (CInt)	CInt1	4.82	1.15		CAtti5	5.57	0.74
	CInt2	4.94	0.99		CAtti6	5.61	0.91
	CInt3	4.82	0.97	Community's participation in ecotourism (CPart)	CPart1	4.88	1.44
	CInt4	4.63	1.24		CPart2	4.00	1.44
	CInt5	4.88	1.15		CPart3	3.78	1.49
	CInt6	4.65	1.41		CPart4	4.22	1.70
Corruption (Cor)	Cor1	4.61	1.66		CPart5	2.35	1.72
	Cor2	4.10	1.72		CPart6	5.43	1.10
	Cor3	4.33	1.63	Political instability (PIns)	PIns1	4.51	1.47
	Cor4	5.04	1.27		PIns2	5.02	1.39
	Cor5	5.08	1.38		PIns3	5.20	1.21
	Cor6	5.06	1.27		PIns4	5.41	1.08
Government policy (GP)	GP1	3.43	1.17		PIns 5	3.51	1.83
	GP2	4.18	1.25	Improved standard of living due to ecotourism (ISLE)	ISLE1	5.49	1.02
	GP3	3.92	1.43		ISLE2	5.06	1.01
	GP4	3.67	1.46		ISLE3	3.47	1.60
	GP5	4.49	1.08		ISLE4	3.88	1.32
	GP6	4.04	1.37		ISLE5	3.53	1.37
Valid N= 49 (list wise)					ISLE6	4.04	1.15
					ISLE7	5.10	1.05

Source: Pilot study

6.2.2 Socio-demographic Profile of the Pilot Study Samples

Besides the structured questions, the respondents were asked to provide data on eight demographic questions relating to their age, gender, education, family size, occupation, duration in their current occupation, previous occupation, and length of living in the area. The socio-demographic data reveals that the majority of respondents

were between the ages of 26 and 40 years old, and all of them were male which indicates that only males are participating in ecotourism activities in this area whereas the large majority of the female population are not. This finding was taken into consideration during the final data collection to determine whether there is any segment of ecotourism in which women participate. With regards to education, a majority of the respondents were not well educated; only 14.3% of the respondents held a tertiary degree. Additionally, most of the respondents had 5 or more family members (55.1%) which indicates that local people can maintain even bigger families when they are involved in ecotourism-related professions. Thus, it can be assumed that ecotourism generates sufficient income for their needs. Occupations of the respondents varied, including: tour guides, transport services, hotel/motel operations, restaurant and café workers, cultural shows, fishing, collecting and selling honey, and others. However, a majority of the respondents (34.7%) were involved in transport related services in this area. Most of the respondents (91.8%) started their occupations as a new entrant to the industry and have continued in their occupation for more than 10 years (49%). It was also found that most of the respondents (79.6%) had been living in the ecotourism area for more than 10 years. Overall, the results from socio-demographic analysis indicate that most people have lived in the area for a long time, have poor educational background and are involved in ecotourism-related activities which generates a reasonable income enabling them to maintain a larger family size (see Table 6-2).

Table 6-2: Socio-demographic statistics of the respondents from pilot study

Socio-demographic profile	**Classification**	**Number (Frequency)**	**Percentage**
Age	18-25 yrs	11	22.4
	26-40 yrs	29	59.2
	> 40	9	18.4
	Total	**49**	**100**
Gender	Male	49	100
	Female	0	0
	Total	**49**	**100**
Education	Primary	11	22.4
	Secondary	23	46.9
	Higher Secondary	8	16.3
	Tertiary	7	14.3
	Total	**49**	**100**
Family size	1	1	2
	2	1	2
	3	7	14.3
	4	13	26.5
	5 & more	27	55.1
	Total	**49**	**100**
Occupation	Tour guide	5	10.2
	Transport service	17	34.7
	Hotel/motel business	2	4.1
	Restaurant & Cafe	4	8.2
	Cultural show	1	2.0
	Fishing	6	12.2
	Honey collecting & selling	5	10.2
	others	9	18.4
	Total	**49**	**100**
Duration of current occupation	≤ 5 yrs	14	28.6
	6-10 yrs	11	22.4
	>10 yrs	24	49.0
	Total	49	100
Previous occupation	Yes	4	8.2
	No	45	91.8
	Total	**49**	**100**
Length of living in this area	≤ 5 yrs	3	6.1
	6-10	7	14.3
	>10 yrs	39	79.6
	Total	**49**	**100**

Source: Pilot study

6.3 CONDUCTING THE SURVEY

The final data was collected using face-to-face personal interview techniques with a structured questionnaire. The initial plan was to collect 500 responses from the local community involving various ecotourism-related professions. However, it was possible to reach to 487 respondents. The data collection team could not manage the

targeted number of samples due to remoteness of the study site and unwillingness of the respondents to participate in the survey. At the beginning of the data collection, 30 questionnaires were distributed to the respondents, with a one week turnaround time. Of 30, 17 questionnaires were returned but most with incomplete responses. At this stage, the researcher assumed that this poor response rate might affect the overall results of the study. Hence, changes were made to the data collection techniques and the researcher then engaged the face-to-face personal interview technique. As a result, a total of 438 data responses were collected from the study survey (i.e., excluding the pilot study data). 341 surveys were collected in the first stage, followed by 97 responses in the second stage. Table 6-3 explains the details of the data handling process.

Table 6-3: Handing the survey data

Response	Number	Percentage
Target sample size	500	100
Total responses	438	87.6
First wave data	341	68.2
Second wave data	97	19.4
Total unusable data	32	6.4
Total useable data	406	81.2

Source: Survey data

6.3.1 Data Characteristics and Treatments

There were some inappropriate responses found in the initial data set that had limited application to PLS software for analysis. A common issues which also arose was the return of incomplete responses, missing values, and the existence of outliers included in the initial data set. Hence the data set needed to be adjusted to improve the overall data quality (Batista & Monard, 2003). Out of 438 surveys, 4 cases were found with incomplete responses and they were accordingly deleted from the data set. The remaining data was further reviewed for missing value. At this stage, 8 cases were found with total of 32 missing values that were replaced by -99 in the data set (Wong, 2013). During the check for outliers, 28 cases were found with outlier values and inconsistent patterns of response (including one case with six missing values). 28 cases were therefore deleted from the final data set to improve the data quality. In the end, the data set contained 406 responses with 26 adjustments for missing values.

6.3.2 Sampling Error and Test of Non-response Bias

Non-response bias is not uncommon and has the potential affect a study's ability to truly reflect the entire population. To examine the non-response bias, this study employed a non-parametric test by applying the Mann-Whitney test, which determines the difference between two independent samples. For this purpose, the data were divided into two waves, such as early responses data (n=341) as group 1 and late responses data (n=97) as group 2 in the SPSS data sheet. The assumption of this analysis was that there are differences in the responses between two groups in regards to the particular measurement items. The results of the Mann-Whitney test are presented in Table 6-4. The results reveal that the z-scores for all of the tested items were insignificant, so the null hypothesis was accepted and the alternative hypothesis was rejected, meaning that there was no difference between the two groups of data sets in relation to their responses. Thus, it can be argued that non-response bias did not exist in the data set. As such, the data set was valid for further analysis.

Table 6-4: Mann–Whitney test

Construct	Items	Z- value	Significance
Attraction of Ecotourism site (Attr)	Attr6	-.525	.60
Motivation for ecotourism development (Mot)	Mot2	-.321	.75
Power (Po)	Po1	-1.425	.15
Trust (Tr)	Tr6	-1.010	.312
Information sharing (InfoS)	InfoS3	-.549	.583
Perceived benefits (PB)	PB1	-.040	.968
Perceived costs (PC)	PC2	-.317	.751
Community attitude towards participation in ecotourism (CAtti)	CAtti1	-1.571	.116
Community intention to participation in ecotourism (CInt)	CInt3	-.036	.971
Community's participation in ecotourism (CPart)	CPart1	-1.297	.195
Improved standard of living due to ecotourism (ISLE)	ISLE1	-1.018	.309

Source: Survey data

6.3.3 Test of Common Method Bias

Common method bias is a potential problem in behavioural research because it is one of the main sources of measurement errors, which may affect the validity of empirical findings (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Common method bias is present "when the same method is used to measure correlations between variables" (Schwarz, Schwarz, & Rizzuto, 2008, p. 1). The existence of common method bias in the data set was another challenge for this study. The researcher was conscious of reducing common method bias in the beginning of the study. Hence, every step was

carefully handled including sample selection, questionnaire preparation and all other relevant stages of the research process. For example, the samples of this study were carefully selected from within close proximity of the study site, who were directly or indirectly related to (affected by) ecotourism activities. Secondly, the respondents were made aware of the confidentiality of their responses from the outset, to ensure they answered all questions freely and honestly. The field study data shows that the literacy rate, as well as the respondent's proficiency in English, was poor, hence, the questionnaire was translated into the mother tongue of the respondents using simple and unambiguous words. Thirdly, if any clarification was needed, the data collection team was able to provide this, as this survey was conducted by a face-to-face personal interview. Fourthly, many of the questions contained examples (where needed) for better understanding of the questions. Fifthly, this study avoided double-barrelled questions which tends to confuse the respondents.

Table 6-5: Test of common method bias

Constructs' relationship	**Path coefficient (β)**	**Significance level**
Marker -> ISLE	0.0322	0.6461

Note: β=0.0322 and p=0.6461

Previous literature suggests different approaches for controlling method variance problems, for example, multiple regression and partial correlations (Ganster, Hennessey, & Luthans, 1983), partial correlation technique (Lindell & Whitney, 2001), confirmatory factor analysis (CFA) approach (Podsakoff et al., 2003) and unmeasured latent method construct (Richardson, Simmering, & Sturman, 2009; Williams, Cote, & Buckley, 1989; Williams, Hartman, & Cavazotte, 2010). In this study, the CFA marker technique was used to test the common method bias. According to Richardson et al. (2009), the CFA marker technique can be used to explain random errors in the marker and substantive constructs, and also account for congeneric and non-congeneric common method variance (CMV). To test the common method bias, data was gathered for a marker variable (i.e., religion in politics) which was uncorrelated and theoretically irrelevant (Richardson et al., 2009) to the ultimate dependent variable (i.e., improved standard of living due to ecotourism) of the study. Table 6-5 presents the results of the common method bias test. The results show that the relationship of marker variable to the ultimate dependent variable is insignificant (β=0.0322 and p=0.6461) which indicates that there is no common method bias within the data set.

6.3.4 Socio-demographic Statistics of the Samples of the Survey

The socio-demographic statistics of the study samples are presented in Table 6-6. With regards to the age of the respondents, data was collected based on the segmentation of age groups of the respondents (i.e., 18-25, 26-40, and > 40 years). The survey data reveals that most of the respondents were above 25 years old (i.e., 44.1% aged 26-40 years and 43.1 % aged > 40 years).

Table 6-6: Socio-demographic statistics of survey data

Socio-demographic profile	Classification	Number (Frequency)	Percentage
Age	18-25 yrs	52	12.8
	26-40 yrs	179	44.1
	> 40	175	43.1
	Total	**406**	**100**
Gender	Male	321	79.1
	Female	85	20.9
	Total	**406**	**100.0**
Education	Primary	206	50.7
	Secondary	174	42.9
	Higher Secondary	21	5.2
	Tertiary	5	1.2
	Total	**406**	**100.0**
Family size	1	4	1.0
	2	18	4.4
	3	53	13.1
	4	140	34.5
	5 & more	191	47.0
	Total	**406**	**100.0**
Occupation	Tour guide	24	5.9
	Transport service	57	14.0
	Hotel/motel business	26	6.4
	Restaurant & Cafe	72	17.7
	Handicrafts	30	7.4
	Cultural show	13	3.2
	Fishing	106	26.1
	Honey collecting & selling	31	7.6
	others	47	11.6
	Total	**406**	**100.0**
Duration of current occupation	≤ 5 yrs	62	15.3
	6-10 yrs	80	19.7
	>10 yrs	264	65.0
	Total	**406**	**100.0**
Previous occupation	Yes	89	21.9
	No	317	78.1
	Total	**406**	**100.0**
Length of living in this area	≤ 5 yrs	8	2.0
	6-10	24	5.9
	>10 yrs	374	92.1
	Total	**406**	**100.0**

Source: Survey data

It was found that about 79.1% of the respondents were male, however, there was a good number of female participants (20.9%) in the final survey, which was one of the concerns in the pilot study. The data shows that most of the respondents (50.7%) had

a primary level of education and only 1.2% of the respondents had completed tertiary education. This finding indicates that persons with a higher education were apparently less involved in ecotourism-related activities; this needs to be considered when working for ecotourism development in this area. With regard to family size, the data reveals that almost half (47%) of the respondents had 5 or more family members, and they were somewhat maintaining the family with the income earned from ecotourism-related activities. These results indicate that ecotourism can provide sufficient income opportunity for the local residents.

The data supports the finding that numerous categories of respondents are participating in ecotourism-related activities in the study area. They are employed in the areas of tour guides, transport services, hotel businesses, restaurant and café businesses, handicrafts, cultural shows, fishing, honey collection and selling, and other related professions. Among all, the participation involved with making and selling handicrafts were not identified in the pilot study data, which indicates that the final survey covered a much wider scale of involvement in ecotourism. Data was also collected regarding the length of the respondent's time in their current occupation. It was found that most of the respondents (65%) had been with in same profession for more than 10 years, which indicates that engagement in ecotourism is considered to be a stable profession. It was also concluded that most respondents (78.1%) started ecotourism-related activities as a new profession. The last demographic variable related to the length of residency in the study area; it was found that 92.1% of the respondents had been living in the area for more than 10 years. The overall socio-demographic findings suggest that the ecotourism site (the Sundarbans) provides significant benefits for the livelihoods of local residents.

6.4 STRUCTURAL EQUATION MODELLING (SEM) ANALYSIS

After analysing the socio-demographic profiles of the respondents, this research moved to SEM analysis. In fact, SEM analysis includes two basic parts: (i) the measurement model and (ii) the structural model. The measurement part was conducted to examine the validity and reliability of the measures used for measuring the constructs of the research model. Once the analysis of the measurement model was satisfactorily completed, the structured part of the analysis was run to examine the relationship between the constructs in the research model. Table 3-4 mentions the sequential arrangement of SEM analysis and corresponding estimations.

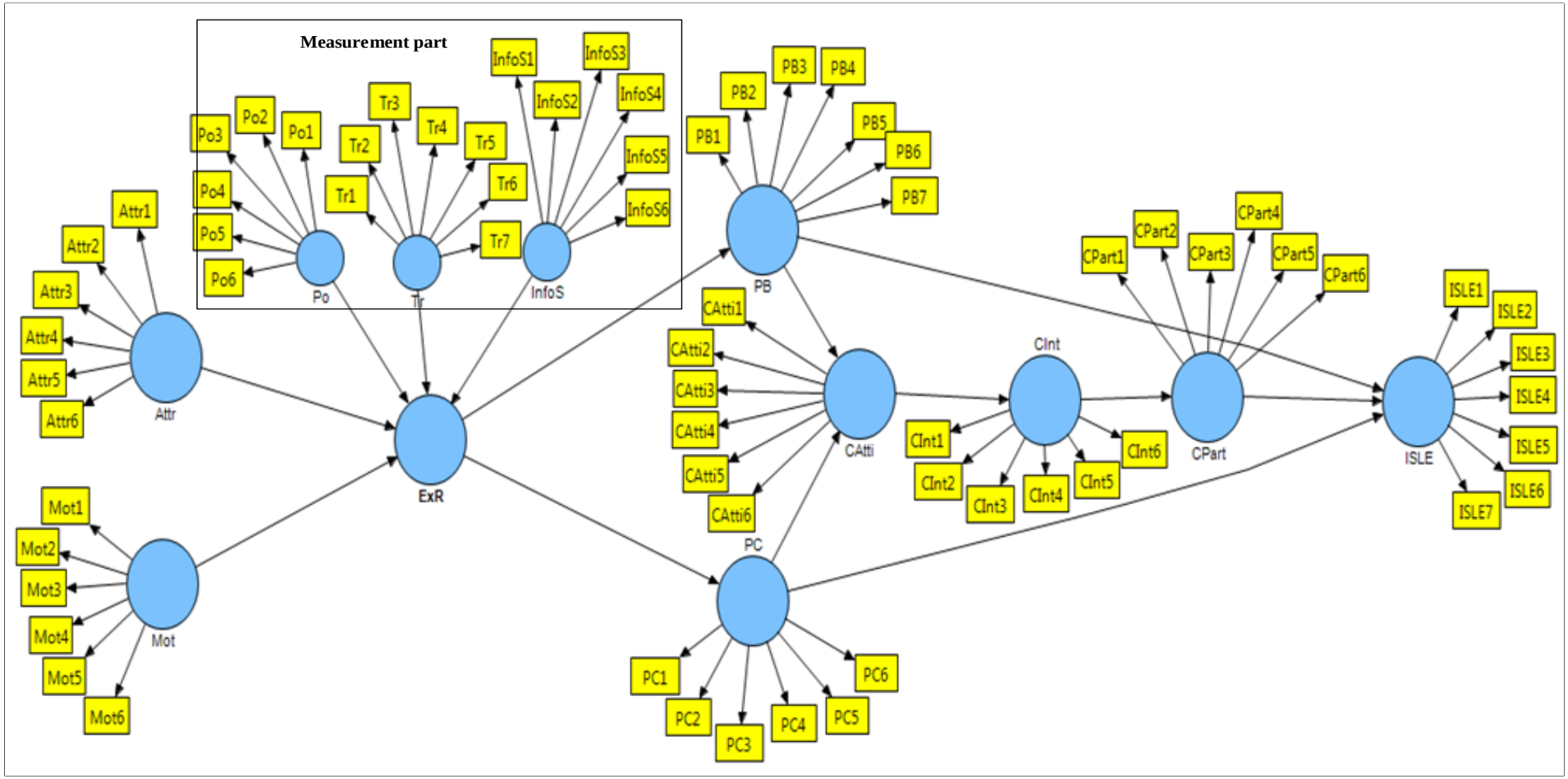


Figure 6-1: Full SEM model

As mentioned in the full SEM model (see Figure 6-1), there were 69 first-order reflective type measures (indicators) under 11 constructs, which represents the measurement part of the model. This model also comprised 11 hypothetical relationships representing the structural paths of the model. However, the arrow links from Po → ExR, Tr → ExR and InfoS → ExR indicate the second-order formative measures of the exchange relationship (ExR) and thus, they were not part of the structural relationship.

6.4.1 Assessing the Measurement Model

The assessment of the measurement model comprised all the constructs and variables considered in the behavioural exchange model (see Figure 4-3). This model comprised 12 measurement constructs including one second-order construct that is either reflective or formative in nature. As mentioned in Table 3-4, the reflective model was measured by the indicator's reliability, internal consistency reliability, convergent validity, and discriminant validity (both in item level and construct level). This Table also shows that the formative model was measured by the indicators' absolute contribution (loadings), indicators' relative contribution (weights) and test of multi-collinearity issues. The following sections present details of the assessment of the measurement model.

6.4.1.1 Assessing the reflective measurement model

The research model included 11 first-order reflective type constructs such as (Attr), (Mot), (Po), (Tr), (InfoS), (PB), (PC), (CAtti), (CInt), (CPart) and (ISLE). There were 6 to 7 measurement indicators under each of the constructs. The reflective model was measured by analysing the validity and reliability of the indicators for their representative construct (Hair et al., 2011, 2013; Ringle et al., 2012). The following sections describe, in detail, the reflective measurement model.

6.4.1.1.1 Reliability

This study assessed two kinds of reliability tests: indicator reliability and internal consistency reliability. The former is explored at the indicator's level whereas the latter is executed at the construct level.

Indicator reliability

Indicator reliability was estimated by the indicators' absolute contribution (loadings scores). The rule of thumb or accepted value in this connection is ≥ 0.70, however, in exploratory studies, a loading of 0.40 is acceptable (Hair et al., 2013). Since this study does not confirm any existing findings in the current research context, the cut off score is 0.40. However, this study accepts ≥ 0.60 as the minimum cut off score for loading. Some of the indicators were deleted for having a score of < 0.60 (see Table 6-7).

Table 6-7 shows that some of the indicators (e.g., Attr2, Attr4, Attr6, Mot2, Mot5, Po6, Tr6, InfoS3, PC4, PC5, PC6, CPart5, ISLE3, ISLE4, ISLE5 and ISLE6) take poor loadings than that of the cut-off point. Considering the minimum cut off criterion for loadings, all of the poor loading indicators were deleted from the data set and further analysis was conducted (Hair et al., 2011). At this stage, all the indicators considered for the second round of PLS algorithm analysis was found to have loadings of ≥ 0.60 which was expected in this study (see Table 6-8).

Table 6-7: Assessment of indicators' reliability

Constructs	Items	Loadings	CR	AVE	Constructs	Items	Loadings	CR	AVE
Attraction of Ecotourism si	Attr1- visiting spots and natural scenery	0.75	0.75	0.36	Perceived costs	PC1- increases the prices of land and property	0.75	0.47	0.30
	Attr2- wild animals living in this forest	0.59				PC2- increases the prices of other goods	0.58		
	Attr3-beautiful landscape	0.81				PC3- increases the cost of living	0.66		
	Attr4- ecotourism-related services	0.36				PC4- increases the crime rate	-0.24		
	Attr5- safety and security	0.62				PC5- changes the traditional way of life	0.52		
	Attr6- easily accessibility	0.26				PC6- community is being exploited	-0.38		
Motivation for ecotourism development	Mot1- doesn't damage natural environment	0.74	0.81	0.42	Community's attitude towards participation in ecotourism	CAtti1- worthwhile employment opportunities	0.61	0.89	0.56
	Mot2- improve socio-economic condition	0.46				CAtti2- benefits outweigh the negative impacts	0.81		
	Mot3- augments international understanding	0.74				CAtti3- great promise for our future way of life	0.77		
	Mot4- a novel profession	0.66				CAtti4- experience in ecotourism is enjoyable	0.73		
	Mot5- provides new knowledge	0.43				CAtti5- People feel pleasant	0.78		
	Mot6- creates partnership	0.76				CAtti6- participation in ecotourism has foreseeable future	0.79		
Power	Po1- cooperation among the parties	0.71	0.83	0.46	Community's intention to participation in ecotourism	CInt1- intention to attend to the ecotourism	0.76	0.89	0.58
	Po2- quality of advice provided by the parties	0.68				CInt2- intention to contribute to the ecotourism	0.80		
	Po3- mutual assistance	0.75				CInt3- expect to participate in ecotourism	0.81		
	Po4- getting favour	0.63				CInt4- intend to participate in ecotourism	0.72		
	Po5- getting good advice	0.73				CInt5- Want to participate in ecotourism	0.78		
	Po6- fail to comply the requests causes withdrawal the relationship	0.53				CInt6- will try to participate in ecotourism	0.69		
Trust	Tr1-keeping promises	0.70	0.87	0.49	Community's participation in ecotourism	CPart1- participation in ownership and management	0.69	0.81	0.43
	Tr2- believe in the information	0.78				CPart2- participation in ecotourism planning	0.73		
	Tr3- honest in the exchange	0.71				CPart3- participation in decision-making	0.74		
	Tr4- not difficult to trust the parties	0.70				CPart4- participation in conservation	0.67		
	Tr5- even-handed in negotiations	0.65				CPart5- participation in making or selling local goods	0.41		
	Tr6- take care of our needs	0.60				CPart6- participation in ecotourism-related employment	0.64		
	Tr7- reliable to each other	0.75			Improved standard of living due to ecotourism	ISLE1- increases household income	0.77	0.58	0.23
Information sharing	InfoS1- share information in detail	0.76	0.87	0.52		ISLE2- access to the public transportation	0.69		
	InfoS2- share information in a timely manner	0.79				ISLE3- access to the clean water in this area	0.09		
	InfoS3- learn by interacting with others	0.57				ISLE4- access to electricity in this area	0.28		
	InfoS4- share customized information	0.76				ISLE5- access to better health services	0.07		
	InfoS5- information provided might help other parties	0.73				ISLE6- improves the standard of education	0.16		
	InfoS6- feel good telling an experience	0.71				ISLE7- improves the average standard of living	0.65		
Perceived benefits	PB1- creates employment opportunities	0.63	0.87	0.48					
	PB2- community gets more business	0.71							
	PB3- attracts better infrastructure	0.54							
	PB4- government gets revenue	0.72							
	PB5- contributes to the environmental reservation	0.75							
	PB6- enhances the spirits and image	0.78							
	PB7- benefits local community in general	0.71							

Source: Survey data

Table 6-8: Assessment of indicators' reliability after deleting low loading indicators

Constructs	Items	Loadings	CR	AVE	Constructs	Items	Loadings	CR	AVE
Attraction of Ecotourism si	Attr1- visiting spots and natural scenery	0.81	0.81	60	Perceived costs	PC1- increases the prices of land and property	0.81	0.80	0.58
	Attr2- wild animals living in this forest					PC2- increases the prices of other goods	0.73		
	Attr3-beautiful landscape	0.87				PC3- increases the cost of living	0.74		
	Attr4- ecotourism-related services					PC4- increases the crime rate			
	Attr5- safety and security	0.62				PC5- changes the traditional way of life			
	Attr6- easily accessibility					PC6- community is being exploited			
Motivation for ecotourism development	Mot1- doesn't damage natural environment	0.78	0.84	0.56	Community's attitude towards participation in ecotourism	CAtti1- worthwhile employment opportunities	0.61	0.89	0.56
	Mot2- improve socio-economic condition					CAtti2- benefits outweigh the negative impacts	0.81		
	Mot3- augments international understanding	0.79				CAtti3- great promise for our future way of life	0.77		
	Mot4- a novel profession	0.63				CAtti4- experience in ecotourism is enjoyable	0.73		
	Mot5- provides new knowledge					CAtti5- People feel pleasant	0.78		
	Mot6- creates partnership	0.78				CAtti6- participation in ecotourism has foreseeable future	0.79		
Power	Po1- cooperation among the parties	0.74	0.84	0.51	Community's intention to participation in ecotourism	CInt1- intention to attend to the ecotourism	0.76	0.89	0.58
	Po2- quality of advice provided by the parties	0.67				CInt2- intention to contribute to the ecotourism	0.80		
	Po3- mutual assistance	0.77				CInt3- expect to participate in ecotourism	0.81		
	Po4- getting favour	0.63				CInt4- intend to participate in ecotourism	0.72		
	Po5- getting good advice	0.75				CInt5- Want to participate in ecotourism	0.78		
	Po6- fail to comply the requests causes withdrawal the relationship					CInt6- will try to participate in ecotourism	0.69		
Trust	Tr1-keeping promises	0.70	0.87	0.50	Community's participation in ecotourism	CPart1- participation in ownership and management	0.69	0.83	0.50
	Tr2- believe in the information	0.78				CPart2- participation in ecotourism planning	0.74		
	Tr3- honest in the exchange	0.71				CPart3- participation in decision-making	0.74		
	Tr4- not difficult to trust the parties	0.70				CPart4- participation in conservation	0.68		
	Tr5- even-handed in negotiations	0.65				CPart5- participation in making or selling local goods			
	Tr6- take care of our needs					CPart6- participation in ecotourism-related employment	0.64		
	Tr7- reliable to each other	0.75			Improved standard of living due to ecotourism	ISLE1- increases household income	0.79	0.80	0.51
Information sharing	InfoS1- share information in detail	0.78	0.87	0.58		ISLE2- access to the public transportation	0.72		
	InfoS2- share information in a timely manner	0.80				ISLE3- access to the clean water in this area			
	InfoS3- learn by interacting with others					ISLE4- access to electricity in this area			
	InfoS4- share customized information	0.76				ISLE5- access to better health services			
	InfoS5- information provided might help other parties	0.74				ISLE6- improves the standard of education			
	InfoS6- feel good telling an experience	0.72				ISLE7- improves the average standard of living	0.64		
Perceived benefits	PB1- creates employment opportunities	0.64	0.87	0.52					
	PB2- community gets more business	0.71							
	PB3- attracts better infrastructure								
	PB4- government gets revenue	0.72							
	PB5- contributes to the environmental reservation	0.76							
	PB6- enhances the spirits and image	0.79							
	PB7- benefits local community in general	0.71							

Note: items with shadow marks were deleted

Source: Survey data

Internal consistency reliability

Internal consistency reliability was measured using composite reliability (CR) scores. It was observed that CR scores for PC and ISLE were not substantial when they were run with the full range of the indicators (see Table 6-7). Once, the low loading indicators were deleted and further analysis was made, the scores for composite reliability were found to be higher (≥ 0.80) in all cases, which ensures internal consistency among the constructs (see Table 6-8).

6.4.1.1.2 Validity

Validity was assessed by estimating convergent validity and discriminant validity. The former is measured at the construct level, whereas the latter is measured at both the indicator and construct level (Hair et al., 2011).

Convergent validity

Convergent validity is measured using the AVE score which uses ≥ 0.50 as the minimum acceptable level (Hair et al., 2013). However, AVE scores were poor in the majority of the constructs in the first analysis (see Table 6-7). After deleting the low loadings indicators, the AVE scores increased to between 0.60 and 0.50 in the second analysis (see Table 6-8) which ensures the convergent validity of the constructs.

Discriminant validity

This study examines the discriminant validity of the constructs and their items to ensure that they are diverse from each other (Lowry & Gaskin, 2014). To test the discriminant validity of the indicators, this study performed cross-loading assessments where the estimation is that an indicator's loadings should be higher than all of its cross loadings (Hair et al., 2011). Table 6-9 shows the cross-loadings analysis of the measurement indicators. The cross-loadings matrix shows that, with the satisfactory loading level at ≥ 0.60, only three indicators (e.g., CAtti1, Mot4 and PB1) had lower scores than their cross-loadings. Hence, these indicators were further deleted from the data set (Lowry & Gaskin, 2014).

Table 6-9: Cross-loadings of the measurement indicators

Constructs	Attr	CAtti	CInt	CPart	ISLE	InfoS	Mot	PB	PC	Po	Tr
Attr1	0.81	0.58	0.37	0.13	0.22	0.58	0.58	0.47	0.26	0.47	0.46
Attr3	0.87	0.60	0.42	0.17	0.23	0.55	0.59	0.50	0.28	0.53	0.53
Attr5	0.62	0.37	0.25	0.15	0.22	0.34	0.34	0.32	0.16	0.37	0.37
*CAtti1	0.39	0.61	0.26	0.28	0.30	0.40	0.43	0.48	0.20	0.39	0.40
CAtti2	0.57	0.81	0.39	0.22	0.41	0.64	0.64	0.65	0.32	0.58	0.59
CAtti3	0.52	0.77	0.40	0.19	0.30	0.55	0.59	0.56	0.22	0.50	0.53
CAtti4	0.49	0.73	0.40	0.20	0.29	0.46	0.49	0.49	0.23	0.46	0.45
CAtti5	0.53	0.78	0.36	0.20	0.37	0.56	0.57	0.58	0.31	0.45	0.50
CAtti6	0.55	0.79	0.40	0.19	0.33	0.60	0.61	0.56	0.32	0.48	0.56
CInt1	0.39	0.39	0.76	0.28	0.16	0.29	0.36	0.23	0.16	0.31	0.30
CInt2	0.38	0.41	0.80	0.32	0.17	0.33	0.39	0.26	0.22	0.30	0.34
CInt3	0.34	0.38	0.81	0.39	0.25	0.33	0.35	0.34	0.31	0.31	0.33
CInt4	0.22	0.25	0.72	0.34	0.23	0.24	0.26	0.26	0.31	0.22	0.24
CInt5	0.35	0.40	0.78	0.33	0.31	0.35	0.36	0.32	0.32	0.31	0.35
CInt6	0.40	0.41	0.69	0.28	0.23	0.39	0.39	0.38	0.23	0.38	0.39
CPart1	0.17	0.24	0.33	0.69	0.20	0.12	0.24	0.28	0.18	0.12	0.20
CPart2	0.08	0.09	0.29	0.74	0.09	0.05	0.11	0.09	0.14	0.04	0.07
CPart3	0.09	0.12	0.24	0.74	0.18	0.10	0.12	0.13	0.21	0.06	0.12
CPart4	0.26	0.30	0.31	0.68	0.21	0.22	0.26	0.28	0.18	0.18	0.22
CPart6	0.06	0.17	0.30	0.64	0.20	0.06	0.10	0.19	0.11	0.08	0.09
ISLE1	0.32	0.45	0.27	0.19	0.79	0.41	0.37	0.44	0.32	0.37	0.38
ISLE2	0.12	0.24	0.16	0.14	0.72	0.22	0.19	0.28	0.29	0.19	0.24
ISLE7	0.15	0.23	0.19	0.24	0.64	0.20	0.22	0.23	0.26	0.18	0.21
InfoS1	0.55	0.59	0.32	0.09	0.31	0.78	0.57	0.57	0.26	0.57	0.58
InfoS2	0.47	0.53	0.38	0.20	0.29	0.80	0.54	0.59	0.37	0.54	0.59
InfoS4	0.50	0.54	0.31	0.16	0.35	0.76	0.59	0.59	0.40	0.51	0.58
InfoS5	0.44	0.46	0.26	0.07	0.32	0.74	0.53	0.50	0.35	0.51	0.54
InfoS6	0.50	0.62	0.34	0.10	0.25	0.72	0.56	0.55	0.23	0.51	0.53
Mot1	0.59	0.60	0.35	0.23	0.23	0.59	0.78	0.57	0.26	0.54	0.56
Mot3	0.57	0.61	0.35	0.20	0.21	0.56	0.79	0.54	0.26	0.52	0.56
*Mot4	0.39	0.45	0.30	0.14	0.41	0.50	0.63	0.51	0.39	0.52	0.53
Mot6	0.44	0.56	0.38	0.18	0.29	0.55	0.78	0.56	0.37	0.54	0.55
*PB1	0.31	0.47	0.22	0.12	0.32	0.42	0.41	0.64	0.34	0.43	0.43
PB2	0.30	0.46	0.23	0.24	0.42	0.49	0.43	0.71	0.39	0.46	0.46
PB4	0.44	0.53	0.31	0.21	0.28	0.52	0.57	0.72	0.44	0.49	0.52
PB5	0.53	0.63	0.36	0.24	0.24	0.61	0.62	0.76	0.33	0.59	0.60
PB6	0.49	0.62	0.29	0.14	0.38	0.60	0.60	0.79	0.34	0.54	0.62
PB7	0.37	0.49	0.27	0.32	0.35	0.52	0.50	0.71	0.37	0.41	0.51
PC1	0.37	0.43	0.32	0.10	0.32	0.49	0.47	0.51	0.81	0.42	0.43
PC2	0.08	0.08	0.21	0.24	0.28	0.13	0.14	0.25	0.73	0.20	0.16
PC3	0.16	0.19	0.21	0.26	0.33	0.23	0.26	0.30	0.74	0.28	0.29
Po1	0.49	0.45	0.27	0.00	0.23	0.51	0.51	0.46	0.23	0.74	0.50
Po2	0.40	0.43	0.29	0.17	0.25	0.42	0.48	0.47	0.32	0.67	0.49
Po3	0.43	0.49	0.30	0.17	0.33	0.53	0.55	0.51	0.33	0.77	0.59
Po4	0.38	0.37	0.29	0.10	0.20	0.46	0.44	0.44	0.30	0.63	0.41
Po5	0.43	0.52	0.29	0.09	0.27	0.56	0.54	0.53	0.33	0.75	0.60
Tr1	0.39	0.52	0.21	0.02	0.36	0.53	0.51	0.55	0.29	0.55	0.70
Tr2	0.45	0.54	0.33	0.11	0.31	0.56	0.53	0.60	0.35	0.55	0.78
Tr3	0.40	0.44	0.30	0.20	0.24	0.49	0.51	0.47	0.30	0.50	0.71
Tr4	0.42	0.47	0.31	0.26	0.32	0.52	0.52	0.47	0.29	0.54	0.70
Tr5	0.31	0.39	0.23	0.19	0.30	0.43	0.43	0.41	0.27	0.43	0.65
Tr7	0.51	0.51	0.40	0.15	0.26	0.60	0.61	0.60	0.32	0.56	0.75

*Indicator removed to improve discriminant validity

Source: Survey data

To determine the discriminant validity at the construct level, this study examined the correlation of the first-order latent constructs using (Fornell & Larcker, 1981) a square route of AVE technique. This score should be greater than the correlation with other diagonal latent constructs. Table 6-10 shows the test of the discriminant validity at the construct level.

Table 6-10: Inter-correlation of the first-order latent constructs

Constructs	Attr	CAtti	CInt	CPart	ISLE	InfoS	Mot	PB	PC	Po	Tr
Attr	**0.77**										
CAtti	0.68	**0.75**									
CInt	0.46	0.49	**0.76**								
CPart	0.20	0.28	0.43	**0.70**							
ISLE	0.29	0.45	0.30	0.26	**0.72**						
InfoS	0.65	0.72	0.43	0.16	0.40	**0.76**					
Mot	0.67	0.74	0.46	0.25	0.38	0.74	**0.75**				
*PB	0.57	0.74	0.39	0.29	0.46	0.74	0.73	**0.72**			
PC	0.31	0.36	0.34	0.24	0.41	0.43	0.42	0.50	**0.76**		
*Po	0.60	0.64	0.40	0.15	0.36	0.70	0.71	0.68	0.42	**0.72**	
*Tr	0.59	0.68	0.43	0.21	0.40	0.74	0.73	0.73	0.42	0.73	**0.70**

* The construct did not satisfy the assumption given by Fornell & Larcker, 1981.

Source: Survey data

In the case of discriminant validity at the construct level, the inter-correlation results show that three constructs (e.g., PB, Po, and Tr) did not satisfy the assumption given by Fornell and Larcker (1981). Hence, inter-correction analysis was needed to be addressed in line with the findings of the cross-loading analysis. Since, the discriminant validity both in the indicator level and construct level were found problematic; three indicators, namely, CAtti1, Mot4, and PB1 (see Table 6-9) were deleted from the data set. Table 6-11 presents the results of further cross-loading analysis; none of the indicators had a score less than its corresponding raw and column results. Thus, the results ensured that the indicators were dissimilar from each other. Further reviewed of the discriminant validity at the construct level was also conducted. Table 6-12 shows the inter-correlation of the constructs where all of the constructs are supported by the cross loadings analysis as well as Fornell and Larcker's criteria, however, the scores of the (Po) and (Tr) constructs were the same, which indicate a problem with the discriminant validity for these two constructs. It is noteworthy to mention that the results of multi-collinearity analysis ensured that there are no multi-collinearity issue between these two constructs (see Table 6-14). The study then proceeded with further SEM analysis.

Table 6-11: Cross-loadings of the measurement indicators after deleting some indicators

Constructs	Attr	CAtti	CInt	CPart	ISLE	InfoS	Mot	PB	PC	Po	Tr
Attr1	0.81	0.58	0.36	0.13	0.22	0.58	0.59	0.47	0.26	0.47	0.45
Attr3	0.87	0.60	0.42	0.17	0.23	0.55	0.56	0.50	0.28	0.53	0.51
Attr5	0.62	0.37	0.25	0.15	0.22	0.34	0.32	0.33	0.16	0.37	0.36
CAtti2	0.57	0.80	0.39	0.22	0.41	0.64	0.60	0.64	0.32	0.58	0.58
CAtti3	0.52	0.78	0.40	0.19	0.31	0.55	0.58	0.57	0.22	0.50	0.52
CAtti4	0.49	0.75	0.40	0.20	0.29	0.46	0.47	0.48	0.23	0.46	0.43
CAtti5	0.53	0.80	0.36	0.20	0.37	0.56	0.55	0.58	0.31	0.45	0.49
CAtti6	0.55	0.81	0.40	0.19	0.33	0.60	0.61	0.57	0.32	0.48	0.54
CInt1	0.39	0.40	0.76	0.28	0.17	0.29	0.36	0.22	0.16	0.31	0.29
CInt2	0.38	0.41	0.80	0.32	0.17	0.33	0.39	0.25	0.22	0.30	0.33
CInt3	0.34	0.39	0.81	0.39	0.25	0.33	0.32	0.35	0.31	0.31	0.31
CInt4	0.22	0.26	0.72	0.34	0.23	0.24	0.22	0.27	0.31	0.22	0.23
CInt5	0.35	0.41	0.78	0.33	0.31	0.35	0.32	0.32	0.32	0.31	0.33
CInt6	0.40	0.39	0.69	0.28	0.23	0.39	0.37	0.38	0.23	0.38	0.38
CPart1	0.17	0.24	0.33	0.69	0.20	0.12	0.24	0.29	0.18	0.12	0.21
CPart2	0.08	0.06	0.29	0.74	0.10	0.05	0.10	0.11	0.14	0.04	0.06
CPart3	0.09	0.09	0.24	0.74	0.18	0.10	0.11	0.13	0.21	0.06	0.11
CPart4	0.26	0.27	0.31	0.68	0.21	0.22	0.25	0.28	0.18	0.18	0.21
CPart6	0.06	0.17	0.30	0.64	0.20	0.06	0.12	0.20	0.11	0.08	0.10
ISLE1	0.32	0.43	0.27	0.19	0.78	0.41	0.31	0.43	0.32	0.37	0.38
ISLE2	0.12	0.23	0.16	0.14	0.71	0.22	0.14	0.25	0.29	0.19	0.25
ISLE7	0.15	0.23	0.19	0.24	0.65	0.20	0.16	0.23	0.26	0.18	0.21
InfoS1	0.55	0.58	0.32	0.09	0.31	0.78	0.53	0.55	0.26	0.57	0.57
InfoS2	0.47	0.52	0.38	0.20	0.29	0.80	0.50	0.60	0.37	0.54	0.58
InfoS4	0.50	0.54	0.31	0.16	0.36	0.76	0.54	0.60	0.40	0.51	0.55
InfoS5	0.44	0.47	0.26	0.07	0.32	0.74	0.50	0.51	0.35	0.51	0.53
InfoS6	0.50	0.62	0.34	0.10	0.25	0.72	0.55	0.54	0.23	0.51	0.52
Mot1	0.59	0.59	0.35	0.23	0.23	0.59	0.84	0.57	0.26	0.54	0.55
Mot3	0.57	0.62	0.35	0.20	0.21	0.56	0.84	0.55	0.26	0.52	0.53
Mot6	0.44	0.56	0.38	0.18	0.29	0.55	0.79	0.57	0.37	0.54	0.55
PB2	0.30	0.43	0.23	0.24	0.42	0.49	0.36	0.67	0.39	0.46	0.46
PB4	0.44	0.53	0.31	0.21	0.28	0.52	0.57	0.75	0.44	0.49	0.51
PB5	0.53	0.62	0.36	0.23	0.24	0.61	0.63	0.79	0.33	0.59	0.58
PB6	0.49	0.62	0.29	0.14	0.38	0.60	0.54	0.81	0.34	0.54	0.60
PB7	0.37	0.49	0.27	0.32	0.35	0.52	0.45	0.73	0.37	0.41	0.51
PC1	0.37	0.43	0.32	0.10	0.32	0.49	0.44	0.50	0.81	0.42	0.42
PC2	0.08	0.08	0.21	0.24	0.28	0.13	0.08	0.24	0.73	0.20	0.16
PC3	0.16	0.20	0.21	0.26	0.33	0.23	0.19	0.30	0.74	0.28	0.29
Po1	0.49	0.43	0.27	0.00	0.23	0.51	0.47	0.45	0.23	0.74	0.48
Po2	0.40	0.43	0.29	0.17	0.25	0.42	0.44	0.46	0.32	0.67	0.48
Po3	0.43	0.48	0.30	0.17	0.33	0.53	0.50	0.51	0.33	0.77	0.60
Po4	0.38	0.38	0.29	0.10	0.20	0.46	0.43	0.43	0.30	0.63	0.40
Po5	0.43	0.52	0.29	0.09	0.27	0.56	0.48	0.52	0.33	0.75	0.59
Tr1	0.39	0.50	0.21	0.02	0.36	0.53	0.44	0.54	0.29	0.55	0.70
Tr2	0.45	0.53	0.33	0.11	0.31	0.56	0.49	0.59	0.35	0.55	0.79
Tr3	0.40	0.43	0.30	0.20	0.23	0.49	0.49	0.46	0.30	0.50	0.73
Tr4	0.42	0.47	0.31	0.26	0.32	0.52	0.48	0.47	0.29	0.54	0.71
Tr5	0.31	0.39	0.23	0.19	0.30	0.43	0.40	0.41	0.27	0.43	0.67
Tr7	0.51	0.51	0.40	0.15	0.26	0.60	0.56	0.60	0.32	0.56	0.76

Source: Survey data

Table 6-12: Inter-correlation of the first-order latent constructs after deleting some indicators

Constructs	Attr	CAtti	CInt	CPart	ISLE	InfoS	Mot	PB	PC	Po	Tr
Attr	**0.77**										
CAtti	0.68	**0.79**									
CInt	0.46	0.50	**0.76**								
CPart	0.20	0.25	0.43	**0.70**							
ISLE	0.29	0.43	0.30	0.26	**0.72**						
InfoS	0.65	0.72	0.43	0.16	0.40	**0.76**					
Mot	0.65	0.72	0.44	0.25	0.29	0.69	**0.82**				
PB	0.57	0.72	0.39	0.30	0.44	0.74	0.68	**0.75**			
PC	0.31	0.36	0.34	0.24	0.41	0.43	0.36	0.49	**0.76**		
Po	0.60	0.63	0.40	0.15	0.36	0.70	0.65	0.67	0.42	**0.72**	
Tr	0.57	0.65	0.41	0.21	0.41	0.72	0.66	0.71	0.42	0.72	**0.73**

Source: Survey data

6.4.1.2 Assessing the formative measurement model

The study uses one second-order formative construct (ExR) with three (i.e., Po, Tr and InfoS) first-order reflective constructs (see Figure 6-1 and Figure 6-2). In this two-stage approach, each of the first-order constructs was replaced by their latent variable scores to measure ExR at the second-order level (Hair et al., 2013; Ringle et al., 2012). Table 6-13 presents the results of the second-order formative constructs. The results show that both the loadings and weights of the formative indicators of ExR are significant.

Table 6-13: Measurement of second-order formative constructs

Construct	Indicators	Loadings	*t*-value	Weights	*t*-value
ExR	Po	0.92	59.76	0.39	7.78
	Tr	0.93	66.57	0.43	7.42
	InfoS	0.87	38.07	0.27	4.60

Source: Survey data

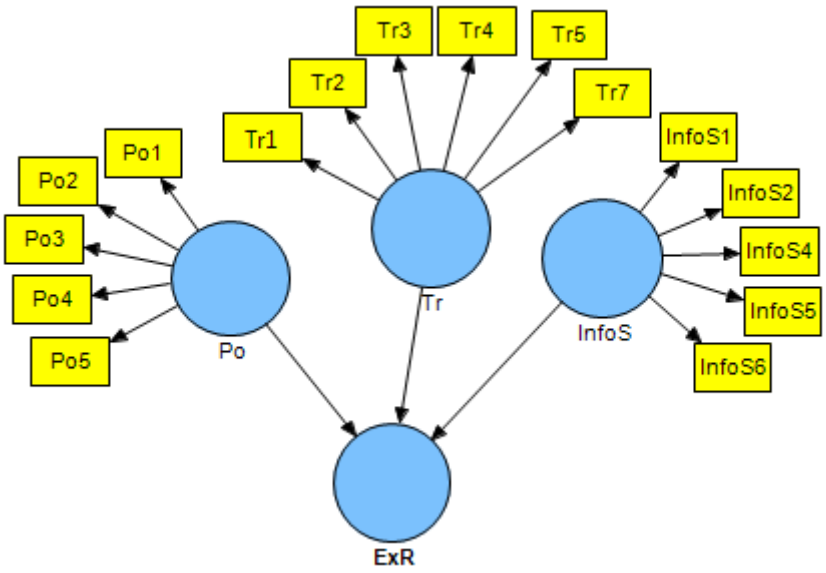


Figure 6-2: Second-order formative model

6.4.1.2.1 Assessment of the collinearity issue

The formative constructs were also checked for any multi-collinearity issues. The collinearity test was conducted using SPSS software. Table 6-14 shows the results of the collinearity test. The results reveal that no multi-collinearity issues exist within the second-order formative indicators as the tolerance scores were > 0.20 and variable influential factor (VIF) scores were < 5 in all cases (Hair et al., 2013).

Table 6-14: Assessment of multicollinearity issue in higher-order formative model

Construct	Indicators	Tolerance	VIF
ExR	Po	0.48	2.09
	Tr	0.52	1.94
	InfoS	0.48	2.08

Source: Survey data

6.4.2 Assessing the Structural Model

Once the analysis of the measurement model was complete, and the measurement indicators were refined, the study performed an analysis of the structural model to explain the true relationships between the constructs. The analysis of the structural model included the assessment of the statistical significance of the path loadings, the path coefficient, and their corresponding *t*-values (Hair et al., 2011, 2013; Lowry & Gaskin, 2014). As part of the structural assessment of the model, the percentage of variance explained (R^2) for each of the constructs was also determined to estimate the

explanatory power of the research model (Hair et al., 2013). In addition, the research examined the effect size, predictive relevance and nomological net of the constructs (Ballestar et al., 2016; Chin, 2010; G. Dowling & Orlitzky, 2016; Ringle et al., 2012). Bootstrapping procedure in SmartPLS (with 5000 samples) was chosen for assessing the relationship among the constructs of the research model, as bootstrapping procedure can leverage the complexity of the analysis (Lowry & Gaskin, 2014).

6.4.2.1 Coefficient of determination

The empirical test criteria of the coefficient of determination in PLS-SEM signifies the test of R^2 and f^2 effect size. The R^2 value of an endogenous latent construct refers to the explanatory power of its exogenous latent construct(s). Similarly, the value of f^2 effect size helps to estimate the relevance of each exogenous latent construct to explain their respective endogenous latent construct(s). With reference to the above statement, it can be argued that f^2 is complementary to R^2 (Ballestar et al., 2016). The values of R^2 and f^2 effect size of the research model are shown in Table 6-15 and Table 6-16 respectively.

Table 6-15 shows that the R^2 values of the constructs represent all three levels, i.e., substantial (.66), moderate (.33) and weak (.19) (Suhartanto, 2016). The R^2 values of ExR (0.64), PB (0.63) and CAtti (0.52) are closer to the substantial level whereas the R^2 values of PC (0.26), ISLE (0.26) and CInt (0.25) fall between the moderate and weak levels. Furthermore, the R^2 value of CPart (0.18) is slightly lower than the minimum acceptable score suggested by Suhartanto (2016). However, with reference to Ballestar et al. (2016), this value is still high for the current research as the data for this study was collected from heterogeneous groups from the study site.

Table 6-15: Coefficient of determination (R^2) and cross-validation redundancy (Q^2)

Constructs	R^2	Q^2
Exchange relationship (ExR)	0.64	-
Perceived benefits (PB)	0.63	0.35
Perceived costs (PC)	0.26	0.13
Community attitude towards participation in ecotourism (CAtti)	0.52	0.32
Community intention to participation in ecotourism (CInt)	0.25	0.14
Community's participation in ecotourism (CPart)	0.18	0.08
Improved standard of living due to ecotourism (ISLE)	0.26	0.11

Source: Survey data

According to the results (see Table 6-16), the f^2 value of 0.197 signifies a moderate effect of the exogenous latent construct (Attr) on endogenous latent construct (ExR). The effect size (f^2) of 0.419 indicates that Mot has a strong effect on ExR. Similarly, PB indicates a very strong effect on CAtti (0.830). The f^2 value of PC on the other hand, shows hardly any effect on CAtti. This result is consistent with the *t*-value of the respective hypothesis (see Table 6-17). In all other cases, exogenous latent constructs are characterised as having a weak effect on their respective endogenous latent constructs.

Table 6-16: Effect size (f^2) and q^2

Constructs	ExR		**CAtti**		**CInt**		**CPart**		**ISLE**	
	f^2	q^2	**f^2**	q^2	**f^2**	q^2	**f^2**	q^2	**f^2**	q^2
Attr	0.197	-								
Mot	0.419	-								
PB			0.830	0.355					0.082	0.027
PC			0.000	0.002					0.051	0.019
CAtti					0.074	0.043				
CInt							0.126	0.059		
CPart									0.001	0.001

Source: Survey data

6.4.2.2 Test of predictive relevance

The assessment of predictive relevance denotes the predictive ability of the structural relationship by examining the cross-validation redundancy (Q^2) and q^2 effect size (Hair et al., 2013). Q^2 signifies a way of restructuring data to estimate the best relevant model with the underlying constructs (Suhartanto, 2016). The results of both Q^2 and q^2 supplement the statistical significance of the hypothesised relationships (Ballestar et al., 2016). It was found in Table 6-15 that exogenous latent constructs PB and CAtti had moderately higher predictive relevance scores. All other constructs in the model have Q^2 scores greater than 0 which means that the exogenous latent constructs have at least some degree of predictive relevance with their corresponding endogenous latent constructs. Similarly, the results of the q^2 effect size shows that PB → CAtti has a strong predictive relevance (see Table 6-16) and in all other cases, this study found weak to moderate predictive relevance between exogenous latent constructs and their corresponding endogenous latent constructs.

6.4.2.3 Path co-efficient (β) values and *t*-statistics

The hypothesised relationships between the constructs were examined on the basis of path coefficients and their corresponding *t*-values (Hair et al., 2013; Ringle et al.,

2012). A positive path coefficient value indicates that the relationship in this path is positive. In contrast, a negative relationship exists where there are negative path coefficient values. In addition, the *t*-value determines the significance of the relationship in the path. In the assessment of the significance of path coefficient, PLS bootstrapping procedure was applied with 5000 repetitions (samples) as recommended by Hair et al. (2011). Figure 6-3 and Table 6-17 show the path coefficient (β) values and *t*-values for the structural relationships in the study model.

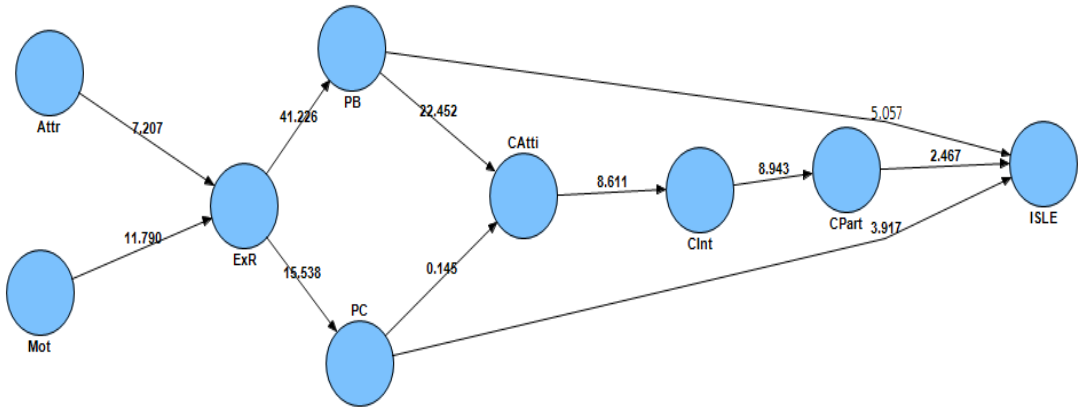


Figure 6-3: *t*-values from PLS bootstrapping

Table 6-17: Path coefficient (β) values and *t*-values

Hypothesis	Relationship	Standardised path coefficient	*t*-value	Comment
H_1	Attr→ExR	0.36	7.21***	Accepted
H_2	Mot→ExR	0.52	11.79***	Accepted
H_3	ExR→PB	0.79	41.23***	Accepted
H_4	ExR→PC (-ve)	0.52	15.54***	Rejected
H_5	PB→CAtti	0.72	22.45***	Accepted
H_6	PC→CAtti (-ve)	0.01	0.14	Rejected
H_7	PB→ ISLE	0.29	5.06***	Accepted
H_8	PC→ ISLE	0.24	3.92***	Accepted
H_9	CAtti→CInt	0.50	8.61***	Accepted
H_{10}	CInt→CPart	0.43	8.94***	Accepted
H_{11}	CPart→ISLE	0.12	2.47**	Accepted
Note: Significant: *t*-value 1.65 @ Significant level 10%, 1.96 @ significant level 5%, and 2.58 @ significant level				

Source: Survey data

6.4.2.4 Test of nomological validity

Nomological validity manifests the theoretical framework of the research model and the empirical framework of how to measure the link between the constructs. It also specifies the relationship between these two frameworks (Andreev et al., 2009). It explains the extent and significance of the relationships between the formative latent construct and other latent constructs in the research model. Figure 6-4 explains the nomological nets of the focal construct of the current study. To measure the valid

nomological nets of the focal construct with both its antecedent and consequence latent constructs, the links between the constructs as hypothesised needs to be determined first, and the results then need to be supported with significant path coefficients (i.e., greater than zero) (Andreev et al., 2009).

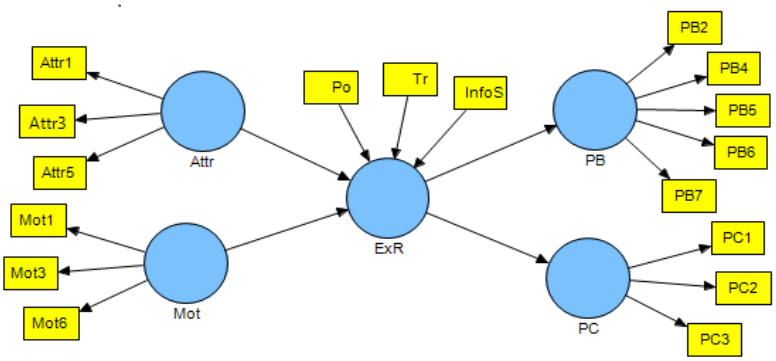


Figure 6-4: Illustrative research model showing nomological net

To assess the nomological validity of the exchange relationship (ExR) as a formative construct, this study examines the structural paths of its antecedents and consequences (Peng & Lai, 2012). In Table 6-18, the study results indicate positive and highly significant relationships between the focal construct and its antecedent and outcome variables which supports the nomological validity of the exchange relationship.

Table 6-18: Structural estimates for nomological validity

Path	**Coefficient (β)**	***t*-statistics**	**Standard error**
Attr -> ExR	0.3566	7.2877	0.0489
Mot -> ExR	0.5195	11.7825	0.0441
ExR -> PB	0.7942	41.8823	0.019
ExR -> PC	0.5189	16.1641	0.0321

Note: The relationship paths are significant. (Source: Survey data)

6.4.3 Mediation Analysis

As this study establishes a direct relationship between PB to ISLE and PC to ISLE, the assessment of the indirect effects of PB and/or PC to ISLE through CAtti, CInt, and CPart were assessed to estimate the mediation effects of those constructs. According to Seibert, Silver, and Randolph (2004), mediation needs to satisfy three prerequisites: there needs to be a significant relationship (i) between the independent variable and dependent variable, (ii) between the independent variable and the mediating variable, and (iii) between the mediating variable and the dependent variable. This is consistent

with Baron and Kenny's (1986) method. However, recent literature no longer supports the BK method for mediation study (Rungtusanatham et al., 2014). The review of mediation literature thus uncovered serial mediation for use in this study as there is more than one mediating variables from PB and/or PC to ISLE (Kilduff, Galinksy, Gallo, & Reade, 2016). This study tested H_{12} and H_{13} to examine whether CAtti, CInt, and CPart mediate the relationship between PB and ISLE, and between PC and ISLE respectively. This study thus applied Model 6 in PROCESS macro of Hayes (2013) in SPSS software for serial mediation analysis.

Table 6-19 shows the results of the serial mediation test. The results reveal that the direct effect and indirect effect from PB to ISLE and from PC to ISLE are significant as there is no '0' value between the lower limit and the upper limit of the bootstrap confidence interval. This significant and indirect effect suggests that the relationship between the independent and dependent variable is affected by CAtti, CInt, and CPart in both models (see Figure 6-5 and Figure 6-6). Thus, this study supports the serial mediation model (Kilduff et al., 2016) of the hypothesised relationships (H_{12} and H_{13}).

Table 6-19: Results of the Mediation Test

Effect type	Coefficient (β)	SE	LLCI	ULCI
PB -> ISLE				
Direct effect	0.234	0.064	0.109	0.361
Indirect effect	0.014	0.007	0.003	0.034
PC -> ISLE				
Direct effect	0.267	0.047	0.178	0.361
Indirect effect	0.007	0.004	0.002	0.016

Source: Survey data

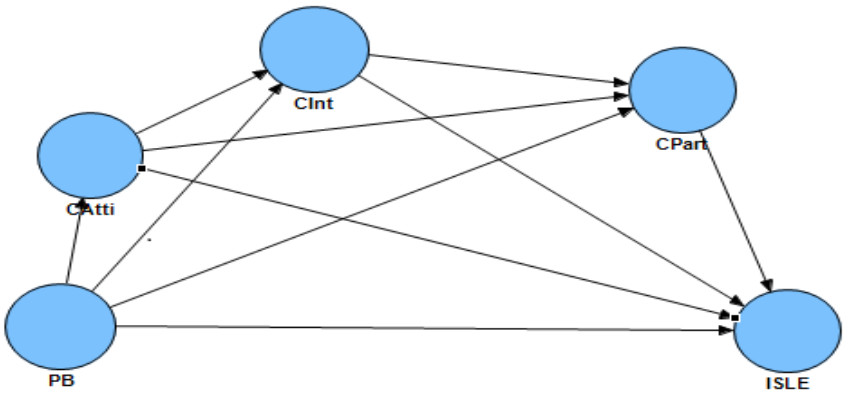


Figure 6-5: Mediation model PB to ISLE

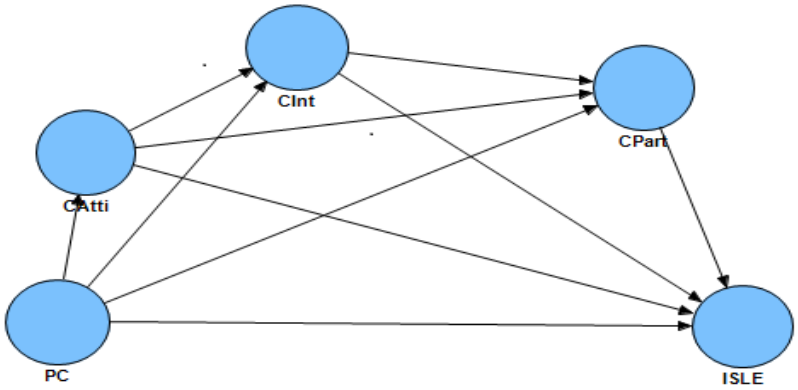


Figure 6-6: Mediation model PC to ISLE

6.4.4 Assessing the Impact of the Control Variables

This study examines the impact of control variables on the ultimate dependent variable (ISLE). For this purpose, personal circumstances (PCir), experience (Exp) and government policy (GP) are used as control variables. In this study, personal circumstances (PCir) is defined by the age and family size of the respondents; whereas experience (Exp) comprised two variables: duration of current occupation and length of living in this area. Government policy (GP) was measured by five indicators: infrastructure development policy, policy towards security, guidelines and training, awareness building programs and overall government policy. All of these variables came to the attention of the researcher as important phenomena for estimating the improved standard living of the local community. Hence, the researcher examined the impact of those variables on ISLE. The impact of the control variables was assessed using a R^2, path coefficient, and *t*-statistics. Table 6-20 shows the test results.

Table 6-20: Impacts of control variables on ISLE

Constructs	**Control variables on ISLE**		
	Path coefficient (β)	***t*-statistics**	**R^2 of ISLE**
PB	0.23 (0.29)	3.88 (5.06)	0.32 (0.26)
PC	0.25 (0.24)	4.21 (3.92)	
CPart	0.10 (0.12)	2.08 (2.47)	
PCir	-0.09	0.76	
Exp	0.09	1.73	
GP	0.25	5.57	

Note: Scores in the parentheses in Table 6-20 refer to the value found before the inclusion of control variables.

It was observed that, with the inclusion of all three control variables, the R^2 of ISLE in the measurement model increased from 0.26 to 0.32 which in fact increases the explanatory power of the research model. With reference to the structural model, the

path coefficient of PCir to ISLE was found to be negative and insignificant (β= - 0.09, *t*=0.76). This study, on the other hand, found a significant positive relationship between personal experience (Exp) and ISLE (β=0.09, *t*=1.73) and between government policy (GP) and ISLE (β=0.25, *t*=5.57). In addition, the control variables did have an impact on the relationships between PB and ISLE, PC and ISLE, and CPart and ISLE. The path coefficients and *t*-statistics slightly strengthened the relationship between PB and ISLE (β= 0.23 to 0.29 and *t*=3.88 to 5.06) and between CPart and ISLE (β= 0.10 to 0.12 and *t*=2.08 to 2.47). On the other hand, the path coefficient and *t*-statistics for the relationship between PC and ISLE were found to be slightly weaker (β= 0.25 to 0.24 and *t*=4.21 to 3.92) but are still significant.

6.4.5 Statistical Power Analysis

This study examines the power of the research model using G*Power 3.1.9.2 software. In the analysis of power, a number of predictor variables, significance level, and effect size were taken into consideration (Mazen et al., 1987). Figure 6-7 depicts the statistical power of this study model. It is observed that, at the 5% significant level, and having a small effect size, this study requires 64 samples to satisfy the required power (80%) of the model (Cohen, 1988; Mazen et al., 1987). In addition, 110 samples are required to reach 95% power of the model. As this study gathered 406 usable samples, it can be said that the study holds substantial power to validate the hypothesised relationships of the model.

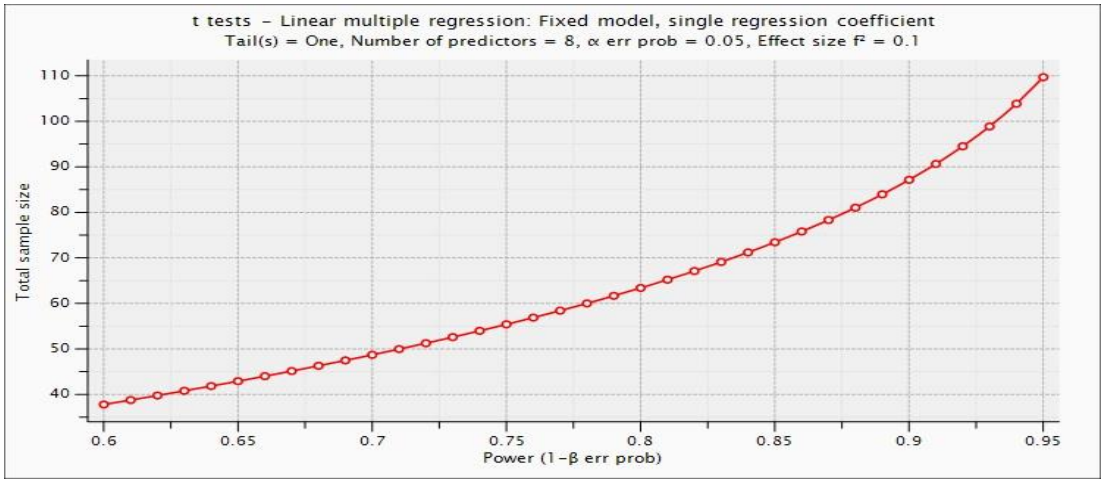


Figure 6-7: Statistical power of the model

6.5 CHAPTER SUMMARY

This chapter presents the results of the quantitative data. The entire analysis in this chapter involves three sections: the analysis of the pilot study data, the analysis of the socio-demographic data and the SEM analysis of data related to the constructs of the research model. The results of the pilot study provided the trend of data which helped the researcher to successfully manage the data quality, as well as continuing the survey for the project. The results from socio-demographic data facilitates an understanding of the socio-demographic profiles of the respondents, as well as their various involvements in ecotourism activities. Finally, the results of the SEM analysis provides information about the types and depth of relationships between the constructs of the research model. In the SEM analysis, the researcher addresses the validity and reliability of the data. As a result of these processes, some of the items were deleted from the measurement model.

Once, the measurement model was confirmed, the analysis was head on to the assessment of the structural relationships. At this stage, 9 out of the 11 hypotheses were found to be significant and were thus accepted. In addition, the mediation effects were examined in this chapter. A significant indirect effect was identified between the X (PB) and Y (ISLE) variables in the mediation analysis. The impact of the control variable on the ultimate dependent variable was also assessed in this chapter. The results of this analysis indicate that the inclusion of control variables increases the explanatory power of the research model. Finally, this chapter concludes with a statistical power analysis of the research model. The result of the power analysis indicates that, having 406 completed surveys data, this study hold substantial power to examine the hypothesised relationships.

Chapter 7 DISCUSSION OF THE FINDINGS

7.1 INTRODUCTION

This chapter presents the study findings which are discussed in line with the analyses of the quantitative and qualitative data and from the perspective of the practical contexts of the study. The first part of the discussion relates the findings to the research hypotheses. All the hypothesised relationships and their corresponding results are discussed with reference to the findings of previous studies, empirical evidences and the practical circumstances of the phenomena. This chapter also refers to the discussion of the mediation analysis to estimate the indirect effect in some of the hypothesised relationships. This chapter presents the discussions about the effects of the control variables on the measurement model as well as on the structural model. Finally, the findings of this study are further conferred with reference to the study objectives.

7.2 FINDINGS IN THE LIGHT OF STRUCTURAL RELATIONSHIPS

7.2.1 Relationship between Attraction of Ecotourism Site and Exchange Relationship (H_1)

The study investigated the influence of the attraction of the ecotourism site (Attr) on the formation of the exchange relationship (ExR) between ecotourism stakeholders (H_1). To empirically establish the link between Attr and ExR, both quantitative and qualitative studies were conducted. The findings from the quantitative study suggest that significant statistical support is apparent for the influence of the attraction of the ecotourism site on the formation of the exchange relationship. The study results show a positive and significant path relationship between these two variables (β=0.36 and t=7.21) which provides a strong empirical understanding that attraction is a central

antecedent factor of forming exchange relationships between tourists and other stakeholders at the ecotourism destination. Thus, the finding supports H_1. In fact, an ecotourism destination with many different attractions can generate more tourists and invite many other stakeholders to provide ecotourism-related services which ultimately create exchange relationships between these stakeholders. This finding has similarities with the existing tourism literature (see Jang & Cai, 2002; Leask, 2010).

Some of the interview participants also support the influence of attraction on exchange relationships. Ten (10) of the 29 interview participants mentioned the influence of attractions on the opportunities to develop exchange relationships between local people and outsiders. In addition, it was observed during the survey that people from other parts of the country established different types of businesses that facilitated ecotourism in the study area. The analysis of the socio-demographic profile of the respondents also supports the above argument. The findings generated from both the quantitative and qualitative investigations are consistent. The study site itself contains many attractions, such as wildlife, the forest's natural beauty, security, plant species and many others which attract the attention of millions of ecotourists from home and abroad every year. Thus, the role of attraction in the exchange relationship is one of the critical factors for ecotourists in their decision making about destination choice. To introduce the Sundarbans as an attractive ecotourism destination, community stakeholders need to articulate its features for presentation to ecotourists. The result will be a win-win situation for both ecotourists and local community people.

7.2.2 Relationship between Motivation for Ecotourism Development and Exchange Relationship (H_2)

The motivation of local people toward ecotourism development is another influencing factor of the exchange relationship. This study has found empirical evidence that motivation has direct influence on exchange relationship. The finding reveals statistically significant results about the influence of motivation for ecotourism development on the exchange relationship (β=0.52 and t=11.79) which supports H_2. This significant path relationship between motivation and the exchange relationship provides a strong empirical understanding which indicates that the motivation of the local community for ecotourism development is integral to the formation of exchange relationships between ecotourism actors. The finding of this study is consistent with

the findings of several other tourism studies including Ap (1992), Moyle et al. (2010), and Nault and Stapleton (2011). The existing literature suggests that local people approach the exchange relationship with the motivation of having economic, social and environmental gains from that exchange. According to the appeal of social exchange theory (SET), motivation is one of the antecedents for exchange formation (Ap, 1992): in a similar vein, the finding of this study suggests that the motivation of the local community is an antecedent factor for the ecotourism exchange relationship.

The finding of hypothesis testing for the influence of motivation on the exchange relationship is also supported by the field study findings. The field study results for this context reveal that the motivation of local people toward ecotourism activities leads to the formation of exchange relationships with other parties. Of the 29 in-depth interviews, five of the participants interviewed supported the role of motivation in the formation of the exchange relationship.

According to the finding of the current study, the motivation of local people is considered another important antecedent of the exchange relationship in the ecotourism industry. Indeed, several motivation factors drive local people to involvement in ecotourism-related activities. The involvement, however, depends on benefits for the individuals (i.e., economic, social and environmental) obtained from the ecotourism industry.

7.2.3 **Relationship between Exchange Relationship and Perceived Benefits (H_3)**

The findings of the measurement model of this study confirmed the validity and reliability of exchange formation and maintenance where power, trust and information sharing are considered important components of the exchange relationship. Similarly, the quantitative findings of this study established the positive and significant link between the exchange relationship and perceived benefits. The results reveal the statistically significant finding of the direct positive impact of the exchange relationship on perceived benefits (β=0.79 and t=41.23). This finding supports H_3, providing strong empirical evidence for the influence of the exchange relationship on perceived benefits in this ecotourism study which is also supported by the findings of existing studies (see Ap, 1992; Gursoy & Rutherford, 2004; Nunkoo & Ramkissoon, 2011, 2012).

The survey data also reveals similar findings showing positive relationship between the exchange relationship and perceived benefits. Field study participants pointed out different types of benefits they are receiving from their relationships with other ecotourism actors, especially from tourists visiting this area. About 38% of the interview participants posited that their interaction with other tourism actors benefits them through employment generation, business creation, infrastructural development and many other aspects.

The benefits from the exchange relationship can be perceived from the economic, social, cultural and environmental perspective, both at the individual level and community level (Gursoy & Rutherford, 2004). Most interpersonal benefits belong to the economic gains from being involved in the exchange relationship, whereas the community benefits are related to the broader social, cultural and environmental development of the whole community. Hence, the implication of perceived benefits from ecotourism is more desired by the local people and, in practical terms, by most of the population in the study area who are directly or indirectly dependent on the ecotourism industry based in the Sundarbans. In fact, this area has no other industry. Most of the agricultural lands are affected by saline water every year. Hence, the activities relating to ecotourism, such as fishing, transport services, indigenous cultural shows, etc. are the main contributing sources for local livelihoods.

7.2.4 **Relationship between Exchange Relationship and Perceived Costs (H_4)**

This study developed H_4 to examine the negative impact of the exchange relationship on perceived costs, but the results of hypothesis testing showed a positive and statistically significant finding in this connection (β=0.52 and t=15.54). The findings revealed that, with the increase in ecotourism exchange, the community perceived the increase of costs positively. Thus, a positive and statistically significant influence was found for the exchange relationship on perceived cost; but H_4 is rejected. This finding is contradictory to that of Nunkoo and Smith (2013) who examined the impact of power and trust (as the components of the exchange relationship) on perceived costs. The current finding also contradicts the results of Nunkoo and Ramkissoon (2011) and Nunkoo and Ramkissoon (2012) where the authors found direct negative relationships between trust and perceived costs and between power and perceived costs,

respectively. It is noteworthy to mention that power and trust are two major components of the exchange relationship (Nunkoo & Ramkissoon, 2012).

The results of the qualitative data analysis and the quantitative results are similar. The local people believed that their relationships with outsider people, including tourists, did not cause a negative impact on their day-to-day life: instead, it brought them benefits. Five interview participants expressed similar views about the impact of the exchange relationship. It was also observed during the survey data collection that interview participants were generally positive when they were asked questions about the impact of the exchange relationship on ecotourism actors in the study area.

Although the results of testing H_4 contradict the findings of the existing literature, they are, however, important to the destination context. The reason is that local people can perceive more benefits from ecotourism, with these greater than and outweighing its costs. This study posed six questions to measure the perceived costs from ecotourism. The first three questions were related to the increasing cost of property, commodities and the overall standard of living, whereas the last three questions were related to increasing crime, change in the traditional way of life and exploitation from ecotourism. In the analysis of the measurement model, the last three indicators were deleted due to poor loading scores and perceived costs were run with the first three indicators. It is assumed therefore that local people accepted the increase in costs as positive for them. Despite the increase in exchange between ecotourism actors leading to an increase in costs in local people's lives, the increased costs bring local people positive outcomes. This finding has opened a new avenue of academic debate about the true consequences of the exchange relationship. Thus, this finding has been found interesting and warrants further study to explore the true impact of the exchange relationship in the destination context.

7.2.5 Relationship between Perceived Benefits and Community's Attitude (H_5)

The study has empirically examined the relationship between perceived benefits (PB) and the community's attitude towards participation in ecotourism (CAtti) from the quantitative and qualitative perspectives. The quantitative findings suggest that there is statistically significant evidence for the direct positive relationship between PB and

CAtti. The findings reveal a positive path coefficient (β=0.72) and a highly significant *t*-value (*t*=22.45) for this relationship and, thus, H_5 is supported. This finding can also be explained in line with social exchange theory (SET): people who find more benefits from ecotourism have a more positive attitude. The finding has strengthened the appeal of SET in ecotourism research. This finding is also congruent with the findings of the existing tourism literature (e.g., Wang & Pfister, 2008; Ward & Berno, 2011).

The positive association between perceived benefits and the community's attitude was also found in the analysis of field study data. The field study finding suggests that perceived benefits from ecotourism influence the attitude of local people. The people who benefit more from ecotourism were observed to have very positive attitude. About 21% of the interview participants expressed a positive attitude towards ecotourism in the study area.

From a practical viewpoint, ecotourism holds great promise for the local people of the Sundarbans area. The reason is that the forest itself is one of the popular ecotourism attractions in Bangladesh within the natural environment. With the increased awareness of people across the world, the desire to visit the Sundarbans has been increasing day-by-day. People are increasingly interested in enjoying nature and wildlife. The Sundarbans is, in fact, the ideal home to offer such an experience. Therefore, local people are obtaining incremental employment as well as income opportunities from this sector which, in turn, creates a favourable attitude towards ecotourism amongst local people.

7.2.6 **Relationship between Perceived Costs and Community's Attitude (H_6)**

From the SET perspective, attitude is developed from the conscious evaluation of benefits and costs. The earlier section has discussed the positive association between perceived benefits and the community's attitude. This section discusses how costs are associated with the community's attitude in line with the study finding. The results of H_6 suggest that the relationship between perceived costs and the community's attitude is insignificant (β=0.01 and *t*=0.14); hence, H_6 is rejected. This finding contradicts the study of Nunkoo and Ramkissoon (2010b) where the authors explored the relationship between the ecocentric attitude and perceived costs.

However, the finding is consistent with the current study's qualitative results. Four

interview participants raised this issue during the interview: generally, people of this area rarely hold any negative attitudes towards ecotourism. These participants highlighted that, due to the development of ecotourism in this area, they needed to pay more to acquire property and in commodity expenditure. However, the increased costs due to ecotourism were not seen negatively by the community people at the study site. Thus, they did not believe that the development of ecotourism in this area would cause them any form of pain as it would apparently be good for the growth of ecotourism in the Sundarbans.

7.2.7 Relationship between Perceived Benefits and Improved Standard of Living due to Ecotourism (H_7)

The study has found a direct positive relationship between perceived benefits and an improved standard of living due to ecotourism, with the findings suggesting significant statistical evidence for this relationship. The results reveal a positive and statistically significant path coefficient (β=0.29 and t=5.06) and, hence, H_7 is supported. This finding is consistent with reference to Fernandes (2013), Kim et al. (2013), and Tosun (2002). This significant path relationship is a sign of empirical evidence and provides an understanding of the relationship between perceived benefits and an improved standard of living due to ecotourism. This relationship was primarily discovered from the field study findings and further validated by the existing literature. The interview participants posited that the benefits they were receiving from ecotourism contributed to the improvement in their livelihood. They further opined that the increased income from ecotourism could be spent on their children education, electricity (solar systems) and other household expenditure, thus providing signs of an improved standard of living for the community people.

7.2.8 Relationship between Perceived Costs and Improved Standard of Living due to Ecotourism (H_8)

The relationship between perceived costs (PC) and an improved standard of living due to ecotourism (ISLE) was also initially discovered in the field study. With respect to the field study findings, the researcher was interested in examining the authenticity of this link and, accordingly, H_8 was designed for quantitative investigation. The results

of the quantitative data analysis reveal that statistically significant result is evident for the relationship between perceived costs (PC) and an improved standard of living due to ecotourism (ISLE). The findings suggest a positive and significant path relationship from PC to ISLE (β=0.24 and *t*=3.92), thus H_8 is supported. The findings are consistent with the existing research (see Blackorby & Russell, 1978; Tovar & Lockwood, 2008), but contradicts that of Frechtling (1994). The current study, in fact, contributes to the existing literature by taking a step further towards the belief that perceived costs improve the standard of living due to ecotourism. The reason is that when people spend more on consumption even than what is consumed by better communities, they incur increased costs which further indicates an improved standard of living.

This finding is supported by the field study outcomes. This hypothesis was, in fact, developed from the analysis of field study data in which five interview participants mentioned that costs engendered due to the development of ecotourism in this area are facilitating an improved standard of living.

7.2.9 Relationship between Community's Attitude and Community's Intention to Participate in Ecotourism (H_9)

The study designed H_9 to examine the relationship between attitude and intention in the current research context. The findings revealed that a statistically significant direct positive relationship exists between the community's attitude and the community's intention to participate in ecotourism (β=0.50 and *t*=8.61) which supports H_9. This finding supports the core concept of the TPB, as suggested by Ajzen (1991), and is also consistent with other relevant studies in the literature on attitude and behavioural intention (e.g., Andereck & Vogt, 2000; Casaló et al., 2010; Karki & Hubacek, 2015; Quintal et al., 2010). Local community people who hold a favourable attitude toward ecotourism development were found to be highly positive to participating more in ecotourism-related activities in the future.

The finding of the quantitative investigation was also in line with the field study outcomes. The interview participants mentioned that they had a positive intention to participate more in ecotourism-related activities in future. They were even willing to participate with their own physical effort, as well as a monetary contribution, for the conservation of the forest.

This finding enriches the existing literature in the field of the attitude–intention relationship in ecotourism development at the local community level. From the practical standpoint, local people held a very positive attitude towards ecotourism by evaluating its benefits and costs. Having found that ecotourism enables them to have a better livelihood, they intended to participate more in ecotourism if opportunities arose in future.

7.2.10 Relationship between Community's Intention to Participate in Ecotourism and Community's Participation in Ecotourism (H_{10})

This study further investigated the relationship between the community's intention and the community's participation which refers to the actual behaviour of the community people in the current study context. The results suggest statistically significant positive evidence of the relationship between the community's intention and the community's participation in ecotourism (β=0.43 and *t*=8.94). This significant finding indicates a direct positive relationship between these two constructs in the current research context; hence, H_{10} is supported. The findings provide evidence of the strong empirical basis of the relationship for the ecotourism literature, and are congruent with the existing TPB-based literature (e.g., Hagger et al., 2002; Kaplanidou & Vogt, 2007; Zhang & Lei, 2012). However, the findings do not support the finding of Karki and Hubacek (2015) in which the authors studied the relationship between behavioural intention and actual behaviour. Although there may be some disagreement, this finding has strengthened the contribution and argument made by earlier studies for extending the TPB by adding an actual behaviour component.

The field study findings revealed weak support for the relationship between the community's intention and the actual participation in ecotourism. Only one interview participant mentioned the link between community intention and community participation in ecotourism. From the practical perspective, the actual participation of the community is highly influenced by the foreseeable benefits from such participation. In fact, large number of residents are primarily dependent on ecotourism-related activities, however, ecotourism as an industry is still under-developed in this area. The ecotourism products and facilities are not articulated in the professional way in the study area. Apart from the economic benefits, the social and environmental benefits of ecotourism are still under-perceived by the local community.

7.2.11 Relationship between Community's Participation in Ecotourism and Improved Standard of Living due to Ecotourism (H_{11})

Finally, the study examined the relationship between community participation (CPart) in ecotourism and an improved standard of living due to ecotourism (ISLE). The findings suggest the existence of a positive and statistically significant relationship between CPart and ISLE (β=0.12 and *t*=2.47), thus supporting H_{11}. This result indicates that if community participation in ecotourism increases, a positive opportunity is provided to increase the standard of living of the community people. The reason is that community participation in ecotourism leads to increased income which facilitates improvements in living conditions. This finding is consistent with Pasape et al. (2015a) and Milman and Pizam (1988). This finding is also consistent with the field study outcomes of this research. About 28% of the interview participants mentioned that participation in ecotourism increases the standard of living of local people. The reason behind the significant positive relationship between CPart and ISLE could be the higher level of dependency of the local people towards forest-based activities as the source of income.

This is the major finding of the current study in relation to empirically estimating the impact on improvements in the standard of living due to ecotourism. This finding also contributes to the TPB's further extension. Until now, the TPB has been discussed with regard to actual participation from behavioural intention on its outcome side (Hsu & Huang, 2012; Karki & Hubacek, 2015). However, the existing TPB literature has not explored what is the outcome of actual behaviour. This research has found that participation of the local community in ecotourism improves their standard of living. In the current research context, an improved standard of living is the outcome of actual participation. From the viewpoint of the TPB, the outcome of actual participation can be claimed as an extension of the existing TPB. Thus, the inclusion of improved standard of living in the existing TPB model as the ultimate outcome variable will increase its generalisability across the discipline areas.

7.2.12 Impact of Mediating Variables (H_{12} and H_{13})

Based on both qualitative and quantitative findings, this study has established the direct relationship between perceived benefits (PB) and an improved standard of living

due to ecotourism (ISLE). This research found it relevant to explore the indirect relationship from PB to ISLE and accordingly developed H_{12}. To test this hypothesis, the study explored serial mediation analysis (Hamby, Daniloski, & Brinberg, 2015; Quaresma, Palmeira, Martins, Minderico, & Sardinha, 2014). The findings of the serial mediation test revealed a statistically significant indirect effect in the relationship between PB and ISLE. The study found that the community's attitude, community's intention and community's participation in ecotourism serially mediate the relationship between perceived benefits and an improved standard of living due to ecotourism.

Through its qualitative and quantitative findings, this study has also found a direct positive relationship between perceived costs and an improved standard of living due to ecotourism. The current study further set out to examine the indirect relationship from PC to ISLE by testing H_{13} which posits that the relationship of PC to ISLE is serially mediated by the community's attitude, community's intention, and community's participation in ecotourism. The findings of the serial mediation analysis indicate a statistically significant indirect effect of CAtti, CInt and CPart in the relationship between PC and ISLE. Hence, the indirect relationships between PB and ISLE and between PC and ISLE need to be taken into consideration for ecotourism planning in the study area.

7.3 FINDINGS IN THE LIGHT OF RESEARCH OBJECTIVES

This study in its exploration sought to achieve four distinct objectives: the *first* objective was related to the reconceptualization of the exchange relationship. The *second* objective mainly focused on the integration of relevant behavioural aspects within the framework of the social exchange process which facilitated the development of the behavioural exchange model for this study. The *third* objective was to evaluate the community supports and participation in ecotourism in the study area. The *fourth* and last objective was to assess the socio-economic benefits of ecotourism in the developing country context. In the following sections, the implications of the research findings are discussed in the light of the study's objectives.

7.3.1 Research Objective 1: To Evaluate the Role of the Exchange Process for Improving the Standard of Living of the Local Community by Reconceptualising the Exchange Relationship

In relation to *Research Objective 1*, this research developed the 'exchange relationship' as the multidimensional hierarchical construct. According to the theory, the exchange relationship is the function of power and trust (Ap, 1992; Nunkoo & Ramkissoon, 2011, 2012); however, information sharing has an important role in the formation and maintenance of the exchange relationship. The current study integrates all three components (i.e., power, trust and information sharing) as second-order formative constructs to explain the exchange relationship. Each second-order construct has its first-order reflective indicators. Power was measured by six indicators, trust by seven indicators, while information sharing was measured by six indicators.

As part of the measurement of the exchange relationship using the three formative second-order constructs, this study assessed the multicollinearity issue. The findings of the collinearity analysis suggested that the multicollinearity issue is not present with the second-order formative constructs of the exchange relationship. This study also checked the validity and reliability of the constructs and their indicators, finding that they were valid and reliable. Hence, the 'reconceptualization' of the exchange relationship by power, trust and information sharing has been empirically supported. Next, the structural model was run to examine the path relationships to and/or from the exchange relationship (ExR) as hypothesised in H_1, H_2, H_3 and H_4 (see Table 5-1). The findings suggest positive and statistically significant path coefficients to and from the exchange relationship for the above-mentioned hypotheses. The analysis of the field study data also confirmed the inclusion of information sharing to explain the exchange relationship. The field study data further suggested that the formation and maintenance of the exchange relationship is the function of the ecotourism destination's attractions and the motivation of the local community toward ecotourism development. The field study participants also opined that their exchange relationship with other actors has created opportunities, as well as incurring costs, for them. Therefore, it can be argued that this study's *Research Objective 1* has been achieved with the support of the empirical findings.

7.3.2 Research Objective 2: To Develop a Model by Integrating Relevant Behavioural Variables within the Framework of the Social Exchange Process

This study proposed an initial research model with the idea borrowed from Ap's (1992) social exchange process. In designing the initial research model, the relevant literature and theories were consulted. In accordance with the field study findings, the proposed initial research model was modified in order to develop the comprehensive research model. This model contains 12 different constructs with 11 hypothesised relationships between the constructs (see Figure 4-3 and Table 5-1). Among the constructs, two are antecedent factors, three are measurement factors and all others are consequence factors. In this model, a*ttraction of ecotourism site* and *motivation for ecotourism development* were defined as exchange initiators that were also seen as the antecedent factors of the *exchange relationship* (H_1 and H_2). In this model, the formation and maintenance of the exchange relationship were defined by *power*, *trust* and *information sharing* factors. The consequences of the exchange were assessed in the light of immediate and ultimate consequences. The immediate consequence of the exchange relationship of the research model comprised *perceived benefits* (H_3) and *perceived costs* (H_4) that influence the formation of the *community's attitude* toward ecotourism (H_5) and (H_6). According to the model, attitude further influences the *community's intention* (H_9), and intention influences *community's participation* in various ecotourism-related activities (H_{10}). In a similar vein, community's participation in ecotourism influences the ultimate consequence variable of this study, that is, *improved standard of living due to ecotourism* (H_{11}). The empirical results of the above-mentioned hypothesised structural relationships were revealed as positive and statistically significant. Hence, the research model of this study is confirmed.

In addition to the basic structural relationships, a step-by-step process was developed for how the model flows from initiating an exchange to the consequences of that exchange. In other words, this represents what initiates the exchange, how the exchange relationship is formed and maintained, and what are the consequences (both immediate and ultimate) of that exchange relationship. In this process, some relevant TPB components, namely, attitude, intention and actual behaviour (participation) have successfully been blended within SET's consequence part. This integration has also been found relevant from the review of the existing SET and TPB literature. Empirical

evidence also argues that the blending of the existing TPB into SET facilitates the improved standard of living of the local community. The constructs and variables integrated into the research model have been found valid and reliable.

The field study data also support the findings of the quantitative study. Field study participants identified two antecedent factors that initiate and influence exchange relationship formation and its maintenance (H_1 and H_2). They further explained that the exchange relationship has several subsequent consequences in perceived benefits (H_3), perceived costs (H_4), developing the community's attitude (H_5), community's intention (H_9), community's participation in ecotourism activities (H_{10}) and their improved standard of living (H_{11}). Hence, *Research Objective 2* has been achieved with support of both the quantitative and qualitative findings.

7.3.3 Research Objective 3: To Evaluate the Significance of the Community's Support for and Participation in Ecotourism Development

This study assessed community involvement in ecotourism development in the study area. *Research Objective 3* relates to H_2, H_3, H_4, H_6, H_7, H_8 and H_{11}. As part of the community's participation in ecotourism, the motivation of the local community for ecotourism development was measured. This study also explored how the community in the study area had become engaged in the exchange process that would benefit and/or engender costs for them. Finally, this research set out the relationship between the community's participation and their improved standard of living due to ecotourism. The direct relationship between perceived benefits and perceived costs has been examined. The above-mentioned hypothesised relationships have been found to be positive and statistically significant. The current study also found that local people who were engaged in various ecotourism-related activities had become able to spend more for education, health, electricity and other related costs from their earnings. With reference to both the qualitative and quantitative studies, local people were found to be engaged in different ecotourism-related activities for maintaining their livelihood. They were mainly engaged in transport services for tourists, as tour operators and tour guide services, and in fishing, cultural shows and honey collection. All these activities are facilitating the Sundarbans-based ecotourism either for the tourist experience or the shopping experience at the destination. In practice, tourists simply come to tour operators with the intention of visiting the Sundarbans. Their tour itinerary,

accommodation, food and beverages, and sight-seeing are all managed and offered by the local people who may be tour operators or any other tourism suppliers. Thus, without the cooperation and participation of the local community in the ecotourism exchange process, the expansion of ecotourism in the Sundarbans would be only imaginary. In reference to *Research Objective 3*, this study, in fact, has discovered the pivotal role of the local community in ecotourism development.

7.3.4 Research Objective 4: To Assess the Socio-Economic Benefits of Ecotourism in a Developing Country Context

Data for this study were collected from Bangladesh which is a developing country in Southeast Asia. The collected data related to the benefits and costs of ecotourism development, as well as its economic and social consequences at both individual and community levels. The economic impacts cover the costs and benefits relating to infrastructural development; investment in new businesses; employment and income opportunities; increasing price levels for property and commodities; and the cost of living. The social impacts, on the other hand, include the international understanding about the area; upholding local pride and prestige; level of crime; environmental conservation; exploitation; and changes in the traditional way of life. The current study has explored H_7 and H_8 in addressing *Research Objective 4*. The variables mentioned above were considered for data collection, in both the qualitative and quantitative phases under perceived benefits (PB) and perceived costs (PC) which led to the improved standard of living of the local community. As mentioned, the quantitative findings for H_7 and H_8 reveal a positive and statistically significant relationship. Indeed, the findings represent the socio-economic conditions of the local people of Bangladesh. The field study findings also suggest that the benefits and costs of ecotourism for the community directly affect their standard of living. Hence, this study provides empirical evidence that ecotourism development can improve the standard of living of the local communities of Bangladesh as a developing country. The research findings could be applicable to the many other developing countries worldwide with a similar context to that of Bangladesh. Hence, *Research Objective 4* of this study has been achieved.

7.4 CHAPTER SUMMARY

This chapter presented the discussion of the findings of the current research. The results of all the hypotheses, with the exception of H_6, were found to be highly positive and significant. In addition, the mediation effects were discussed in this chapter where significant indirect effects were found between the X and *Y* variables. This chapter further discussed the influence of control variables on the ultimate dependent variable. Finally, this chapter explained how the study objectives were satisfactorily achieved with reference to empirical support from both the qualitative and quantitative findings.

Chapter 8 CONCLUSIONS

8.1 INTRODUCTION

The current study has been conducted to explore how the social exchange process in ecotourism can improve the standard of living for the local community. ***Chapter 1*** identified the study objectives from the discussion of the research problems and the importance of the study area. The conceptual research model was developed in ***Chapter 2*** from the review of the relevant literature and theory. ***Chapter 3*** explained the methodology of this study highlighting the rationale for using the mixed-methods (qual → QUAN) approach. Details of the field study were presented in ***Chapter 4*** to contextualise the initial conceptual model and to develop the comprehensive research model from the field study findings. ***Chapter 5*** was designed in line with the quantitative approach with formal links and hypotheses drawn from the research model. The results of the quantitative data analysis were presented in ***Chapter 6***. The discussion in ***Chapter 7*** focused on the findings resulting from both the qualitative and quantitative data analyses.

The current chapter, ***Chapter 8***, begins by presenting the summary of this research. The summary section below portrays the research theme, methods, analysis, results and interpretation of the findings. The subsequent section discusses the contribution of the study to the existing knowledge from the theoretical, methodological and practical perspectives. The following section explains the limitations of the current study. In the final section of this chapter, some indications have been suggested for the future research agenda in the field of the current study area.

8.2 RESEARCH SUMMARY

Ecotourism has been receiving greater attention for its ability to improve the livelihood of communities through offering income opportunities and infrastructural development at the community level. However, this sector has been suffering from the

lack of empirical evidence for evaluating the dynamics and contribution of ecotourism development at the community level. More specifically, little has been explored by academics and practitioners on the effective exchange between community people and other actors. It can arguably be said that the local community is the weaker party in the ecotourism exchange (Holloway & Humphreys, 2012). The existing literature on ecotourism lacks an empirically supported exchange process that can promote the community's economic, social and environmental benefits. From this limitation of the existing ecotourism research, the current study aimed to develop a behavioural exchange model integrating SET and the TPB to fill the existing gap and provide in-depth insights for academics and practitioners. In order to empirically validate the study model, a mixed-methods qual → QUAN-based approach was employed for data collection and data analysis. In this research, qualitative investigation was explored first, in which data were gathered from the field study in Bangladesh. A total of 29 in-depth interviews were conducted, with these following a semi-structured interview schedule. The field study data were analysed through content analysis using NVivo software.

The comprehensive research model (i.e., the Behavioural Exchange Model) was developed by combining the variables of the initial research model and the field study findings. The model contained antecedent constructs (i.e., Attraction of ecotourism site and Motivation for ecotourism development) which refer to exchange initiation; measurement constructs (i.e., Power, Trust and Information sharing) for measuring the exchange relationship which refer to exchange formation and maintenance; and outcome variables (i.e., Perceived benefits, Perceived costs, Community's attitude towards participation in ecotourism, Community's intention to participate in ecotourism, Community's participation in ecotourism, and Improved standard of living due to ecotourism) which represent the exchange consequences. All the constructs and measures of the model were mostly borrowed from the SET and TPB literature as well as from the literature in the ecotourism and broad tourism fields. Conceptualizing from SET and the TPB to develop the patterns of the relationships between the constructs in the model, research hypotheses were established. The second phase of data collection was conducted with a structured questionnaire highlighting the constructs of the model and their measures, with these validated prior by the field study findings. In addition, some socio-demographic variables were included in the

questionnaire. Before the final survey was conducted, the questionnaire was pre-tested and refined based on the pre-testing findings. Data were collected from a total of 438 completed questionnaires using the final version of the questionnaire.

To analyse the quantitative data, the PLS-based SEM technique was applied. The PLS framework follows the analysis of the measurement model in the first stage, and subsequently, the analysis of the structural model in the second stage. This study applied the two-stage approach to estimate the validity and reliability of the model (Becker et al., 2012). In analysing the measurement model, some items were subject to deletion due to a poor reliability score. Once acceptable item reliability, and convergent and discriminant validity had been ensured, the model was then run to examine the structural relationships using the PLS bootstrapping procedure. Of the 11 hypothetical relationships, 9 hypotheses were accepted. The study findings suggest that both attraction of the ecotourism site and motivation for ecotourism development have independently had significant influence on the formation and maintenance of the exchange relationship (H_1 and H_2, respectively). The exchange relationship is the function of the actors' power and trust, and the information sharing between the actors. Findings suggest that the exchange relationship has a significant positive impact on perceived benefits (H_3) and also a significant positive impact on perceived costs (H_4). Perceived benefits have a direct positive significant relationship with the community's attitude towards participation in ecotourism (H_5). On the other hand, a direct negative relationship between perceived costs and the community's attitude towards participation in ecotourism was not found to be statistically significant (H_6). Furthermore, a significant direct positive relationship was found with the relationships between perceived benefits and improved standard of living due to ecotourism (H_7) and between perceived costs and improved standard of living due to ecotourism (H_8). Again, findings suggest a significant direct positive relationship between the community's attitude and the community's intention towards participation in ecotourism (H_9). A significant positive relationship was found between the community's intention to participate in ecotourism and the community's participation (actual) in ecotourism (H_{10}). Another finding confirmed the existence of a significant direct positive relationship between the community's participation in ecotourism and the improved standard of living due to ecotourism (H_{11}).

The analysis was further explored to test the mediation effects of the relationships

through the application of the PROCESS macro of Hayes (2013). The results of two additional hypotheses also found a statistically significant effect of the mediating variables (i.e., CAtti, CInt and CPart) on the relationships between perceived benefits and improved standard of living due to ecotourism (H_{12}) and between perceived costs and improved standard of living due to ecotourism (H_{13}). The current study also found the positive impact of control variables (i.e., Personal circumstances, Experience and Government policy) on the ultimate dependent variable resulting in a 23% increase in the R^2 value of the ultimate dependent variable (ISLE). Thus, the overall findings of this study have wide-scale implications both in theoretical and practical contexts.

8.3 CONTRIBUTIONS OF THE STUDY

The current study has not been conducted in isolation from other studies on ecotourism. Hence, the facts and findings yielded from this study are compatible with but do not replicate other studies in a similar context. The main contributions of this study have been highlighted from the theoretical, methodological and contextual viewpoints.

8.3.1 Theoretical Contributions

This study has presented an integrated process for the exchange relationship where the attraction of the ecotourism site and the motivation for ecotourism development are considered antecedent factors and an improved standard of living due to ecotourism is the ultimate consequence (outcome) of the exchange relationship. An improved standard of living due to ecotourism is the function of all the preceding exogenous variables used in the study model. This model has combined most of the relevant factors and dimensions with the theoretical definitions to explain the behavioural exchange relationship process in ecotourism. This study has empirically established the relationships between and among the factors of the study model. In addition, this study has empirically confirmed the link between information sharing and the exchange relationship, with this broadening the scope of the earlier definition of the exchange relationship that contained power and trust variables (Ap, 1992; Nunkoo &

Ramkissoon, 2012). The components of exchange initiation, exchange formation and maintenance, and exchange consequences have been logically presented and explained in this research. Thus, this study has indeed enriched the existing ecotourism literature by providing an operational behavioural exchange model in ecotourism.

Another remarkable contribution of this study is the inclusion of new dimensions for both SET and TPB. As mentioned, the scope of SET has been broadened with the inclusion of *information sharing* as a new dimension which is empirically justified in this research. Based on the findings of this study, the TPB can now explain the behavioural outcome which is considered another important contribution to the theory. The existing TPB literature has explained up to the actual behaviour in its consequence side but readers had an inherent need to find out what happened after the performance of certain behaviour by an individual. In the current study's context, the outcome of actual behaviour is an improved standard of living due to ecotourism. Thus, this addition to the outcome side of the TPB is another remarkable move forward in the theory. In fact, with this inclusion, the existing TPB is found to be complete with its antecedents (i.e., Attitude, Subjective norms and Behavioural controls) and consequences (i.e., Actual behaviour and Behavioural outcome) factors of the planned behaviour. Furthermore, this model provides new insights and understandings about the integrated effects of SET and the TPB in ecotourism research. Hence, the combination of different but related components from the above two theories has deepened the implications of the model.

8.3.2 **Methodological Contributions**

This study has followed the mixed-methods approach in line with the qual → QUAN direction in which the qualitative study was conducted to identify factors and dimensions for developing the comprehensive research model. The quantitative method, on the other hand, was explored to examine the structural relationships between and among the constructs used in the comprehensive research model. This mixed-methods qual → QUAN-based research is considered an important research methodology because the qualitative study explores the facts and figures from the in-depth study of the phenomenon either by interview, focus group discussion or another similar technique(s). The findings from the qualitative study were brought to the task

of designing the quantitative study for final investigation of the phenomenon. Therefore, this study has made an important methodological contribution in ecotourism research that can be followed in future research where local residents are the primary informants for the study. Another important methodological contribution of this research is the application of serial mediation analysis which has revealed the significant indirect relationship of the independent variables (PB and PC) and the independent variable (ISLE) through the mediating variables (CAtti, CInt and CPart). Thus, the current study has exposed a new analytical tool for future ecotourism research.

8.3.3 Practical Implications

As has been the case previously with the Western world, the research on ecotourism is increasingly been conducted in developing countries. Ecotourism research has gained popularity in Asia, Latin America and many African countries. However, each country has different socio-economic conditions with priorities of different importance. Bangladesh is not only a developing country, but it has high population density. The country very much wants and needs alternative sources of income for the people. Ecotourism is found as a promising sector, providing the means for employment and income generation for the local community which would facilitate their easier purchase of belongings. Thus, the research findings will inspire the local community to participate in ecotourism-related activities for their livelihood.

The study findings also provide new insights for ecotourism entrepreneurs on the benefits of ecotourism that will assist their evaluation of investment decisions in various ecotourism-related projects which further create opportunities for employment for the local community. In addition, the successful application of the study model will help to improve the socio-economic conditions of the local community with reference to infrastructural development including education, transport systems, electricity, health, and water solutions.

This study is expected to make notable contributions to local planners and national policy makers for developing a sound ecotourism industry in Bangladesh which has many ecotourism-friendly locations. For example, the Ministry of Civil Aviation and Tourism of Bangladesh government can introduce accommodation project across Sundarbans for overnight stay for the ecotourists. This initiative will offer job

opportunity for the local people in hospitality, catering and overall tourism supply chain. Finally, the study findings can also be the model for other developing countries with similar socio-economic backgrounds.

8.4 RESEARCH LIMITATIONS

The study findings are accompanied by a model that is applicable in the destination context. This model can facilitate the understanding of ecotourism stakeholders, national policy makers and academics about the prerequisites of the ecotourism exchange relationship and its outcomes. Despite the wide-scale applicability of the findings, the following limitations have emerged at the conclusion of this research, with these unable to be addressed by this study.

The study was conducted at a specific community level with those who are primarily suppliers of ecotourism offerings. The socio-economic background of the community and the extent of their relationship with ecotourism may vary from that of other players in the industry. Other players may have different perceptions about the phenomena used in the study model. Thus, replication of the model in other contexts would authenticate the findings of this research.

This research followed the mixed-methods approach in which two different types of data sets (i.e., qualitative and quantitative) were collected in two different time phases which does not satisfy the requirement for the time horizon of data collection (Saunders, Lewis, & Thornhill, 2009). In fact, this study applied cross-sectional design as the single instance which may have the typical limitations of the observation of similar phenomena over time. Thus, the current study has this methodological limitation.

Data were collected from local people who have direct or indirect involvement in ecotourism. Tourists, one of the major segments of ecotourism exchange at the study site, were not considered in this study which further limits the study findings. In addition, the roles of government in and for the study area were not empirically examined in this study. As the current study emphasized exchange relationship among ecotourism stakeholders for gaining improved standard of living of the local community, the study of other exchange partners will provide more useful insights in

the current study context. Thus, the inclusion of all relevant stakeholders would increase the generalizability of the study findings.

The analysis has addressed antecedent constructs that impact on focal constructs and a focal construct that impacts on consequence constructs. The structural model does not represent the true exchange process; rather, it explains the sequential order of occurrence within the research model. Thus, the study model limit the concept of the social exchange process merely explaining the benefits and costs of other exchange partners.

The model suggested in this research is a hybrid-type model which was derived from the blending of SET and the TPB; thus, the applicability and effectiveness of the model are subject to testing in different conditions. The single empirical test conducted in this research may limit the universal applicability of the model.

Moreover, this study has considered samples from one destination in one of the developing countries (i.e., Bangladesh), and has argued that the findings can be applicable to other developing countries with similar conditions. However, the generalisability of the findings is subject to investigations in different parts of the world. Different perceptions may arise about the antecedent and consequence phenomena used in this model in the context of other Asian, Latin American and African developing countries; or among individualistic and collectivist societies across the world.

8.5 FUTURE RESEARCH DIRECTIONS

This research has opened new avenues for further study in the field of ecotourism. Future researchers in ecotourism can explore the following interesting areas of research.

This study has empirically defined the exchange relationship in terms of power, trust and information sharing. These factors are found to be statistically valid and reliable components of the exchange relationship in this research. As nothing is considered absolutely true in social sciences research, future studies can look into broadening the scope of the exchange relationship incorporating additional components, such as

cooperation, confidence, beliefs and other similar relationship and behavioural variables in the context of ecotourism.

In addition, a research opportunity exists in relation to conducting a longitudinal study in ecotourism research as this can overcome the limitations of the cross-sectional study. As longitudinal design involves a study performed over a period of time using the same sample, it would provide the opportunity to empirically test the deeper perception of the phenomena used in the current study.

Future researchers could also include the perceptions of ecotourists and the role of government agencies along with that of local community stakeholders to study the impacts of ecotourism. The reason is that ecotourists are the segment that contributes the most to the local community; similarly, government roles facilitate ecotourism development. Comprehensive findings could be generated if all three groups are studied together.

As the variance explained by the current research is moderate, the scope exists to expand the current study's context. Further studies could reconstruct the present model by incorporating other different variables, such as conservation awareness; ethical/moral conservation guidelines; environmental education; eco-development; gender and empowerment; sustainable community development; generation effect; etc. to explore the impacts of ecotourism development at the community level.

This study has argued for the extension of the existing TPB on its outcome side. Further research could be conducted using this outcome variable within the framework of the TPB in different contexts and different geographic areas. The findings from these other studies could strengthen the argument for the extension of the existing theory of planned behaviour (TPB).

Additional research avenues are now open in the theoretical perspective of ecotourism research which is underdeveloped in the literature. Hence, future research could seeks to extend the existing knowledge of ecotourism through the application of actor-network theory, stakeholder theory and the resource-based view (RBV) either combined or individually to assess the outcomes from ecotourism development.

Finally, the analysis of the research data could be expanded in different dimensions. As the major focus of the study is the SEM analysis technique, future researchers could address the analysis of moderating effects as well as moderated mediation and the

mediated moderation model. In addition, future research could undertake partial least squares-based multi-group analysis (PLS-MGA) of the research model to assess the group-specific differences in the findings. Further research could be conducted using a different modelling technique such as case-based modelling instead of SEM analysis.

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Appendix A

Social Exchange Process in Ecotourism: Realizing Benefits for the Local Community

Constructs	Items	Study Purpose	Study Method	Literature source
Attraction of ecotourism site (6)	natural scenery, wild animals, easy accessibility.	To investigate the management behaviour of attractions in terms of their responses to seasonality	Quantitative- survey	(Connell, Page, & Meyer, 2015)
	Beautiful landscape, safety, accessibility	to identify the attributes of a destination that will potentially provide MTEs	Quantitative- survey	(Kim, 2014)
	Nature	To develop Ecotourist Predisposition Scale	Quantitative- survey	(Nowaczek & Smale, 2010)
	food services, picnic areas and animal attractions	to contribute to the research debate on the definitions of visitor attractions and events and examining the relationships between them.	Qualitative- conceptual	(Weidenfeld & Leask, 2013)
	food services, picnic areas and animal attractions	to survey decision makers in the theme park and attraction industry and solicit their vision regarding future trends.	Quantitative- survey of the park and attraction executives	(Milman, 2001)
	wilderness and undisturbed nature, and tropical forests and indigenous bush	to develop and test an ecotourism interest scale	Quantitative- survey of the international visitors	(Juric, Cornwell, & Mather, 2002)
	Beautiful landscape	to distinguish a special well-being segment among customers interested in rural tourism in Finland	Quantitative- survey of the website users of http://www.lomarengas.fi	(Pesonen & Komppula, 2010)
	Ecotourism services	to analyse tourist preferences for ecotourism and their willingness to pay for ecotourism activities	Qualitative- workshop and focus group Quantitative: Questionnaire survey	(Chaminuka, Groeneveld, Selomane, & Van Ierland, 2012)
	personal safety, accessibility	to uncover the underlying push and pull factors of motivation associated with British outboundpleasure travellers and effects of key motivational factors for destination choice	Quantitative- survey	(Jang & Cai, 2002)

Motivation for ecotourism development (6)	experience and learn more about nature	to explore how much visitors were willingness to pay (WTP) for developing ecotourism	Quantitative- survey	(Chen & Jim, 2012)
	keep healthy and physically fit			
	rest and relax in pleasant settings			
	pursue special interest and skills			
	environmental conservation motivation	to examine the effects of individual and community participation in ecotourism benefits on household conservation practices and perspectives	Mixed methods: Qualitative- focus-group, informal interview and direct observation Quantitative- Self-administered survey	(Stem, Lassoie, Lee, Deshler, & Schelhas, 2003)
	environmental issues	to advance knowledge of the complex relationship between community-based ecotourism and sustainable development	Case study- Qualitative	(Reimer & Walter, 2013)
	satisfying financial or economic benefits	to explore the cultural interaction between communities and visitors to islands	Case study- Qualitative (in-depth interview)	(Moyle, Croy, & Weiler, 2010)
	economic benefit	to develop and test a model of the support residents have for tourism development during a period of economic uncertainty	Quantitative- Survey	(Stylidis & Terzidou, 2014)
	economic and social condition	• to develop a conceptual model that explains why residents develop positive or negative perceptions toward tourism and • to present a set of propositions to test • the model	Conceptual	(Ap, 1992)
	promoting ecotourism internationally	to evaluate the contribution of ecotourism to conservation and communities' development	Case study- Literature review	Chiutsi et al., 2011)
	novelty seeking	to identify the attributes of a destination that will potentially provide MTEs	Quantitative- survey (personal interview)	(Kim, 2014)
	widen the knowledge of community	to investigate women's participation in a community-based ecotourism project in northern Vietnam	Case study- in-depth semi-structured interviews, participant observation and document analysis	Tran & Walter, 2014)

	long-term partnership	to evaluate a community's desire to participate in an ecotourism project; and to assess the feasibility of implementing a community participatory ecotourism development project that is based on the community participation process	Mixed methods: Quantitative: survey Qualitative: interview	(Nault & Stapleton, 2011)
Power (6)	cooperativeness	to examine how coercive power and non-coercive power affect trust and how these relationships are affected by affective and calculative commitment	Quantitative: survey	(Jain, Khalil, Johnston, & Cheng, 2014)
	withdrawal			
	competence			
	compliance			
	quality of advice	to aid channel researchers in developing and utilizing adequate measures of power	Quantitative: interview	(Frazier, 1983b)
	mutual assistances			
	Personal influence	to develop a model of community support for tourism	Quantitative- survey	(Nunkoo & Ramkissoon, 2011)
	Political influence			
	opportunity to participate	to develop a comprehensive model that predicts residents' trust in government actors and political support for tourism	Quantitative- online survey	(Nunkoo & Smith, 2013)
	getting favour	investigate the relationship between power, relationship commitment and the integration of manufacturers with their customers	Quantitative- mail survey and follow-up calls	(Zhao, Huo, Flynn, & Yeung, 2008)
	getting good advice			
	own land	to explore the utility of a combination of social exchange and power theories to explain how residents 'evaluation of the impact of tourism influences their attitudes	Qualitative- adopted between unstructured and restructured interview)	(Kayat, 2002)
	access to capital			
	hold positions			
	have high education/experience			
	younger age			
Trust (7)	keep promises	to examine how coercive power and non-coercive power affect trust and how these relationships are affected by affective and calculative commitment	Quantitative- survey	(Jain, Khalil, Johnston, and Cheng, 2014)
	believe in information			
	considers welfare			
	trustworthy			
	honesty			
	trust the government	to test a model of community support with the social exchange theory as its theoretical basis	Quantitative- survey	(Nunkoo & Ramkissoon, 2012)

	social morality	to identify the factors influencing social capital as it affects community conflict management for community residents in rural tourism villages	Quantitative- survey	(Park, Lee, Choi, & Yoon, 2012)
	easy to trust high tendency to trust trust a person with having even little knowledge trusting someone not difficult	to investigate the four main antecedents influence on consumer trust in Internet shopping	Quantitative- postal survey	(Lee & Turban, 2001)
	even-handed in negotiations act as expectation faith sense of betrayal	to explain how trust operates at both individual and organizational levels	Quantitative- survey	(Zaheer, McEvily, & Perrone, 1998)
	take care Trust completely	to establish a theoretical basis for evaluating a strategic increase in customers' perceptions of service/product quality	Mixed methods Qualitative: interview Quantitative: survey	(Caceres & Paparoidamis, 2007)
	always meet expectations can be counted to be good reliable cannot always be trusted	to analyse the relationships of satisfaction, trust, and commitment to component satisfaction attitudes and future intentions	Quantitative: mail survey	(Garbarino & Johnson, 1999)
Information sharing (6)	share information on inventory forecast of customer demand share information on price share information electronically	to examine the relationships between specific supply chain practices and organizational performance	Quantitative: structured interview with mail survey	(Cook, Heiser, & Sengupta, 2011)
	detailed enough frequent enough timely enough	to extend understanding of supplier development theory by investigating the relationships among communication methods, information sharing within a firm, information sharing between firms, and support aimed at supplier development	Quantitative-mail survey	(Carr & Kaynak, 2007)
	share proprietary information information help our partner	to examine factors influencing information sharing and implementation in inter-organizational relationships	Quantitative: survey	(Cheng, 2011)
	learn many thing	To introduce a new perspective of information behaviour in Web 2.0 environment	Quantitative: survey	(Mills, Knezek, & Khaddage, 2014)

	share customized information	to investigate what empirical evidence exists regarding benefits of information sharing in supply chains	Conceptual- in-depth interview and literature review	(Kembro & Näslund, 2014)
	timely	to provide empirical evidence for SCT and TCT from the perspective of supply chain management	Quantitative- survey	(Wang, Ye, & Tan, 2014)
	accurate			
	complete			
	adequate			
	reliable			
	feel good	To examine the income effect in personal shopping behaviour	Quantitative- personal interview survey	(Paridon, Carraher, & Carraher, 2006)
Perceived benefits (7)	employment opportunity	to test a model of community support with the social exchange theory as its theoretical basis	Quantitative- survey	(Nunkoo & Ramkissoon, 2012)
	more business for local people			
	better infrastructure			
	Increase in standard of living			
	Investment opportunities			
	cultural exchange			
	environmental preservation			
	community spirit and image	to examine the factors predicting attitudes toward tourism of residents from communities	Quantitative- both mail survey and personal interview	(McGehee & Andereck, 2004)
	revenues for local governments	to investigate influences of seasonal attributes on residents' perceptions of tourism impacts and, in turn, residents' perceived quality life in a cultural-heritage tourism destination	Quantitative- hand-delivered questionnaire with return envelope for sending completed questionnaire	(Jeon, Kang, & Desmarais, 2016)
	benefits myself	to explore differences in residents' perceptions of casino development between South Korea and Colorado; and to investigate whether social exchange theory is appropriate to explain residents' perceptions	Quantitative- face-to-face interview/survey	(Lee, Kang, Long, & Reisinger, 2010)
	benefits local residents			
Perceived costs (6)	Increase in environmental pollution	to test a model of community support with the social exchange theory as its theoretical basis	Quantitative- survey	(Nunkoo & Ramkissoon, 2012)
	Increase in alcoholism and prostitution			
	Increase in prices of goods and services			
	Increase in the price of land and property			

	Increase in crime rate			
	Change in culture			
	Increase in traffic congestion	to explore the effects of the distance residents live from attractions on their attitudes toward tourism	Quantitative- mail survey	(Jurowski & Gursoy, 2004)
	Increase cost of living	to explore differences in residents' perceptions of casino development between South Korea and Colorado to investigate whether social exchange theory is appropriate to explain residents' perceptions	Quantitative- face-to-face interview/survey	(Lee et al., 2010)
	Affect the community's way of life	to expand the existing support models by testing one that was developed based on the previous constructs and social exchange theory	Quantitative- survey	(Gursoy & Rutherford, 2004)
	Native people are being exploited by tourism	to examine the factors predicting attitudes toward tourism of residents from communities	Quantitative- both mail survey and personal interview	(McGehee & Andereck, 2004)
Community's attitude towards participation in ecotourism (6)	satisfying	to investigate the travellers' behaviour formation process in visiting a destination and to test an extended model of the TPB	Mixed methods; Qualitative: focus group Quantitative: postal and e-mail survey	(Hsu & Huang, 2012)
	pleasant			
	enjoyable			
	worthwhile			
	Fascinating			
	rewarding			
	great promise	to examine the relationships between tourism attitudes, length of residency,level of tourism development, and feelings of community attachment	Quantitative- mail survey	(McCool & Martin, 1994)
	overall benefits outweigh negative impacts			
	positive	to examine the influence of materialistic value on one's attitude and interest toward ecotourism	Quantitative- online survey	(Lu, Gursoy, & Del Chiappa, 2016)
	favourable			
	fun			
	foreseeable future	to explore patterns and themes of Asian ecotourism	Qualitative_ literature review	(Weaver, 2002)
Community's intention to participate in	to attend	to analyse the relationships of satisfaction, trust, and commitment to component satisfaction attitudes and future intentions	Quantitative- mail survey	(Garbarino & Johnson, 1999)
	to subscribe			
	to donate			
	to intend	to investigate the travellers' behaviour formation process in visiting a destination and to test an extended model of the TPB	Mixed methods; Qualitative: focus group Quantitative- postal and e-mail survey	(Hsu & Huang, 2012)
	to plan			
	to want			
	probably will			

	to expect	to predict the intention to transfer after participation in a faculty development workshop	Quantitative- survey workshop attendees	(Singh, De Grave, Ganjiwale, Muijtjens, & van der Vleuten, 2014)
	likelihood	to examine the influence of materialistic value on one's attitude and interest toward ecotourism	Quantitative- online survey	(Lu et al., 2014)
Community's participation in ecotourism (6)	communicating with local government	examines how communities at the periphery of a remotely located nature reserve of Taiwan have responded to potential ecotourism development, and analyses their attitudes and intentions towardfour key dimensions of ecotourism development	Quantitative- face-to-face interview	(Lai & Nepal, 2006)
	participation in ecotourism planning			
	increasing ecotourism-related employment			
	participation in ownership and management	To explore community views of ecotourism	Qualitative- semi-structured interview	(Stronza & Gordillo, 2008)
	participation in conservation			
	making and selling local goods	to assess community empowerment and its relationship with stakeholders' participation by collecting the views of internal and external stakeholders in indigenous ecotourism.	Qualitative- semi-structured interviews, focus groups and participant observation	(Ramos & Prideaux, 2014)
	participation in decision-making			
Improved standard of living due to Ecotourism (7)	household income	to develop methods of income analysis which incorporate the household factor	Quantitative- sample survey of the households	(Ringen, 1991)
	access to clean water	to measure standard of living using proxies and compare the indicators with consumption expenditure	Quantitative- secondary data	(Montgomery, Gragnolati, Burke, & Paredes, 2000)
	access to electricity			
	access to public transport	to test the relationship between standard of living and self-evaluated quality of life	Quantitative- structured interview	(Skantze, Malm, Dencker, May, & Corrigan, 1992)
	access to school/education			
	access to books and papers			
	access to cheap home-help services			
	access to inexpensive dental and health care			
	material well-being	to define two composite indices of well-being—standard of living and quality of life	Quantitative: secondary data of 170 countries	(Bérenger & Verdier-Chouchane, 2007)
	average standard of living	to identify the positive and negative aspects of tourism as perceived by the local population to determine the influence of selected variables on the population's responses	Quantitative: structured interview	(Belisle & Hoy, 1980)

Appendix B

Exchange Process in Ecotourism: Realizing Benefits for the Local Community

☐ I have received information regarding this research and had an opportunity to ask questions. I believe I understand the purpose, extent and possible risks of my involvement in this project and I voluntarily consent to take part.

OPTIONAL CONSENT

☐ I do	☐ I do not	consent to being video-recorded
☐ I do	☐ I do not	consent to being audio-recorded
☐ I do	☐ I do not	consent to the storage and use of my information in future ethically-approved research projects related to this project

Introductory Questions

Please tick from the following which is best relevant to you:

Age: □18-25 years □26-40 years □above 40 years

Gender [Please tick]: □Male □Female

Number of year(s) living in this area: □Below 5 years □6 – 10 years □Above 10 years

Level of Education [Please tick]: □Primary □Secondary □Higher secondary □Tertiary

Occupation: □Tourism related business □Others (mention):

Period of current occupation/business: □Below 5 years □6 – 10 years □Above 10 years

Previous occupation/business (if any):

Semi-structured Questions

1. Could you please tell me about your understanding of ecotourism?

2. Could you please explain the key attractions in this area for ecotourism? Give example.
   - Probe as necessary.

3. What are the activities related to ecotourism in this area? Give example.
   - Probe as necessary.

4. Could you please tell me about different parties involved in ecotourism related activities in this area?

5. Why do people in this area get involved in ecotourism related activities? Give example.
   - Probe as necessary.

6. In your opinion, what issues are important to facilitate exchange relation between and among the parties involved in ecotourism related activities? Give example.
   - Probe as necessary.

6.a) Do you think mutual dependence of parties play roles in exchange relation for ecotourism? How? Give example.

- Probe as necessary.

6.b) Do you think, trustworthiness of parties plays a role in exchange relations for ecotourism? How? Give example.

- Probe as necessary.

6.c) Does information about party(ies) facilitate exchange relation between and among individuals of this area in relation to ecotourism? Give example.

- Probe as necessary.

7. Do local people get benefits from their relation with ecotourism activities? How? Give example.

- Probe as necessary.

8. Is ecotourism harmful (in any way) to local people? Why or why not? Give example.

- Probe as necessary.

9. Could you please explain local people's attitude towards ecotourism in this area? Give example.

- Probe as necessary.

10. How do you participate in ecotourism related activities at present? Which aspects of ecotourism? Give example.

- Probe as necessary.

11. Could you please tell me your willingness to get involved more in ecotourism activities in this area? Give example.

- Probe as necessary.

12. Do local people enjoy additional income and consumption abilities due to ecotourism? How? Give example.

- Probe as necessary

13. Could you please tell me the name of any individual or organization who is directly or indirectly involved in ecotourism activities in this area?

Appendix C

Curtin University

Social Exchange Process in Ecotourism: Realizing Benefits for the Local Community

Questionnaire

☐ I have received information regarding this research and had an opportunity to ask questions. I believe I understand the purpose, extent and possible risks of my involvement in this project and I voluntarily consent to take part.

OPTIONAL CONSENT

☐ I do	☐ I do not	consent to being video-recorded
☐ I do	☐ I do not	consent to being audio-recorded
☐ I do	☐ I do not	consent to the storage and use of my information in future ethically-approved research projects related to this project

Section - A

Please mark your choice with each of the following statement about ecotourism in your area using '√' in the appropriate box for each statement where 1 denotes strongly disagree and 6 stands for strongly agree.

Id	Question	Strongly disagree	Disagree	Moderately Disagree	Moderately Agree	Agree	Strongly agree
Attr	**Please pass your opinion regarding the following ecotourism attractions in this area:**	**1**	**2**	**3**	**4**	**5**	**6**
Attr1	There are many visiting spots and natural scenery in this area						
Attr2	There are many wild animals (tiger, monkey, etc.) living in this forest						
Attr3	Landscape is beautiful with rivers and forest						
Attr4	The ecotourism related services (e.g., food, accommodation, transport, etc.) are available in this spot						
Attr5	Personal safety and security for the ecotourists are excellent in this area						
Attr6	Visiting spots in this area are easily accessible						
Mot	**Please state you opinion regarding why people of this area are motivated to be involved in ecotourism related activities**	**1**	**2**	**3**	**4**	**5**	**6**
Mot1	Ecotourism of this area do not damage natural environment						
Mot2	Ecotourism of this area helps to improve socio-economic condition of local community						
Mot3	Ecotourism development augments international understanding about this area						

Mot4	Providing ecotourism services is a novel profession						
Mot5	Being involved in ecotourism provides new knowledge about this industry						
Mot6	Ecotourism activities of this area creates partnership between the local community and outsider stakeholders						
Po	**To what extent, you believe the following factors constitute the power of the parties involved in the exchange in ecotourism related issues?**	**1**	**2**	**3**	**4**	**5**	**6**
Po1	Cooperation among the parties						
Po2	Quality of advice provided by the parties						
Po3	Mutual assistance of the parties						
Po4	Getting favour from other parties by going along with them						
Po5	Getting good advice from our relationship with other parties						
Po6	Fail to Comply with the tourists' requests, they will withdraw themselves to visit this area.						
Tr	**To what extent, you believe the following factors build trust among the parties involved in the exchange in ecotourism related issues?**	**1**	**2**	**3**	**4**	**5**	**6**
Tr1	We keep promises in our exchange						
Tr2	We believe in the information that the parties provide to us						
Tr3	We are always honest in the exchange						
Tr4	It is not difficult to trust the parties involved in the exchange.						
Tr5	We are even-handed in our negotiations						
Tr6	We take care of our needs						
Tr7	We are reliable to each other						
InfoS	**To what extent, you believe the following factors facilitate the information sharing among the parties involved in the exchange regarding ecotourism issues.**	**1**	**2**	**3**	**4**	**5**	**6**
InfoS1	We share information in detail to meet our requirements						
InfoS2	We share information in a timely manner to meet our requirements						
InfoS3	We learn a lot by interacting with others in this industry						
InfoS4	We share customized information with other parties						
InfoS5	We provide information to other parties that might help them						
InfoS6	we feel good telling about an experience to the other parties						
PB	**Please state your perception regarding the following benefits of ecotourism for the local community in this area**	**1**	**2**	**3**	**4**	**5**	**6**
PB1	Ecotourism development creates employment opportunities for the local community						
PB2	Local community gets more business due to ecotourism						
PB3	Ecotourism development attracts better infrastructural development (e.g., road, electricity, etc.) for this area						
PB4	Government gets revenue from ecotourism in this area						
PB5	Ecotourism contributes to the environmental preservation as a whole						
PB6	Ecotourism enhances the spirits and image for the local community						
PB7	Ecotourism development benefits local community in general						
PC	**Please state your perception regarding the following costs of ecotourism for the local community in this area**	**1**	**2**	**3**	**4**	**5**	**6**
PC1	Ecotourism development increases the prices of land and property in this area						
PC2	Ecotourism development increases the prices of other goods and services in this area						

PC3	Ecotourism development increases the cost of living for the local community						
PC4	Ecotourism development increases the crime rate in this area						
PC5	Ecotourism changes the traditional way of life of the local community						
PC6	Local community is being exploited by ecotourism						
CAtti	**Please state your opinion regarding the following aspects of community's attitude towards participation in ecotourism**	**1**	**2**	**3**	**4**	**5**	**6**
CAtti1	Ecotourism provides many **worthwhile employment** opportunities for the local community						
CAtti2	The overall benefits of ecotourism **outweigh** the negative impacts						
CAtti3	Ecotourism holds **great promise** for our future way of life						
CAtti4	The involvement in ecotourism is **enjoyable**						
CAtti5	People **feel pleasant** for ecotourism development in this area						
CAtti6	There is likelihood that local community will participate in ecotourism in **foreseeable future**						
CInt	**As a member of this local community, please state your opinion on the following aspects of your intention to participate in ecotourism.**	**1**	**2**	**3**	**4**	**5**	**6**
CInt1	I have intention to attend to the ecotourism related activities in future						
CInt2	I have intention to contribute to the ecotourism related activities in the future						
CInt3	I expect to participate in ecotourism activities						
CInt4	I intend to participate in ecotourism activities						
CInt5	I Want to participate in ecotourism activities						
CInt6	I will try to participate in ecotourism related activities in next 12 month						
CPart	**As a member of this local community, please give your choice on the following types of participation in ecotourism related issues.**	**1**	**2**	**3**	**4**	**5**	**6**
CPart1	I have participated in ownership and management of ecotourism venture						
CPar2	I have participated in ecotourism planning in this area						
CPart3	I have participated in decision-making on ecotourism in this area						
CPart4	I have participated in conservation of this ecotourism site						
CPart5	I am involved in making or selling local goods and services						
CPart6	I am involved in ecotourism-related employment						
Cor	**Please give your observation regarding the following aspects of corruption based on this ecotourism site.**	**1**	**2**	**3**	**4**	**5**	**6**
Cor1	Bribery practices of certain officials for special treatment						
Cor2	Illegal resource removal by the local people						
Cor3	Officials taking enticements						
Cor4	Pirates take ransom from local traders						
Cor5	Pirates kidnaps local traders						
Cor6	Pirates torture local traders						
GP	**Please mention, how do you perceive about the following aspects of government policy for ecotourism development in this area.**	**1**	**2**	**3**	**4**	**5**	**6**
GP1	Government's infrastructural development (platform, stair, mobile network, etc.) is available in this ecotourism site						
GP2	Government's policy towards security system is satisfactory in this ecotourism site						
GP3	Government's policy for caring & maintenance of the interest of the local community is sufficient						

GP4	Government provides clear guidelines and training in ecotourism related activities,						
GP5	Government launches public awareness-building programs for the conservation of ecotourism resources						
GP6	Overall government policy on ecotourism development is effective in this area						
PIns	**Please give your opinion on how the following factors affect the ecotourism activities in this area.**	**1**	**2**	**3**	**4**	**5**	**6**
PIns1	Government stability						
PIns2	Conflict among political parties						
PIns3	Blockade of different movement groups and associations						
PIns4	Hartal (strike) from different political party and movement groups						
PIns5	Religion in politics						
ISLE	**Please state your opinion regarding the following aspects of the improved standard of living due to ecotourism in this area.**	**1**	**2**	**3**	**4**	**5**	**6**
ISLE1	Ecotourism development increases household income						
ISLE2	Ecotourism development increases access to the public transportation in this area						
ISLE3	Ecotourism development increases access to the clean water in this area						
ISLE4	Ecotourism development increases access to electricity in this area						
ISLE5	Ecotourism development increases access to better health services in this area						
ISLE6	Ecotourism development improves the standard of education in this area						
ISLE7	Ecotourism development improves the average standard of living for the local community						

Section - B

The following questions are related to the demographic factors. Please indicate what is the most appropriate for you by putting 'X' in the appropriate box, or mention your choice as it is best relevant for you.

Age: □18-25 years □26-40 years □above 40 years

Gender: □Male □Female

Level of Education: □Primary □Secondary □Higher secondary □Tertiary

Household size: □1 person □2 persons □3 persons □4 persons □5 persons or above

Occupation: □Tour guide □Transport □Accommodation □Restaurant/café □Handicraft/souvenir □Cultural show □Fish collector/seller □Honey collector/seller □Others (mention):

Period of current occupation/business: □Below 5 years □6 – 10 years □Above 10 years

Previous occupation/business (if any):

Period of living in this area: □Below 5 years □6 – 10 years □Above 10 years