

**Business Value of ICT for Small Tourism Enterprises:  
The Case of Sri Lanka**

**By**

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## **Abstract**

*Researchers and practitioners believe that Information and Communication Technologies (ICTs) create business value in organisations. However in practice, organisations often struggle to demonstrate the benefits of ICTs. This difficulty in demonstrating the value of ICTs to organisations is not related to the technology itself, but rather the ways in which technology is used, and how it creates business value. There is an extensive body of literature which focuses on these issues. However, it is predominantly centred on large organisations in the context of developed countries. There is a lack of research on how ICTs create business value in small enterprises particularly in relation to developing countries. Hence, the business value of ICTs remains an important research topic for information systems researchers.*

*The tourism industry is highly information intensive and the use of ICTs in tourism has become so widespread it is almost obligatory. While the benefits that larger tourism organisations gain from ICTs have been well researched, little is known about how ICTs can be utilised to maximise the business value of Small Tourism Enterprises (STEs). Understanding the value of ICTs for STEs is important as they have gained widespread recognition as a major source of employment, income generation and poverty alleviation in developing countries. Therefore, the purpose of this study is to explore how ICTs can contribute to the business value of STEs.*

*Using a combination of Barney's Resource Based View of the firm (RBV) and an integrated model developed by combining the Business value of IT framework by Melville et al. and the tourism production system by Poon and Alford, this study examines how ICTs contribute to the business value of STEs. A post-positivist qualitative multi-case study was carried out using 35 STEs which represent the major tourist regions of Sri Lanka. Semi-structured interviews were the main method of data collection supported by document and website analysis. Data analysis was guided by template coding. The initial template developed using the dimensions identified from the literature was further analysed by integrating the themes which emerged from the research data. Data was*

*analysed across cases, using a cross tabular design to compare categories and analyse within-group similarities and inter-group differences.*

*The use of technological and human ICT resources alongside complementary resources in key business processes was examined in order to identify how ICTs were being utilised to gain business value for STEs in Sri Lanka. The combination of internal and external factors derived from the focal firm and the external environment proved to have a significant role in determining STEs' ability to gain business value from ICTs. Further analysis of cases across four major tourism clusters revealed that business motives, strategies, and location were the main reasons for the varying levels of business value gained by small businesses in the country.*

*The findings of this study indicated that ICTs do contribute to the business value of STEs in Sri Lanka by improving organisational performance in terms of both financial and non-financial gains. In accordance with the claims of RBV, the findings further confirmed that in order to gain business value, ICT resources need to be combined with complementary resources. The findings also identified the significance of strategic integration of online travel agents' resources in order for STEs to gain the optimum business value from their own ICT resources.*

*A key outcome of this study is the development of an integrated model of the business value of ICTs for STEs. In addition, this study contributes to the theoretical understanding of IT business value research in the context of small tourism businesses, particularly in developing countries. It also has implications for business owners and governments in terms of effective utilisation of firm resources, prioritization and allocation of resources to key projects and processes.*

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## Table of Contents

<b>Abstract</b> .....	<b>i</b>
<b>Acknowledgements</b> .....	<b>iii</b>
<b>Table of Contents</b> .....	<b>iv</b>
<b>List of Tables</b> .....	<b>ix</b>
<b>List of Figures</b> .....	<b>x</b>
<b>1. Chapter 1: Introduction</b> .....	<b>11</b>
1.1. Overview .....	11
1.2. Motivation for the research .....	13
1.3. Research Problem .....	14
1.4. Research Question .....	15
1.5. Research Design and Methodology .....	15
1.6. Organisation of the Thesis .....	16
<b>2. Chapter 2: Literature Review</b> .....	<b>18</b>
2.1 Chapter Introduction.....	18
2.2 Information and Communication Technologies (ICTs) .....	18
2.2.1 Business value of IT/ICT .....	20
2.2.2 Concepts in business value of IT .....	22
2.2.3 ICTs in Small and Medium Enterprises (SMEs) .....	24
2.3 Tourism.....	28
2.3.1 Nature of the tourism industry .....	30
2.3.2 Tourism business processes.....	32
2.3.3 ICTs in tourism .....	39
2.3.4 Small Tourism Enterprises (STEs).....	44
2.3.5 ICTs in STEs.....	45
2.4 Value of ICTs in STEs.....	46
2.5 The Knowledge Gap .....	47
2.6 Chapter Summary.....	50

<b>3. Chapter 3 - Theoretical Basis and the Conceptual Framework .....</b>	<b>51</b>
3.1 Chapter Introduction.....	51
3.2 Resource Based View of the Firm (RBV) .....	51
3.2.1 RBV in IT business value research.....	53
3.2.2 Melville et al.'s model of IT business value .....	56
3.3 Conceptual Framework .....	58
3.3.1 Focal firm .....	61
3.3.2 External environment .....	62
3.4 Chapter Summary.....	63
<b>4. Chapter 4: Research Context - Sri Lanka and its Tourism.....</b>	<b>64</b>
4.1 Chapter Introduction.....	64
4.2 Background of Sri Lanka – The Research Site .....	64
4.3 Overview of Tourism Sri Lanka.....	67
4.3.1 Sri Lankan tourism – A brief history.....	67
4.3.2 Tourism as a major economic activity of Sri Lanka.....	68
4.3.3 Tourism demand .....	71
4.3.4 Tourism supply.....	74
4.3.5 Summary of the Sri Lankan tourism industry .....	79
4.4 PESTEL Analysis – Tourism in Sri Lanka .....	80
4.4.1 Political factors.....	81
4.4.2 Economic factors.....	85
4.4.3 Socio-cultural factors .....	86
4.4.4 Technological factors .....	88
4.4.5 Environmental factors.....	89
4.4.6 Legal factors .....	89
4.5 Chapter Summary.....	94
<b>5. Chapter 5: Research Methodology .....</b>	<b>95</b>
5.1 Chapter Introduction.....	95
5.2 Research Paradigm and Approach .....	95
5.3 Research Process.....	102

5.4	Case Design .....	105
5.4.1	Unit of analysis.....	105
5.4.2	Case selection .....	105
5.5	Data Collection .....	110
5.6	Data Analysis .....	115
5.6.1	Template coding .....	117
5.6.2	Overall case analysis .....	120
5.6.3	Cross-case analysis.....	121
5.7	Ethical Considerations.....	122
5.8	Validity and Reliability.....	122
5.9	Chapter Summary.....	128
<b>6.</b>	<b>Chapter 6: Findings - Overall Cases .....</b>	<b>129</b>
6.1	Chapter Introduction.....	129
6.2	The Focal Firm – STEs in Sri Lanka.....	129
6.2.1	Case profiles.....	129
6.2.2	ICT resources in STEs.....	132
6.2.3	Complementary resources in STEs .....	146
6.3	Business Processes of STEs.....	152
6.3.1	Distribution and sales .....	154
6.3.2	Service delivery .....	164
6.3.3	Management (back office functions).....	165
6.3.4	Summary of the business processes of STEs .....	167
6.4	External environment.....	168
6.4.1	Effects of industry characteristics on STEs .....	168
6.4.2	Effects of government support on STEs.....	173
6.4.3	Effects of trading partner resources and processes on STEs.....	175
6.5	Drawbacks and Barriers to Implementing ICT Strategies .....	184
6.5.1	Lack of qualified and trained ICT personnel .....	185
6.5.2	Lack of awareness about available ICTs.....	186
6.5.3	Limited financial budget for ICTs .....	187
6.5.4	Limited infrastructure in rural areas.....	188

6.6	Chapter Summary.....	189
<b>7.</b>	<b>Chapter 7: Cross-Case Analysis.....</b>	<b>191</b>
7.1.	Chapter Introduction.....	191
7.2.	Clustering the Cases .....	191
7.3.	Availability of ICT Resources in STEs across the Four Regions.....	198
7.3.1.	Technological ICT resources.....	199
7.3.2.	Human ICT resources .....	206
7.3.3.	Summary of the ICT resources in the four regions.....	208
7.4.	Availability of Complementary Resources in STEs across the Four Regions.....	209
7.4.1.	Non-IT physical capital resources .....	209
7.4.2.	Non-ICT human capital resources.....	210
7.4.3.	Complementary organisational capital resources.....	211
7.4.4.	Summary of the complementary resources in the four regions .....	212
7.5.	Use of ICTs in Business Processes – ICT Strategies .....	212
7.5.1.	Online selling strategies.....	213
7.5.2.	Online marketing strategies.....	218
7.5.3.	Back office functional strategies.....	225
7.5.4.	Summary of use of ICT strategies .....	228
7.6.	Drawbacks and Barriers to Implementing ICT Strategies .....	229
7.7.	Summary of the Cross-case Analysis.....	234
<b>8.</b>	<b>Chapter 8: Discussion .....</b>	<b>235</b>
8.1.	Chapter Introduction.....	235
8.2.	Addressing the Research Question and Aims .....	235
8.3.	(RA 1) - How STEs use ICTs to gain Business Value .....	236
8.4.	(RA 2) - Factors affecting the STEs' ability to gain business value through ICTs ...	243
8.4.1.	Organisational Factors .....	243
8.4.2.	External Factors .....	250
8.5.	(RA 3) – Determinants of varied contribution of ICTs to the business value of STEs	257
8.5.1.	Business motives of the owners .....	257



8.5.2.	ICT strategies used .....	259
8.5.3.	Variations between different regions.....	269
8.6.	(RQ) - How do ICTs contribute to the business value of STEs in Sri Lanka?.....	271
8.6.1.	Increasing financial gains .....	272
8.6.2.	Improving operational efficiency and competitiveness .....	275
8.6.3.	Improving the reputation of the business .....	276
8.7.	Business Value of ICTs: A Revised Theoretical Framework.....	281
8.7.1.	Focal Firm.....	284
8.7.2.	Business Processes.....	285
8.7.3.	Organisational Performance .....	287
8.7.4.	External environment .....	288
8.8.	Chapter Summary.....	290
<b>9.</b>	<b>Chapter 9: Conclusion.....</b>	<b>291</b>
9.1	Chapter introduction.....	291
9.2	Research Synthesis.....	291
9.3	Contributions of this research.....	295
9.4	Limitations of this research.....	303
9.5	Directions for future research.....	305
	<b>References.....</b>	<b>307</b>
	<b>Appendix A: Interview Protocol.....</b>	<b>328</b>
	<b>Appendix B: Participant Information Sheet.....</b>	<b>331</b>
	<b>Appendix C: Participant Consent Form .....</b>	<b>332</b>
	<b>Appendix D: Final Template .....</b>	<b>333</b>
	<b>Appendix E: HEC Approval for Interviews .....</b>	<b>336</b>

## List of Tables

Table 2.1: Definitions of IT business value .....	21
Table 2.2: Key business processes in tourism .....	36
Table 4.1: Top 10 sources of foreign exchange for Sri Lanka 2009 & 2014 .....	69
Table 4.2: Public sector revenue from tourism (in Rs. Million) 2011-2014.....	70
Table 4.3: Direct employment in the tourism industry 2014.....	70
Table 4.4: Relative importance of market regions (2012, 2013 & 2014).....	71
Table 4.5: Top ten source markets (2013 & 2014).....	72
Table 4.6: The seven tourist regions of Sri Lanka.....	76
Table 4.7: Accommodation establishments in Sri Lanka.....	78
Table 4.8: Accommodation capacity (rooms in graded accommodation) and its regional distribution from 2005 to 2014 .....	79
Table 4.9: Sri Lankan government initiatives to develop the tourism industry after 2009 .....	82
Table 4.10: Sri Lankan government initiatives to develop ICTs in the country .....	84
Table 4.11: Overview of Sri Lanka's ICT and tourism industry performance compared to other countries in the South Asian region .....	92
Table 5.1: Key characteristics of case research (Benbasat et al., 1987).....	101
Table 5.2: Registered tourist accommodation businesses in resort regions of Sri Lanka.....	108
Table 5.3: Distribution of cases selected from resort regions .....	110
Table 5.4: Interview protocol sections .....	111
Table 5.5: Rigour in the design phase, adapted from Dubé and Paré (2003) and Strode (2012)	125
Table 5.6: Rigour in the data collection phase, adapted from Dubé and Paré (2003) and Strode (2012) .....	126
Table 5.7: Rigour in the data analysis phase, adapted from Dubé and Paré (2003) and Strode (2012) .....	127
Table 6.1: Summary of the Case Profile .....	131
Table 7.1: Disparities in Infrastructure by Provinces in Sri Lanka 2007 .....	195
Table 7.2: Availability of ICT resources among the four regions.....	199
Table 7.3: Level of ICT skills of the employees of the STEs in the four regions.....	207
Table 7.4: The usage level of online selling strategies across the four regions. ....	214
Table 7.5: Website analysis of the four regions. ....	219
Table 7.6: Use of social media by STEs in the four regions .....	220
Table 7.7: The extent of involvement of STEs with TripAdvisor.....	222
Table 7.8: The usage level of back office functional strategies across regions.....	226
Table 7.9: The level of implementation of ICT strategies within the four regions.....	228
Table 7.10: The level of impact of barriers to ICT strategies in the four regions.....	229
Table 7.11: Emphasis on ICTs where strategic plans were available .....	232
Table 8.1: Business value concepts supported by the literature and evidence from cases .....	271
Table 8.2: Features of the initial conceptual framework and the revised theoretical framework .....	283

## List of Figures

Figure 2.1: Tourism production system (Poon, 1993).....	33
Figure 2.2: Tourism business processes (Adapted from Poon, 1993 and Alford, 2005) .....	39
Figure 2.3 : The knowledge gap.....	48
Figure 3.1: IT Business value model (Melville et al., 2004) .....	56
Figure 3.2: Conceptual framework – How ICT contributes to the business value of STEs adapted from Melville et al. (2004); Poon (1993); and Alford (2005).....	60
Figure 4.1: Map of Sri Lanka (Ezilon Maps, 2013). .....	66
Figure 4.2: Tourist arrivals to Sri Lanka 1970-2014.....	67
Figure 4.3: Seasonality of tourist traffic 2014 .....	73
Figure 4.4: Tourist resort regions in Sri Lanka (SLTDA website, 2013).....	75
Figure 4.5: Institutional structure of tourism authorities in Sri Lanka. ....	90
Figure 5.1: Research process.....	104
Figure 5.2: Distribution of accommodation in resort regions of Sri Lanka .....	110
Figure 5.3: Analytical Framework.....	116
Figure 6.1: ICT devices availability in STEs.....	133
Figure 6.2: Use of ICT applications by STEs .....	137
Figure 6.3: Availability of networking and communication infrastructure in STEs.....	140
Figure 6.4: Availability of specific features on websites of STEs.....	142
Figure 6.5: Level of ICT skills of employees in STEs.....	144
Figure 6.6: Availability of non-ICT physical resources in STEs.....	147
Figure 6.7: Availability of non-IT human resources in STEs.....	149
Figure 6.8: Key business processes of STEs .....	153
Figure 6.9: Rooms reservation methods used by STEs in Sri Lanka .....	154
Figure 6.10: Use of OTAs by STEs. ....	176
Figure 7.1: Classification of businesses for analysis across cases .....	197
Figure 7.2: Factors considered in cross-case analysis of this study. ....	198
Figure 7.3: Availability of ICT devices in the four regions .....	200
+ Figure 7.4: Use of ICT software and applications by STEs in the four tourist regions.....	203
Figure 7.5: Availability of networking and communication facilities in the four regions .....	205
Figure 7.6: ICT skill levels of employees of the STEs in the four regions.....	207
Figure 7.7: Overview of STE's ICT strategies. ....	213
Figure 8.1: How STEs in Sri Lanka use ICTs to gain business value.....	242
Figure 8.2: Factors affecting the STEs' ability to gain business value from ICTs .....	256
Figure 8.3: Factors affecting the varied level of business value gained by STEs from ICTs.....	270
Figure 8.4: How ICTs contribute to the business value of STEs.....	280
Figure 8.5: Revised theoretical framework of business value of ICTs to STEs .....	282

# Chapter 1: Introduction

## 1.1. Overview

Researchers and practitioners have been debating the value of Information and Communication Technology (ICT) in business ever since the widespread commercial use of computers began (Barua et al., 2010; Schryen, 2013). However, while the debate may be perpetual, it has evolved substantially over the years (Barua et al., 2010; Melville, Kraemer, & Gurbaxani, 2004). It has become well established that it is not the technology itself that brings value. Instead it is the way in which it is combined with other resources such as people and finances that enable a business to gain strategic advantage through ICT (Brynjolfsson & Hitt, 1996; 2000; Grover & Kohli, 2012; Kohli & Grover, 2008; Melville et al., 2004). Because ICT creates value in complex ways, it is a challenge to isolate and separate the value created by ICT specifically (Barua et al., 2010; Brynjolfsson & Hitt, 1996; Kohli & Grover, 2008; Prasad, 2008; Tiessen, Wright, & Turner, 2001).

Further, with the advent of new forms of information technologies such as mobile applications (apps), software-as-a-service, and virtualisation, Information Systems (IS) practitioners and academics face renewed challenges in measuring the impacts of ICT on business value (Tallon, 2013). Several studies suggest that ICTs enable firms to increase work efficiencies, exploit market opportunities, strengthen the financial bottom-line and increase organisational performance (Barua et al., 2010; Lin, 2009; Mithas, Ramasubbu, & Sambamurthy, 2011). However despite wide acceptance of the contribution of ICT to business performance, there is an argument that it is contextual and the contribution of ICT is affected by the nature of the industry and organisational climates (Melville et al., 2004; Nakata, Zhu, & Kraimer, 2008; Schryen, 2013). The more information-intensive industries are and the more ICT-favourable organisational climates are, the more benefits of ICTs are recognised and supported (Kohli & Grover, 2008; Melville et al., 2004; Nakata et al., 2008).

Inevitably the tourism industry has been affected by the technological revolution as tourism is one of the most information-intensive industries (Benckendorff, Sheldon, &

Fesenmaier, 2014; Werthner & Klein, 1999). ICTs have been recognized as one of the greatest forces causing change in the tourism industry (Law, Leung, Au, & Lee, 2013). The establishment of Computer Reservation Systems in the 1970s, Global Distribution Systems in the late 1980s and the development of the Internet have dramatically transformed operational and strategic practices in the industry. As a result, the adoption of ICTs in the tourism industry has gained considerable interest from researchers, policy makers and practitioners during the last few decades (El-Gohary, 2012; Thomas, Shaw, & Page, 2011).

The tourism industry consists of a number of large players such as multinational companies as well as Small Tourism Enterprises (STEs) which are often family-owned or have few employees. Within the tourism industry, STEs are considered the dominant form of enterprise in terms of numbers (Mihalic & Buhalis, 2013). They are regarded by policy makers as the economic lifeblood of the tourism sector (Buhalis, 1998; Mihalic & Buhalis, 2013; A. J. Morrison & King, 2002; Thomas, 2013). Claims have been made that STEs are vital for job creation, destination competitiveness, economic development, sustainable tourism and the creation of significant social benefits (Andriotis, 2002; Echtner, 1995; Fuller, Buultjens, & Cummings, 2005; Jones & Haven-Tang, 2005; Shaw & Williams, 2004; Wanhill, 2000). For example, in the year 2014 Sri Lankan tourism (both large and small tourism enterprises) generated a direct contribution to GDP of US\$ 3.5 billion which is 4.8% of total GDP and tourism directly employed 352,000 full time equivalent staff which represents 4.3% of total employment (WTTC, 2014). The contribution of STEs to these figures is significant as small and medium enterprises account for 70% of the tourism industry in Sri Lanka (SLTDA, 2014).

Technological and structural changes in recent decades have put STEs under increased pressure (Marvel, 2001). In particular, they lag behind in their exploitation of Web technology (S. Burgess, 2015). This is pertinent as the increasing use of the Internet and other communication technologies allows tourism operators to reach those interested in their product irrespective of location and opens up possibilities for tourism firms to reap productivity gains (Buhalis, 1998; Favre-Bonté & Tran, 2015). Buhalis and Law (2008, p. 611) have pointed to the fact that investment in ICT and online marketing is particularly

significant for “remote, peripheral and insular destinations where local principals and authorities have a greater dependence on tourism for their livelihoods but lack the expertise and resources to undertake comprehensive marketing campaigns”, which is a dilemma faced by many small tourism enterprises.

Despite the large numbers of STEs, it is only in recent years that these organisations have started to attract attention from researchers (J. Ateljevic, 2007; El-Gohary, 2012). As a result, a growing literature dealing with the characteristics and needs of this sector has emerged (Andriotisy, 2003; J. Ateljevic, 2007; Thomas, 2004). However, research that clarifies how ICT improves the business value of the tourism sector and STEs in particular is lacking in either the ICT (Prasad, 2008) or tourism literature (Cohen & Olsen, 2013; Melián-González & Bulchand-Gidumal, 2016).

## **1.2. Motivation for the research**

The tourism industry is one of Sri Lanka’s oldest industries. For centuries, Sri Lanka had been a popular tourist destination, particularly for European travellers. However, over 20 years of internal conflict and terrorism had a negative impact on tourism and the industry stagnated. Since the end of the conflict in 2009, the country’s tourism prospects have become more promising. In 2010 immediately after the end of the war, Sri Lanka had a growth of 46% in tourism arrivals. From 2009 to 2011 tourist arrivals doubled with the number of arrivals reaching 562,187 at the end of 2011 (World Tourism Organization, 2013). Tourism plays a major role in the Sri Lankan economy and it ranks as the third largest source of foreign exchange earnings (SLTDA, 2014). Its growth is rapid and forecast to rise by 6.1% pa, from 2015 to 2025 (WTTC, 2014).

During the period of the war in Sri Lanka, there were many changes in the global tourism industry. In particular, new developments in ICT resulted in dramatic changes to how tourism businesses operate. Large tourism businesses were able to cope with the changes because of their multinational nature. However, small tourism organisations were not able to keep up with these global developments. Despite the fact that ICTs have the potential to bring significant benefits to these organisations (Migiro & Ocholla,

2005), these smaller organisations receive little guidance on how to use ICTs to gain business value.

### **1.3. Research Problem**

ICTs have revolutionised the structure and organisation of the tourism industry (Minghetti & Buhalis, 2010; Sheldon, 2003). In order to satisfy demand and survive in the long term, organisations have no choice but to incorporate ICTs and enhance interactivity within the marketplace (Buhalis & O'Connor, 2005; Sheldon, 2003; Zelenka, 2009). One of the areas of tourism management that has received a sustained research effort is the use of ICTs for marketing (Bilgihan & Bujisic, 2015; Buhalis & Law, 2008; Madasu, 2013). Studies examining the association between ICT and tourism organisational performance are relatively few and even those limited studies are predominantly focused on larger organisations and financial value (Buhalis, 2003; Melián-González & Bulchand-Gidumal, 2016; Sirawit, Islam, & Do Ba, 2011). When used effectively ICTs provide a wider range of benefits to STEs than the obviously identified financial benefits. Yet, this area remains under-theorised and under-researched (Buhalis & Law, 2008; Getz & Carlsen, 2005). While ICT business value research is rare in tourism, adoption of ICTs in STEs and barriers to do so are well researched and in turn inform the current use of ICTs in their business processes (Hung, Yang, Yang, & Chuang, 2011; Karanasios & Burgess, 2008; Ma, Buhalis, & Song, 2003).

In conclusion, it was found that there is little research addressing the business value of ICT tourism and what is available is mainly focused on financial gain for larger businesses in the context of developed countries. Though the use of ICTs in small firms is well established and there is abundant literature available on the ICT adoption research, little research has been carried out on the business value of ICT in small firms especially in the tourism sector. This research addresses this gap in the literature by focusing on the ways in which ICTs are being used by STEs to gain business value, which leads to the overarching question of this research.

## **1.4. Research Question**

In order to address the gap in the literature discussed in the previous section, this research poses the following research question (RQ):

### **How do ICTs contribute to the business value of small tourism enterprises in Sri Lanka?**

To answer this overarching question the following aims have been formulated:

(RA1) Explore how STEs use ICTs to gain business value;

(RA2) Examine the organisational and external factors that affect STE's ability to gain business value through ICTs;

(RA3) Evaluate why the contribution of ICTs to business value varies from one STE to another.

The primary objective of this research is to extend theory on the business value of ICTs to smaller organisations with a view to improving the contribution of ICTs to the business value of STEs, especially those in Sri Lanka.

## **1.5. Research Design and Methodology**

The selected research paradigm follows a post-positivist epistemology which means the research was carried out with the assumption that phenomena of interest are independently and objectively observable in a variety of contexts (Orlikowski & Baroudi, 1991). As this research requires an in-depth understanding of how ICTs contribute to the business value of STEs, the case study research method was considered appropriate for this exploratory study. The study is based on the Resource Based View of the firm (RBV) by Barney (1991). To guide the research process a conceptual framework was built integrating the business value of IT model by Melville et al. (2004) and tourism business processes by Poon (1993) and Alford (2005).

Multiple case design was selected in order to facilitate cross-case analysis and increase the generalisability of findings to similar contexts. The overall study design follows the guidelines for multi-case studies by Yin (2014) and procedures recommended by Dubé and Paré (2003) to ensure rigour in case study research in information systems. The unit of analysis was the STEs, and 35 STEs from Sri Lanka were selected representing four



major tourist regions of the country. The primary data collection method was the semi-structured interview supported with evidence from other sources. Based on the conceptual model, an analysis framework was developed to guide the inductive and deductive analysis of data using template coding technique (N. King, 1998; Miles, Huberman, & Saldaña, 2013). Data were analysed overall and across cases to address the research aims. The results were interpreted and presented in a revised model of the business value of ICT for STEs in Sri Lanka.

## **1.6. Organisation of the Thesis**

This chapter has presented an introduction to the research topic, research problem, research aims as well as an overview of the research method utilised. The remaining chapters of this thesis are organized as follows:

### ***Chapter 2: Literature Review***

In this chapter, the relevant literature is reviewed and synthesised and the knowledge gap introduced in the introduction is elaborated on.

### ***Chapter 3: Theoretical Basis and the Conceptual Research Model***

This chapter introduces the main theoretical basis of this study which is the RBV. Then, the RBV in IT business value literature is discussed followed by the development of a conceptual framework to guide the research. Finally, the conceptual framework is described linking its variable to research aims.

### ***Chapter 4: Research Context- Sri Lanka and its Tourism***

This chapter provides a comprehensive insight into the research context with background information on Sri Lanka and a PESTEL analysis of its tourism sector.

### ***Chapter 5: Research Methodology***

This chapter outlines the research methodology by explaining the research paradigm and justifying the selection of a case study approach. The research process is described with sections for research design, case selection and data collection procedures. An analytical framework based on the conceptual model is introduced and data analysis

procedures are defined. Ethical considerations, validity and reliability of the research are also addressed.

### ***Chapter 6: Findings: Overall Cases***

Based on the previously introduced conceptual model and the analytical framework this chapter presents the key findings of this research. The findings on firm resources, key business processes and external factors are presented addressing the first two research aims of the research.

### ***Chapter 7: Cross-case Analysis***

This chapter analyses the findings across cases in four different clusters. The chapter first evaluates the basis for case clustering and justifies the selected clusters. Then findings are compared and contrasted among the clusters in order to address the third aim of the research which is, evaluate why the contribution of ICTs to business value varies from one STE to another.

### ***Chapter 8: Discussion***

This chapter addresses the research aims, discusses the relationship of the findings with extant literature and presents the revised model of the business value of IT for STEs thus answering the research question.

### ***Chapter 9: Conclusion***

This chapter summarises the thesis and presents the key findings. The contributions of the research are synthesised and limitations of the research are outlined. The thesis concludes with a discussion of directions for future research.

## **Chapter 2: Literature Review**

### **2.1 Chapter Introduction**

This chapter presents an integrated literature review on the concepts and topics that provide the theoretical background for the study. The literature on the two main domains – ICT business value and ICTs in tourism – is reviewed. The ICT domain begins by defining ICTs; it then investigates the concept of ICT business value and value of ICTs for small businesses. The review of the literature on the tourism domain first defines tourism, and reviews the nature of the tourism product. It introduces the tourism business processes followed by a general review of ICTs in tourism. The next section presents the literature on STEs and value of ICTs for STEs. Finally by integrating the literature on the two domains the knowledge gap is identified.

### **2.2 Information and Communication Technologies (ICTs)**

The term Information Technology (IT) has been expanded to Information and Communication Technology (ICT) in recognition of the growing significance of communications technologies (Oliver & Clayes, 2015; Selwyn, 2002). As a consequence of rapid developments in information and communication technology, ICTs are being utilised within diverse contexts including economic development, education, tourism, business and personal usage, each with their own take on the definition of ICT (Zuppo, 2012). The range of definitions within each type of application across the globe can vary widely. Therefore defining ICT in a universal sense is challenging. However the primary definition of ICT revolves around the devices, processes and infrastructures that facilitate the creating, storing, retrieving, manipulating, sending, and receiving of information through digital means (Day, 2015; Zuppo, 2012).

IT business value literature goes as far back as the 1990s (Cronk & Fitzgerald, 1999) when communication technologies were not as advanced as they are today. The term “IT business value” was already well-established in the literature before the development of the Internet and researchers continued to use the term IT but the implication was that communication technologies were included. Only a few early articles define the term IT, possibly because the term IT is now so widely used a

definition was assumed to be unnecessary. In an early study of the business value of IT, Hitt and Brynjolfsson (1996) noted that a broader definition of IT could include hardware (computers, telecommunications, peripherals), software (in-house or purchased), and also the people component and their training. IT business value research is predominantly focused on large organisations, in other IS research, in particular studies focused on small firms, the term ICT is more common. In alignment with this practice this research also uses the term ICT as it is studying small tourism businesses. In a study of the digital divide, Warschauer (2004, p. 38), has noted that “What is most important about ICT is not so much the availability of a computing device or the Internet line, but rather the people’s ability to make use of that device”. Therefore ICT is considered a broader term covering both technological devices as well as the capabilities of people using them.

In tourism the most widely-cited definition for the term IT was presented by Poon in 1988. She defined the term IT as a collective term given to the developments in the mode (electronic) and the mechanisms (computers and communications technologies as well as the software which drives them) used for the acquisition, processing, analysis, storage, retrieval, dissemination, and application of information. This definition was widely used in the IT in tourism literature up until the year 2000 (Buhalis, 1998). The term ICT came into use after the Internet became more widely used in tourism and when there was increasing convergence of informatics, communication, and multimedia technologies (Main, 2002). To incorporate advances in communication technologies, ICT has been defined as “the entire range of electronic tools which facilitates the operational and strategic management of organisations by enabling them to manage their information, functions and processes as well as to communicate interactively with their stake holders for achieving their mission and objectives” (Buhalis, 2003, p. 178).

Considering the different definitions employed in the two main domains relevant to this research – ICT business value and tourism – it can be identified that the term ICT is mainly based on computers and communication technologies. Taking the broad definitions provided by Warschauer (2004), Minghetti and Buhalis (2010), Mathur (2009), Poon (1988), Selwyn (2003), Zuppo (2012) and Oliver and Claves (2015) into

account, and recalling that ICT is the integration of computers and communication technologies, *in this study the term ICT refers to all the ICT devices and capabilities. This would include all related technologies, components and systems that represent the ability of ICT to be effectively deployed.* However, as previously explained, due to the way in which the terms IT and ICT are used in the IS literature, in this research, the term IT is used when referring to IT business value and the term ICT is used when referring to the context of smaller firms.

### **2.2.1 Business value of IT/ICT**

IT value research has its roots in the Information Systems effectiveness literature (Cronk & Fitzgerald, 1999). The term “IT business value” began appearing predominantly in the 1990s and there has been a range of research that has analysed the relationship between IT and company performance. The accepted wisdom amongst many scholars has been that IT delivers competitive gains, speeds up business transactions, increases customer satisfaction, delivers superior quality and leads to improved profitability (Afflerbach, 2015; Barua et al., 2010; Brynjolfsson & Hitt, 2000; Grover & Kohli, 2012; Kohli & Devaraj, 2003; Melville et al., 2004; Schryen, 2013). However some scholars such as Strassman (1997) were sceptical; he suggested there was no correlation between expenditure on IT and any known measure of productivity. This seemed counter-intuitive, given the theoretical benefits that IT systems should potentially bring, and researchers spent many years subsequently developing a range of evidence to show clear correlations between IT and organisational performance (Barua et al., 2010). Table 2.1 depicts the evolution of the concept of the business value of IT with different definitions found in the literature.

As table 2.1 shows, a gradual evolution of understanding from a number of perspectives is demonstrated by the change in definitions over time. In the early stages beginning from 1990 the definition of the business value of IT was mostly based on the financial benefits or the revenue of the firm. It focused on profit maximisation (Banker & Kauffman, 1991) or the economic contribution made by IT. From 1993 to 1995 the concept moved towards the performance of the IT department (Katz, 1993) and the business.

Table 2.1: Definitions of IT business value

<b>Author</b>	<b>Defines IT business value as</b>
<b>Phase 1</b>	
Banker and Kauffman (1991)	Economic contribution that IT can make to the management's goal of profit maximisation
Berger (1992)	Strategic value
<b>Phase 2</b>	
Katz (1993)	Performance of the IT department and the impact of IT
Konsynski (1993)	Service to the business
Kauffman (1993)	Value IT adds to business
Hitt and Brynjolfsson (1994)	Ability of IT to gain competitive advantage
Jordan (1995)	An economic measure of IT investment in relation to productivity usually at the organisational level
Mukhopadhyay (1995)	Impact of IT on business performance
Strassmann (1997)	Value added as equal to revenue minus purchases
<b>Phase 3</b>	
Cronk and Fitzgerald (1999)	The sustainable value added to the business by IT (IS), either collectively or by individual systems, considered from an organisational perspective, relative to the resources expenditure required
Tallon, Kemerer and Gurbaxani (2000)	Contribution of IT to firm performance
Kohil & Deveraj (2003)	Ability of IT to enable improved organisational efficiency and competitiveness
Brynjolfsson and Hitt (2003)	Impact of IT on positive performance of the firm
Melville et al. (2004)	Organisational performance impacts of information technology at both the intermediate process level and the organisation-wide level, comprising both efficiency impacts and competitive impacts
<b>Phase 4</b>	
Kohli & Grover (2008)	Relationship between IT and firm value whether financial, intermediate or affective
Prasad (2008)	Tangible and intangible benefits gained through IT investments
Barua et al. (2010)	Financial and non-financial value generated through IT investments
Schryen (2013)	The impact of investments in particular IS assets on the multidimensional performance and capabilities of economic entities at various levels, complemented by the ultimate meaning of performance in the economic environment
Afflerbach (2015)	The decision-makers' mental interpretation of IT performance impacts (perceived business value of IT)

The study by Mukhopadhyay in 1995 can be considered a major shift in thinking about the business value of IT concept which moved it towards overall organisation performance. This idea has continued to develop from an organisational perspective bringing in the concepts of sustainable value, organisational efficiency and competitiveness (Brynjolfsson & Hitt, 2003; Cronk & Fitzgerald, 1999; Kohli & Devaraj, 2003; Tallon, Kraemer, & Gurbaxani, 2000). The overall idea of the business value of IT is well defined by Melville et al. (2004) as the “organisational performance impacts of information technology at both the intermediate process level and the organisation wide level, and comprising both efficiency impacts and competitive impacts”. The next development of the concept is seen in the study by Kohli and Grover in 2008 where they expand the idea from limited financial values (e.g. return on investments) to other intermediate (e.g., business process performance) and affective (e.g., customer satisfaction) values of the organisation. This can be seen as the basis of current thinking on the business value of IT. Recent definitions (Barua et al., 2010; Prasad, 2008) reflect this and are mainly based on overall organisational performance including tangible and intangible benefits rather than a mere increase in revenue gained through information technologies. Putting it into a broader perspective, Schryen (2013) summarises it as the impact of IT on multidimensional performance and capabilities of organisations.

The analysis above on the evolution of definitions of IT business value shows that it is mainly based on organisational performance under three themes: 1) financial benefits, 2) efficiency and competitiveness, and 3) intangible benefits. Therefore considering the various definitions given by the above-mentioned key researchers in IT business value and reflecting the current thinking, in this study, IT business value is considered as *the impact of IT on overall organisational performance, whether the performance is financial or nonfinancial and whether it is tangible or intangible in nature.*

### **2.2.2 Concepts in business value of IT**

When considering economics as a reference discipline for IT value research, Bakos and Kemerer (1992) discuss how IT and organisational performance can be used to determine the impact of IT on efficiency and profitability. They discuss information economics which establishes the value of information as its ability to increase the

expected utility of a decision-maker. Using this information economics perspective they consider three different kinds of business value of IT: normative value (based on expected values resulting from the use of IT), realist value (based on observed outcomes on performance improvements due to IT) and perceived value (based on subjective user assessments).

Combining Bakos and Kemerer's information economics perspective with other studies (Barua, Lee, & Whinston, 1996; Brynjolfsson & Yang, 1996) which emphasise the importance of investments in complementary assets in order to obtain better returns on IT investments, Davern and Kauffman (2000) narrowed down the kinds of business value by distinguishing between two types of IT business value. The first is potential value, which represents the maximum value opportunity available to the investor if the IT is implemented successfully. The second is realised value, which is the measurable value that can be identified after the implementation ensues. They further argued that realising the potential value depends on conversion contingencies, which determine how much of the potential value from the investment can be realised.

Srinivasan, Kekre, and Mukhopadhyay (1994) pointed out the importance of longitudinal studies of the business value of IT. The authors recognised that stronger support for the analysis of IT impacts on performance would come from measuring performance prior to and after an IT implementation. Brynjolfsson and Hitt (1998) pointed out that IT investments sometimes require larger and more time-consuming investments in organisational change. Barua et al. (1996) also suggest that the success of IT investments in re-engineering depends on complementary organisational characteristics and processes. Further they argue that investing only in IT would lead to suboptimal benefits for the organisation. In agreement Chircu and Kauffman (2000) note that Teece (1987) argued that in some cases the reason that firms are unsuccessful in appropriating full value from their investments in technology is because they fail to simultaneously invest in the requisite complementary assets that are necessary for obtaining benefits. They include such things as new processes, work routines, organisational knowledge, and responsibility structures, without which the benefits of IT cannot be obtained.



Based on Davern and Kauffman (2000), McKeen and Smith (2009) identified three types of delivering the IT value proposition: identification of potential value opportunities which add value and balance the three fundamental areas of cash, time and risk (Luehrman, 1997); effective conversion (converting the opportunities identified into effective applications of technology); and realisation of value (follow-up to determine whether benefits have been achieved as anticipated).

This debate is still on-going and there is a rich body of literature on IT business value. The concepts of potential value, realised value and perceived value of IT are prominent concepts discussed in the recent literature on IT business value. However, most of this literature concentrates on large organisations; studying the value of ICTs for small enterprises is also important as these firms make a major contribution to the economy as is discussed further in the next section.

### **2.2.3 ICTs in Small and Medium Enterprises (SMEs)**

SMEs have been identified as an important strategic sector for promoting growth and social development in both developed and developing countries (Cragg, Mills, & Suraweera, 2013; Mutula & van Brakel, 2006). Over the years, SMEs have gained widespread recognition as a major source of employment, income generation, poverty alleviation and regional development (Fink & Sukenik, 2011; Mutula & van Brakel, 2006; Zhang & Morrison, 2007). Further, arguably SMEs are considered the main drivers of innovation: the main source of competitive advantage, and economic development of most developing countries (Adeniran & Johnston, 2016; Crossan & Apaydin, 2009; Donner, 2007; Kotelnikov, 2007). Some authors think that the role of SMEs will become more important in the new economy since size and location are less important with e-commerce (Al-Qirim, 2007; Stansfield & Grant, 2003).

#### ***2.2.3.1 Adoption of ICTs in SMEs***

ICTs have the potential to add substantial value to the operations and the competitive position of SMEs (Ismail, Jeffery, & Belle, 2011; Stockdale, Ahmed, & Scheepers, 2012). Research also found that SMEs can take advantage of e-commerce in helping their business to expand. Dewett and Jones (2001) noted that in SMEs ICTs contribute to

organisational performance primarily in two ways: improving internal efficiency and building customer relationships. In terms of internal efficiency, some authors (Bergh, Thorgren, & Wincent, 2011; Lal, 2005) note that the adoption and use of ICTs helps to redesign internal processes and enhance efficiency by making them speedier, easier and more precise. Increasing efficiency and optimising processes from within, in turn, improves customer relationships by shortening internal processes and improving external coordination and communication (Bergh et al., 2011; Dewett & Jones, 2001; S. Lee, Kim, Choi, & Lee, 2009; Mustafa & Beaumont, 2004; Stockdale et al., 2012). Many small and medium-sized enterprises (SMEs) have demonstrated IT success, for example through improved information flows (Bharadwaj & Soni, 2007), enabling innovation (Dibrell, Davis, & Craig 2008), and increasing revenue and decreasing costs (Cragg, Mills, & Suraweera, 2013; Johnston, Wade, & McClean, 2007). Research indicates that firms that make optimal use of ICT can access new market opportunities, gain new knowledge regarding their customers, and improve new product development processes more effectively (Neirotti et al., 2008; Setia et al., 2013). In addition, through the convenience of access, communication, and interaction within or among firms, ICTs may contribute to organisational impacts (Bayo-Moriones, Billón, & Lera-López, 2013; Melville et al., 2004; Sinkovics, Yamin, & “Bryan” Jean, 2007). Recent research identified that developing direct access to customers through interactive web portals is the dominant e-business strategy among small firms (K. Chen, Jaw, & Wu, 2016). However some research conducted with both adopters and non-adopters of ICTs in SMEs suggests that advantages seemed to be a concern from the adopter’s side but they were not experiencing tangible advantages from ecommerce and the advantages sought were only based on perceptions (Al-Qirim, 2008). This argument is valid as researchers are presenting their findings mostly based on overall performance but not clearly describing how ICT were utilised in specific business processes. On the other hand researchers have shown that companies adopt and use ICTs not only to gain competitive advantage but to cope with the need to grow (Bruque & Moyano, 2007; Oulton, 2002; Wolff & Pett, 2006). Since small businesses have a limited field of action, one way to grow is by entering new markets or market segments. The adoption and use of ICTs increases companies’ visibility to potential customers. This enables them to reach more customers and develop growth strategies for both access to new market segments (Gunasekaran,

McGaughey, Ngai, & Rai, 2009; S. Lee et al., 2009). Therefore, the adoption and use of ICTs in key business processes seems to be one of the better strategic reactions to competition under new markets and conditions in the environment (Alonso-Almeida & Llach, 2011).

### ***2.2.3.2 ICTs in SMEs' business processes***

ICT offers SMEs ways to manage their business processes, facilitate relationships with customers, maintain financial records and monitor the performance of both their staff and the business more generally (Alonso-Almeida & Llach, 2011). The internet provides a tool to retain and even strengthen an innovative orientation to business processes, without putting growth at risk. Studies examining the internet and SMEs have suggested that it allows a much greater collection and processing of information than was previously possible (Mathews & Healy, 2007; Beynon-Davies, 2010). This can aid business process innovation through a greater understanding of the evolution of customers' needs (Koschatzky et al., 2001; Souitaris, 2001; Roach, 2011; Huang & Tsai, 2011). Interactive web sites that enable more intelligence gathering and more frequent and timely interactions with both customers and suppliers are likely to be particularly beneficial to micro enterprises where such market intelligence capabilities are usually weak.

As also noted by Deep et al. (2008) and Koh and Simpson (2005), SMEs often have an inherent lack of efficient business processes and regular business procedures. This is particularly true in SMEs which often have diverse but crucial business features and requirements such as time-consuming processes. For example in handling processes such as order-taking, sales staff have to first write down the order on paper and then transfer it into the legacy sales system. It is vital for SMEs to identify these special needs very early in the technology pre-implementation stage in order to select suitable application packages that can satisfy these requirements (Afflerbach, 2015). These issues can often be easily addressed when the firm is equipped with better hardware and software facilities alongside skilled employees to operate them. However, due to the scarcity of resources, such initiatives in SMEs still remain limited. Some studies investigating ERP implementation in SMEs suggest that improving business processes in

SMEs prior to the start of the ERP project will ensure better rates of success in both implementation and exploitation but confirmed that a wide range of deficient business processes and internal problems are inherent to SMEs' operations (Afflerbach, 2015).

Research has also shown that by developing social media strategies small businesses are creating new opportunities to communicate with their customers (Jantsch, 2010). A recent survey found that the greatest advantages of social media marketing are generating more business exposure, increasing traffic, and improving search engine rankings (Stelzner, 2011). All of these benefits are especially important for small businesses with limited means, since the owners often wear many hats in the organisation and, as a result, have many demands on their time (Hibbler-Britt & Sussan, 2015). Exacerbating the time demands are small business owners' limited financial means, which lead to the need to find creative ways to perform many tasks with limited budgets. This is where social media can play an important role in supporting SMEs in technology competence and responding to customer pressures (Schaupp & Bélanger, 2013).

### ***2.2.3.3 Barriers to ICT implementation in SMEs***

It is evident that the use of ICTs provides a platform from which small companies can enhance their competitiveness, despite their size (Alonso-Almeida & Llach, 2011). However, much of the literature identifies the barriers to adopting ICTs in these small businesses due to limited resources in terms of financial, physical and human resources (Duan et al., 2002; Ismail et al., 2011; Latzer, 2013). Research in particular suggests that competitive advantage is difficult to generate from physical IT resources because of the scarcity of financial resources in SMEs (K. Chen et al., 2016). Businesses are more concerned with investing in their main business resources rather than in technology in order to achieve their growth objectives. Moreover, SMEs in general have no IT department and no person who can be called an IT specialist. Instead, IT tasks are typically undertaken on a part-time basis by a keen amateur whose primary duties are not IT related (Cragg, Mills, & Suraweera, 2013). Such barriers are particularly prominent in SMEs in developing countries (Fink & Sukenik, 2011; Nevo & Wade, 2010; Sun, Liu, Jambari, & Michell, 2014).

#### **2.2.3.4 Business value of ICTs in SMEs**

For the benefits of ICTs to be effective, they must go hand-in-hand with changes in human and organisational resources. ICTs provide the means, but it is up to companies to fortify their intangible assets to become more competitive by means of innovation in application of ICTs in their businesses (Goktan & Miles, 2011). Despite the recognition of the importance of e-business implementation in SMEs, the literature on the link between IT and business performance remains inconclusive (Jean, 2007; Kettinger et al., 1994; Liang et al., 2010; Marchand et al., 2002; Wiengarten et al., 2013). In particular, this literature review identified that how ICTs can be utilised in specific business processes to gain business value for SMEs is highly limited in the existing literature.

Since this study focuses on small businesses in the tourism industry which have unique ICT needs compared with other SMEs, there is a need to investigate the nature of the tourism industry and its business processes. The next section provides an overview of tourism, its unique information intensive nature, tourism business processes, application of ICTs in tourism in general and in particular in STEs.

### **2.3 Tourism**

This section provides an overview of tourism including a definition of tourism, the nature of the tourism product, tourism business processes, and the ICTs in tourism. This is followed by a review of the literature on STEs and the use of ICTs in STEs is discussed.

The World Tourism Organisation (WTO) has defined tourism as the activities of people travelling to and staying in places outside their usual environment for not more than one consecutive year for leisure, business or other purposes (WTO, 2007). Tourism is a dynamic and competitive industry; as the focus of tourism businesses is customer satisfaction, safety and enjoyment, they need to be able to constantly adapt to customers' changing needs and desires (Buhalis & Law, 2008). Werthner and Klein (1999) provide a more detailed and logical understating of the nature of the travel and tourism industry as a hybrid industry. More than other services, tourism services are increasingly dominated by information; however, the core product is in almost every case a physical service. These services are produced and consumed in a physical world

and embedded in a rich, locally coloured context. The challenge for the industry is to integrate information and physical services, with flexible configurations (Buhalis, 2003; Inkpen, 1998; Werthner & Klein, 1999).

People from all nations, social ranks and professions are potential tourists (Werthner & Ricci, 2004). Over the past six decades, tourism has experienced continued growth and diversification to become one of the largest and fastest growing economic sectors in the world (UNWTO, 2015). Over time, more and more destinations have opened up and invested in tourism development, turning modern tourism into a key driver for socio-economic progress (Central Bank of Sri Lanka, 2014; Hojeghan & Esfangareh, 2011; UNWTO, 2015). The tourism industry generates substantial economic benefits to both host countries and tourists' home countries and is one of the most important sectors for developing as well as developed countries (Jucan & Jucan, 2013). The main benefits of tourism to a country are foreign exchange earnings, tax revenues, business opportunities for budding entrepreneurs, and employment for workers in the industry (Hojeghan & Esfangareh, 2011). Today tourism has a significant economic impact, on a global as well as on a local level, which is underlined by statistical evidence from several international organisations (UNWTO, 2015). According to the World Travel and Tourism Council (WTTC), tourism's direct contribution to GDP worldwide in 2015 was USD 2,229.8bn and the industry generated 107 million jobs. Longer-term prospects are even more positive with annual growth forecast to be 4.2% per annum over the ten years to 2026 (WTTC, 2016) .

The tourism industry is made of heterogeneous subsectors such as accommodation, transportation, food and beverages, attractions and activities, events and conferences, and tourism retail and services (Page, 2014). A vital component of the tourism industry is the accommodation sector (Milne et al., 2004). It is one of the largest and fastest growing subsectors in the tourism industry and a fundamental element of the tourism product (Sharpley, 2000). It represents the cornerstone of both the international and domestic tourism markets and accounts for a major component of total tourist spending (A. J. Morrison & Thomas, 1999; Statistics New Zealand, 2015; UNWTO, 2015). This subsector incorporates a very large number of businesses which vary greatly in the type

and scale of both management and the product on offer. (European e-Business Market Watch, 2003). The accommodation sector is characterised by considerable uptake of new ICTs in areas such as bookings, property management and back-office functions (Milne et al., 2004). Considering the importance of the accommodation subsector in the tourism industry it has been selected as the basis for investigation in this study.

### **2.3.1 Nature of the tourism industry**

Although the core product of tourism is in almost every case a physical service, tourism services are increasingly dominated by information to a greater extent than other business services (Page, 2014; Sheldon, 2003; Werthner & Klein, 1999). This highly information intensive nature of tourism creates a challenge for businesses in this industry that are aiming to provide a seamless integration of information and physical services. Through mass customisation of tourism products, ICTs help to configure complex and flexible bundles of tourism offerings and enable individualised marketing through knowledge management tools (Clemons & Row, 1991; Sheldon, 2003; Werthner & Klein, 2005).

Unlike durable goods, intangible tourism services cannot usually be physically displayed or inspected at the point of sale before purchasing (Papatheodorou, 2006). They are often bought before the time of their use and away from the place of consumption (Werthner & Klein, 1999). At the moment of decision-making and the related contractual agreement, an abstract model of the product, e.g. its description, is available. Thus, decision-making and consumption are often separated in time and space. This distance can only be overcome by information about the product, which is available in advance and can be gathered by the consumer (Inkpen, 1998; Poon, 1993; Sevrani & Elmazi, 2008). Thus, the tourism product is a confidence good. To increase the consumers' confidence in buying the tourism product businesses need to provide consumers with comprehensive set of information using widely available channels (Gregori, Daniele, & Altinay, 2014). ICTs, particularly the Internet, provide a platform for businesses to make available a rich array of information in an easily accessible way for their potential customers. Moreover, tourism products are considered highly perishable (Lai, 1994; Perdue, 2002), hence unless consumed when planned, they are wasted. Every empty seat on a flight or unoccupied accommodation unit means lost revenue for the

business. Therefore businesses in this industry need highly efficient distribution channels to sell the products at the market's pace or in advance (Pearce & Schott, 2011) plus efficient communication channels to convey information such as last-minute seat sales and last-minute accommodation discounts in order to minimise the risk of products perishing (Pearce, Tan, & Schott, 2007). In addition to its perishability tourism is also characterised by seasonality. While there may be excessive demand for tourism products during certain seasons, at other times of the year businesses may have to operate with little demand. Such fluctuations in demand make it a challenge for businesses to maintain their revenues. One way businesses address this is by implementing effective planning and promotional programmes which make consumers aware of the advantages and availability of off-peak season holidays. This is where ICTs can play a major role, allowing tourism businesses to reach potential travellers through various communication channels such as online travel review sites and social media. Further, due to the tourism product being mostly a cross-border product there is a high risk for consumers in the quality of the product that they are going to receive. ICTs, particularly social media, are helpful in reducing this risk through the provision of interaction with consumers who share their experiences (Buhalis & Law, 2008; Standing, Tang-Taye, & Boyer, 2014).

While the tourism product is communicated to the market in terms of product information flowing to the potential customer, the underlying business processes themselves are also highly information intensive (Aral & Weill, 2007; Sheldon, 2003; Werthner & Klein, 1999). The total tourism product is assembled by various market participants (e.g. airlines, tour operators, hotels etc.) including consumers. Information flow amongst these stake holders creates a tourist information network tying together all market participants, and each player in the chain adds specific information, which eases the decision for the consumer. An improved flow of information among all the stake holders reduces the risks, on both sides of the network, for the consumer and the suppliers (Guillemette & Paré, 2012). Tourists use ICTs and the Internet to speed up and enhance information searching and vacation planning and to access desirable opportunities and services (Buhalis, 2003; Central Bank of Sri Lanka, 2014; Poon, 1993; Sheldon, 2003; Werthner et al., 2015). The diversity of the tourism sector places high



demands on technology support and the performance of information systems (Sevrani & Elmazi, 2008). A consumer in New Zealand wanting to stay in a remote hotel in Sri Lanka needs up-to-date information about transport and activities on offer. The Internet enables the providers of all these types of products and services to interact directly with consumers around the world at a relatively low cost. Using ICT to exchange information about products and services enables all actors involved in tourism to be aware of what services are on offer. Therefore tourism has been recognised as an information-based and information-intensive industry that can benefit from ICTs in many ways (Benckendorff et al., 2014; Karanasios & Burgess, 2008; Law et al., 2013). To gain a fuller understanding of the information-intensive nature of the tourism industry and to explore how ICTs can effectively be utilised, it is necessary to appreciate the relevant business processes.

### **2.3.2 Tourism business processes**

Business processes are actions that firms engage in to accomplish some business purpose or objective. Thus, business processes can be thought of as the routines or activities that a firm develops in order to get something done (Porter, 1991). Business processes are an essential value-creation element for any organisation (Alford, 2005). Therefore it is important to identify the nature of these business processes in tourism and how ICTs can support them in order to increase business value. Tourism production systems and business process mapping have been identified as useful guides to extracting the tourism business processes. The following sections introduce and critically evaluate the tourism production system and tourism business process mapping to identify a set of key tourism business processes.

#### **Tourism Production Systems**

According to Britton (1991), a tourism production system includes: (a) those economic activities geared to producing and selling travel and tour products; (b) the social groups, cultural features, and physical elements which are incorporated into travel and tourism products as attractions; and (c) agencies for regulating the commercial behaviour and social externalities associated with such production. Some literature which defines tourism as “a production system that is composed of an array of economic activities

aimed at producing and selling tourist products, the tourist product itself and the institutions that regulate the system” also supports Britton’s argument (Terhorst & Erkuş-Öztürk, 2011).

According to Poon (1993), tourism possesses a dual production system that comprises both services and information. As tourism services are not usually capable of physical inspection at the time of sale, dissemination of information regarding appearance, price, special promotions, location, availability etc. is very important (Buhalis & Law, 2008; Werthner & Klein, 1999). Information provides the key to product quality and availability. As such, the provision and distribution of information becomes crucial for the competitiveness of industry players as well as the provision of services themselves (Poon, 1993). Therefore Poon (1993) described the business processes in tourism as core information functions and core service functions using four main categories: service production, management, distribution and sales, and service delivery. Figure 2.1 shows a graphical representation of the tourism production system by Poon (1993).

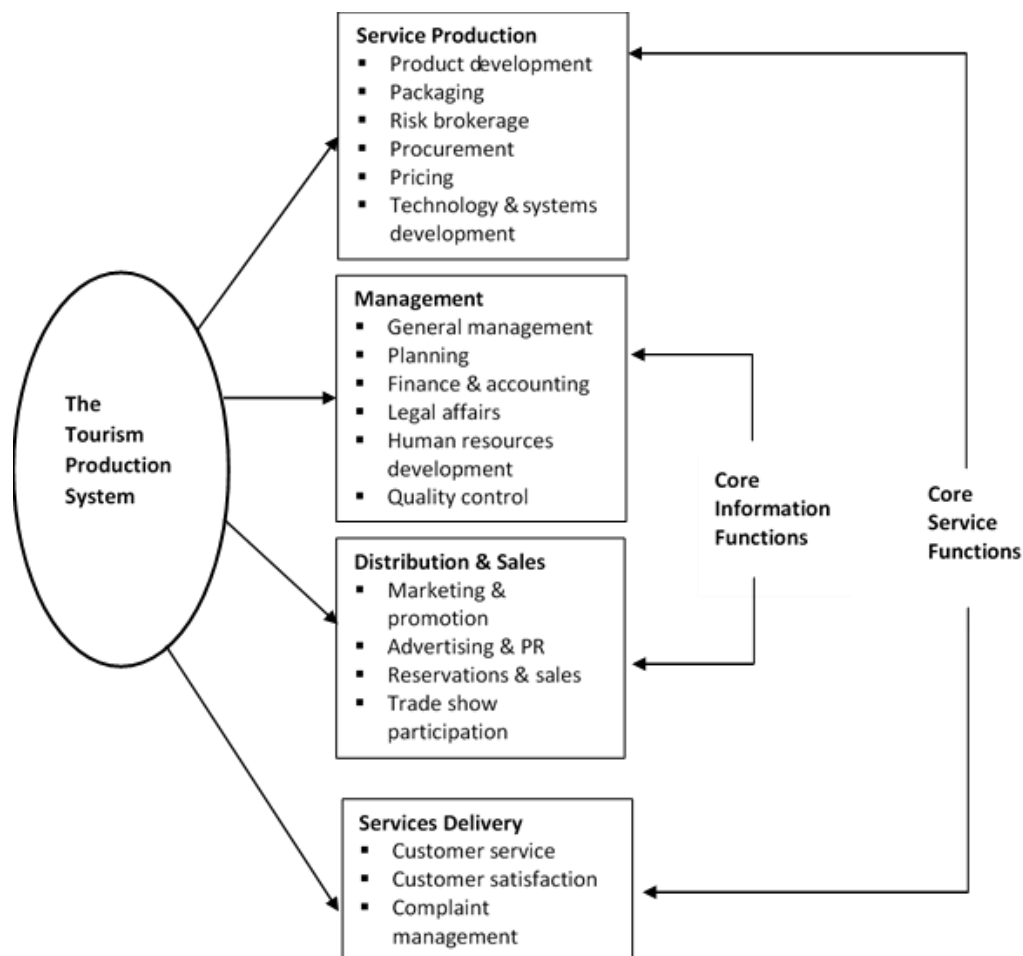


Figure 2.1: Tourism production system (Poon, 1993)

Service production and service delivery are considered core service functions which involve more human activities and less use of ICTs (Poon, 1993). Services produced by the industry include air, sea and land transportation, hotel bed-nights, packaged tours, travel information, and other destination services. Service delivery comprises the final visible services that are delivered to customers.

Management and distribution and sales are considered the core information functions and make the greatest use of ICTs (Poon, 1993). The core management functions constitute the internal information functions of the tourism production system. Distribution and sales is the link between the producers of tourism services and their customers (Gartner & Bachri, 1994). Because of the information-intensive nature of the tourism industry, the process of distribution and sales has a major role to play.

Based on the academic merit it gained throughout the last two decades, the dual production system developed by Poon (1993) has been identified as a strong foundation for extracting the key business processes in tourism. According to Google Scholar, Poon (1993) had been cited in 2,053 articles and books up to May 2016. This includes more than 700 articles and books published in the year 2012 and after. Although it was written in a period in which the Internet was not yet widely used, the validity of the content is demonstrated by recent ICT and tourism-related articles which cite the Poon model (Benckendorff & Zehrer, 2013; Bentz, Lopes, Calado, & Dearden, 2016; Cabiddu, Lui, & Piccoli, 2013; M. C. Hall & Page, 2014; Mowforth & Munt, 2015; Neuhofer, Buhalis, & Ladkin, 2013b; Sigala & Chalkiti, 2013).

Although the Poon model has not been specifically criticised, production systems in tourism have attracted criticism in general. Terhorst and Erkuş-Öztürk (2011) claim that due to its multi-product and multi-service character tourism is difficult to conceive as an industry and the use of production systems implies a too narrow focus on economic actors. Further they argue that production systems failed to emphasise tourism as a system and to bring in “space” in a systematic way. Although this criticism is acknowledged, for the purpose of this study, the dual production system developed by

Poon (1993) has been identified as an appropriate basis as it clearly introduces the business processes in tourism.

Apart from the production systems concept another tool that can be used to identify key business processes is business process mapping.

### **Business Process Mapping**

Business process mapping is a management tool used to improve existing processes or to implement new processes in a business organisation (Law, Chan, & Goh, 2007). It is a technique where a business process or workflow is converted into a visual, step-by-step diagram in order to both better understand an existing process and develop a new more effective process (Reynolds, 2012). Every step in each business process is described with the purpose of fully understanding the process and finding the cheapest and most efficient way to reach a goal.

Process mapping in a business involves four main steps (O'Connor, 2003):

1. Process identification –attaining a full understanding of all the steps of a process;
2. Information gathering– identifying objectives, risks, and key controls in a process;
3. Interviewing and mapping –understanding the point of view of individuals in the process and designing actual maps; and
4. Analysis –utilising tools and approaches to make the process run more effectively and efficiently.

Research on business process mapping in tourism can be found in tourism supply chain management literature (Alford, 2005; Dong, Zhang, Liang, & Guo, 2011). Alford (2005), in a study of the tourism supply chain, described the generic business processes in tourism within the contemporary business environment. He conducted focus group interviews with key players from European car hire, hotel group, and tour operating companies, IT systems suppliers, and Global Distribution System and consultancy services. Members of the group were asked to map their business processes and the resulting diagrams were then superimposed onto each other and common business processes were identified. The four generic business processes identified were product creation, distribution and sales, inventory and fulfilment, and accounting. In a review of the literature on tourism supply chain management Zhang, Song, and Huang (2009) regarded Alford (2005) as a major contribution to the tourism supply chain and business

process re-engineering literature. No specific critique has been found of this work to date. One limitation identified in applying Alford in this research is simplification of the broader concepts from the total tourism industry to match the STEs who provide accommodation services.

In deciding on the key business processes for the purpose of this study both the tourism production system developed by Poon (1993) and key business process identified by Alford (2005) were considered appropriate. The two models contain some similar as well as some different processes related to the tourism industry. Key business processes defined by Poon and Alford are compared in Table 2.2.

Table 2.2: Key business processes in tourism

Poon (1993)	Alford (2005)	Integrated Processes for STEs
<b>Service Production</b> <ul style="list-style-type: none"> <li>_ Product Development</li> <li>_ Packaging</li> <li>_ Risk brokerage</li> <li>_ Procurement</li> <li>_ Pricing</li> <li>_ Technology &amp; Systems development</li> </ul>	<b>Product Creation</b> <ul style="list-style-type: none"> <li>_ Finding and contracting component suppliers</li> <li>_ Contracting with suppliers</li> <li>_ Pricing</li> <li>_ Production of brochures including the creation of images and text</li> <li>_ Publication of product information on web and reservation systems</li> </ul>	<b>Service Production</b> <ul style="list-style-type: none"> <li>_ Product Development</li> <li>_ Contracting with component suppliers</li> <li>_ Procurement</li> <li>_ Pricing</li> <li>_ Publication of product information</li> </ul>
<b>Distribution &amp; Sales</b> <ul style="list-style-type: none"> <li>_ Marketing &amp; promotion</li> <li>_ Advertising &amp; PR</li> <li>_ Reservations &amp; sales</li> <li>_ Trade show participation</li> </ul>	<b>Distribution &amp; Sales</b> <ul style="list-style-type: none"> <li>_ Distribute the holiday product to travel agents and direct consumers</li> <li>_ Facilitate selling the holiday product through web distribution and call centres</li> <li>_ Booking administration</li> </ul>	<b>Distribution &amp; Sales</b> <ul style="list-style-type: none"> <li>_ Distribution of products</li> <li>_ Marketing &amp; promotion</li> <li>_ Reservations &amp; sales</li> <li>_ Booking administration</li> </ul>
<b>Services Delivery</b> <ul style="list-style-type: none"> <li>_ Customer Service</li> <li>_ Customer satisfaction</li> <li>_ Complaint management</li> </ul>	<b>Inventory &amp; Fulfilment</b> <ul style="list-style-type: none"> <li>_ Acquire, control, request and report on inventory</li> <li>_ Creation and control of inventory allocations</li> <li>_ Release of allocations</li> <li>_ Maintain rooming lists, tickets and vouchers</li> </ul>	<b>Services Delivery</b> <ul style="list-style-type: none"> <li>_ Creation and control of inventory allocations</li> <li>_ Release of allocations</li> <li>_ Customer Service</li> <li>_ Complaint management</li> </ul>

<b>Management</b> <ul style="list-style-type: none"> <li>_ General management</li> <li>_ Planning</li> <li>_ Finance &amp; accounting</li> <li>_ Legal affairs</li> <li>_ Human resources development</li> <li>_ Quality control</li> </ul>	<b>Accounting</b> <ul style="list-style-type: none"> <li>_ Maintain financial records</li> <li>_ Collect holiday payments from travel agents</li> <li>_ Collect holiday payments from direct consumers</li> <li>_ Distribute payments and commissions to suppliers</li> </ul>	<b>Management</b> <ul style="list-style-type: none"> <li>_ General management</li> <li>_ Accounting &amp; Finance</li> <li>_ Human Resources development</li> <li>_ Legal affairs</li> </ul>
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The category “service production” in Poon’s model and the key business process “product creation” described by Alford (2005) contain common features which are mainly based on the development of the tourism product or service. As both authors explain, it involves the activities of dealing with suppliers, product pricing, quality control, new product development and any other processes involved in producing the final tourism product.

The next common key business process identified by the authors is distribution and sales. As it creates the link between tourism producers and its customers it can be argued that it is the most crucial process. This involves activities which help sell the tourism product including marketing and promotion, advertising, reservations and sales. The two models describe the major functions of service delivery and inventory and fulfilment which are mainly focused on the actual delivery of the tourism product to the customer. These mainly involve the creation and control of the inventory allocations, reporting and maintaining up-to-date inventories. Customer services and handling customer complaints and reviews after the service are also included under this category. The Poon model describes the broader category of management including planning, accounting, legal affairs and other general management as its sub-activities. In the four generic business processes described by Alford (2005), accounting is included as a separate key business process and the activities of calculating and collecting the holiday payments from customers, travel agents and distribution of payments and commissions to suppliers have been identified as the main functions of this category. But for business value it is important to consider human resources development as well as the general management of the overall business.

The two models describe the business process in the tourism industry as a whole. Considering the production system alone does not seem appropriate as it was developed in a time when there was limited use of the Internet and other advanced

communication technologies. The Alford model overcomes this limitation by considering the contemporary business environment including Internet-based business processes. Therefore to build a strong foundation on the tourism production system and improve its applicability to the current business environment, the two models were combined in this study. The modified tourism production system (Figure 2.2) contains the following four major categories.

### **Service production**

As described previously service production involves the development of the tourism product. This could be the firm developing the product by itself or obtaining the product through component suppliers. Procurement, pricing and publication of product information are considered the other main activities in this category. Technology and systems development in Poon's model was not included as this study only considers small organisations.

### **Distribution and sales**

Under the distribution and sales category, distribution of products, marketing and promotion, reservations and sales, and booking administration were identified as more common in current tourism businesses. Trade show participation was not included as a separate activity as it can be considered a marketing activity.

### **Service delivery**

As the service delivery entails the delivery of the tourism product to the customer, creation and control of inventory allocations, release of allocations, customer service and complaint management activities have been extracted as the main activities under this category.

### **Management**

Although the Alford model identifies accounting as the final key business process, the broader category of management from Poon's model was chosen for the new model as it includes human resource development and general management which have an

impact on the business value of organisations. Accounting is also included under the management category with all its sub-processes.

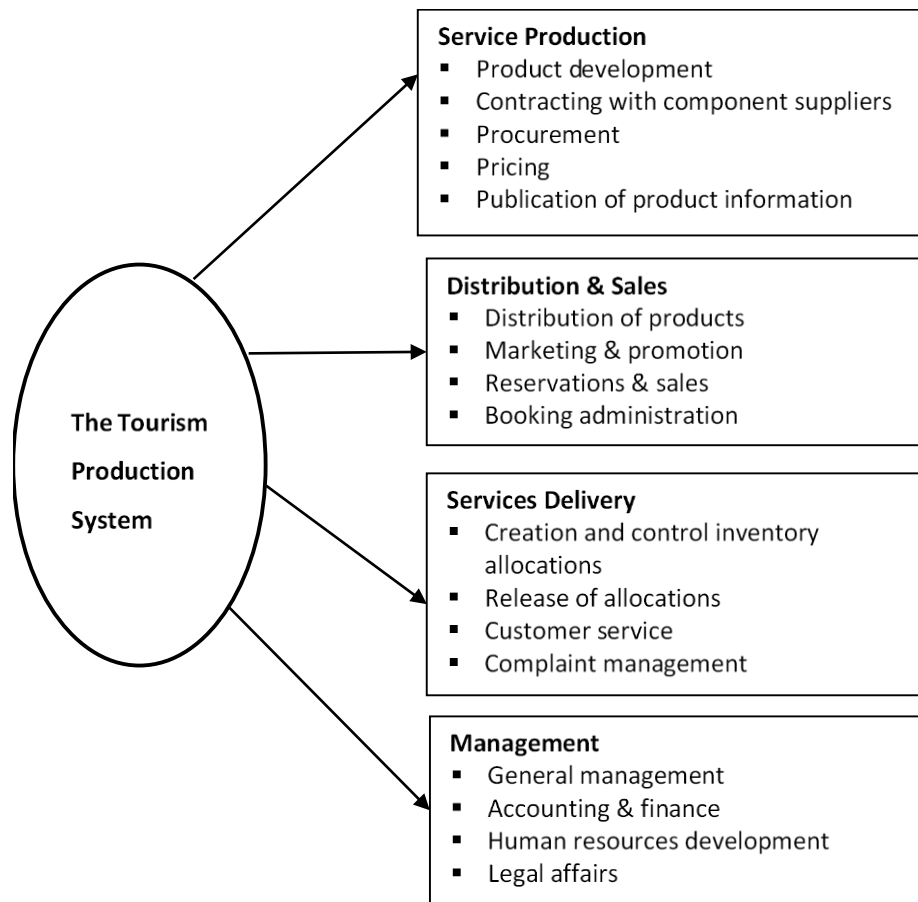


Figure 2.2: Tourism business processes (Adapted from Poon, 1993 and Alford, 2005)

Now that the key business processes have been identified, it is important to explore how ICTs can be utilised to improve the performance of these business processes. The following section discusses how ICTs are currently used in the tourism industry.

### 2.3.3 ICTs in tourism

A range of ICTs are being adopted by all segments of the tourism industry (Buhalis & Law, 2008), as no player in the industry has escaped the impact of ICTs (Mihalic & Buhalis, 2013). The role of ICT depends on the information and human intensity of the activities involved in tourism. The more information-intensive the activity, the greater the role of ICT (Benckendorff et al., 2014; Poon, 1993; Sheldon, 2003).



The use of ICTs in tourism started with the SABRE reservation system in the 1960s (Copeland et. al., 1995). Computer Reservation Systems (CRSs) are normally operated by tourism producers such as airlines, hotels and tour operators and are distributed nationally or globally. It is evident that the online reservation systems are the dominant technology in the tourism industry (Buhalis, 2003; Zelenka, 2009). This can be seen by the extent of development of CRSs for the distribution of travel and tourism-related services and the extent of their adoption by the industry (Poon, 2000). CRSs evolved to become Global Distribution Systems (GDS), incorporating a comprehensive range of services and products and providing a global 'info-structure' for the entire industry (Buhalis, 2003; SLTDA, 2015b). GDSs satisfy the needs of consumers for easy access of travel, lodging and leisure services, actual price and availability of these services as well as the immediate confirmation and documentation of their reservations through the Internet.

The Internet plays a major role in tourism marketing and promotion (Buhalis & Law, 2008). Before the emergence of the Internet it was a challenge for the tourism operator to provide accurate localised data, while maintaining a relationship of trust with the tourist (Pease, Rowe, & Cooper, 2005). The Internet, which offers global reach and multimedia capability, is an increasingly important means of promoting tourism services (ICRA Lanka, 2012). The Internet provides a rich means of distributing information which improves the marketing and promotion of tourism activities. Tourism marketing systems typically represent the forefront of multimedia and virtual-reality applications (Hojeghan & Esfangareh, 2011) and systems developed to assist booking agents, followed by computer-based and web services for tourists such as Lonely Planet and TripAdvisor which provide personalised guides with audio, interactive multimedia and context-aware adaptation.

The tourism industry is also characterised by offering complementary businesses such as air travel, car hire, accommodation and tours. Third-party websites, Expedia for example, provide opportunities to access all these services which otherwise would have to be provided by a number of different organisations. Consumers no longer need to search for information among a multitude of suppliers, they have more choice, can

make reservations in a fraction of the time and cost of conventional methods (Minghetti & Buhalis, 2010) and are able to create travel itineraries in one single application (L. Burgess, Parish, & Alcock, 2011). These parallel trends have resulted in the development of interactive online services, personalisation of the tourism experience, and social sharing of visiting information (McCabe, Sharples, & Foster, 2012; SLTDA, 2015b). In today's society digitised information has become the norm and guidebook publishers such as Lonely Planet are providing this service through mobile applications (Yeoman, 2012).

Recent developments show that in many websites user-generated content is an important source of information and is used by some companies as a marketing strategy to increase trust and customer value (L. Burgess et al., 2011). Consumer-generated content supported through social media is "a mixture of facts and opinions, impression and sentiment, founded and unfounded titbits, experiences, and even rumour" (Stockdale & Standing, 2006, p. 4). Tourist communities, such as Lonely Planet and IGoUGo, provide a platform where tourists can exchange opinions and experiences on topics of common interest (Keutel, Michalik, & Richter, 2014). Other platforms such as TripAdvisor include user ratings of destinations and accommodation services. It is argued that the future of Internet-based tourism will be focused on consumer-centric technologies that will support tourism organisations in interacting with their customers dynamically (Buhalis & Law, 2008). Therefore use of these technologies in marketing and promotion is unavoidable for many tourism organisations. Hence tourism businesses have to play a role in these online tourist communities if they want to participate in these markets (Madasu, 2013). One way of achieving this for small tourism organisations is business collaboration (Keutel et al., 2014). They can enter the online markets by registering with global tourist sites which provide a global presence for these small organisations. When considering the global tourist sites there are two major parties that tourism firms cannot avoid in current tourism trends (Litvin, Goldsmith, & Pan, 2008):

1. Online Travel Agents; and
2. Online Review Sites.

As one of the major segments added to tourism with the advancement of the Internet and other technologies (Litvin et al., 2008) these two will now be discussed in detail.

## **Online Travel Agents**

Online Travel Agents (OTAs) are a third-party business designed to serve the tourism industry (H. A. Lee, Denizci Guillet, & Law, 2013). These organisations have no physical outlets, providing their services solely through the Internet. The first such online travel booking website, named Expedia, was launched by Microsoft in 1996 (Benckendorff et al., 2014). Other familiar examples include Orbitz.com, Priceline.com, Travelocity.com, Agoda.com, Booking.com and Hostelworld.com. These OTAs play a crucial role in online distribution. They have become increasingly more powerful in terms of Internet readiness (Morosan & Jeong, 2008) and economic power, putting hotels in the disadvantageous position of having to sell a large portion of their inventory through third-party intermediaries at heavily discounted rates (Carroll & Sigauw, 2003). Compared to hotels' websites, OTAs have the advantage of offering consumers a one-stop shop for booking hotel rooms and even buying the entire holiday. Additionally, they have built their success on economies of scope, aggregating products and reducing costs to provide consumers with cheaper solutions (H. A. Lee et al., 2013).

OTAs arrange bookings for inventory held by the hotel but made available to the OTAs at agreed-on prices, for which they receive a commission on each transaction (Tranter, Stuart-Hill, & Parker, 2009). While the main revenue is earned from commissions, some OTAs charge a booking fee or buy bulk inventories at a discount and sell at a mark-up (H. A. Lee et al., 2013). The OTA's business involves having information about the buyer that is unavailable to the seller and information about the seller that the buyer cannot know directly.

Although traditional travel agents have played an important role as proxies enabling travellers to make connections with hotels, the emergence of the Internet has changed the traditional relationship between hotels and travel agents. Instead of a traditional agent–principal relationship, OTAs seem to act as more than just intermediaries and more as business partners or vendors (H. A. Lee et al., 2013).

OTAs' main services in the tourism industry include (Benckendorff et al., 2014): the matrix display of search results, search filters, dynamic packaging which can bundle

several tourism products such as flights and accommodation, flexible data search and low-fare notifications etc. While these services are very useful to travellers and tourism businesses of all categories, small businesses and budget travellers get the most advantages out of these OTA services. Financially and technologically, small businesses are less capable of providing such services themselves to their guests. OTAs provide them with a platform to overcome these barriers at an affordable price and be available in guests' searches for their various requirements (Inversini & Masiero, 2014).

### **Online Review Sites**

TripAdvisor's influence is seen as substantial in the tourism industry throughout the world. A report in *The Economist* stated "What customers say on TripAdvisor can make or break hotels" (8/9/14). It further revealed that around 260 million people visit the site each month to read some of the 125 million reviews. These online review sites display user-generated content regarding their travel experiences. This has become very important as user-generated content is rapidly gaining attention as part of the travellers' purchase decision-making process (Benckendorff et al., 2014).

With travellers paying a great deal of attention to reviews, and also being influenced by managements' responses to these reviews, it is very important that the hotel management is attentive to what is being said about their business. Providing responses is essential and even negative feedback can be transformed into an opportunity to display a proactive and positive image of the business. A study conducted by Avant (2013) on responding to TripAdvisor reviews found that over 60% of users would be more likely to book a hotel whose management responded to reviews, compared to one whose management did not. By maintaining an account with TripAdvisor (which is free), businesses can manage the guest reviews by responding to them, requesting reviews from the guests who made a visit, enriching the appearance with images, integrating a Facebook page and making the business available on the TripAdvisor app for smartphones. Although these third-party online reviews are crucial for all the tourism businesses regardless of their size (Phillips, Zigan, Santos Silva, & Schegg, 2015), they are more important for small tourism businesses that do not have an established brand name.

Apart from the applications discussed above which are mainly used in external information-intensive activities, a range of ICTs aid tourism organisations in carrying out their internal management functions. Garbin (2006) described ICTs used for management in tourism mainly in front-office automation for prompt correspondence and back-office systems for internal data processing such as accounting and recordkeeping. Integration of ICTs used in internal operations (service production, service delivery and accounting) and external operations (distribution, marketing and sales) form a total information system for tourism. Poon predicted in 1993 that this comprehensive system of information management would become a very powerful tool for the tourism industry. Fulfilling this prediction, currently ICTs are leading the tourism industry to improve efficiency of production and quality of services, generate new services such as flexible holidays and spread new industry best practices (Law, Buhalis, & Cobanoglu, 2014; Neuhofer, Buhalis, & Ladkin, 2015). Although larger businesses dominate the tourism industry in terms of revenue, as mentioned in the introduction (Section 1.1), small enterprises are considered the dominant form of business in terms of numbers in the industry (Mihalic & Buhalis, 2013). Inevitably these small enterprises can gain a great deal from ICTs. The next section defines the STEs and reviews their use of ICTs.

#### **2.3.4 Small Tourism Enterprises (STEs)**

One of the early debates in the tourism literature was about establishing agreed definitions of “small and medium enterprises” in tourism (Thomas et al., 2011). Definitions vary between countries but usually refer to the number of people employed and the availability of capital (Thomas et al., 2011). For example in the European Union enterprises qualify as small or medium-sized enterprises based on staff headcount and a turnover ceiling. When the staff headcount is fewer than 50 and turnover less than or equal to 10 million Euro they are considered small while if the figures are 250 and 50 million they are characterised as medium-sized enterprises. Sri Lanka considers the number of fulltime employees and defines the firm as small if it is between 0 and 20, and medium if it is from 21 to 50 (SLTDA, 2015a). On the other hand, the United States considers SMEs to include firms with fewer than 500 employees. Following the other studies conducted in the Sri Lankan context (Fernando, Bandara, & Smith, 2012; N. King,

1998), for the purposes of this research STEs are defined as those employing between 0 and 20 fulltime employees. Further in this study the terms small enterprise, small firm and small business will be used interchangeably.

Different authors have used different acronyms to refer to small businesses in tourism. These include STEs (Small Tourism Enterprises) (Buhalis, 2003), SMHO (Small and Medium Hospitality Organisations) (Buhalis & Main, 1998), SHEs (Small Hospitality Enterprises) (Alonso & O'Neill, 2009) and SMTE (Small and Medium Tourism Enterprises) (Ashari, Heidari, & Parvaresh, 2014). In this research, the acronym STE will be used to represent the small tourism enterprises.

### **2.3.5 ICTs in STEs**

Buhalis (1998) argues that STEs have no alternative than to incorporate modern technologies and seek competitive advantages by understanding their markets and initiating changes in their management and technology. Therefore, STEs should regard technology as a pivotal strategic issue and an opportunity. They should also identify how IT can assist them in achieving sustainable prosperity, as well as adding value to their products and enhancing consumers' experience and satisfaction. Although traditionally, smaller tourism operators lag behind their larger counterparts in terms of technology adoption, the Internet has been described as empowering even for very small tourism organisations (S. Burgess, 2015). Further, Schott (2007) claims that particularly small businesses recognise the help of the Internet in improving product education for both the consumers and intermediaries. The Internet facilitates STEs' representation in the electronic marketplace, bringing opportunities to offer direct bookings, reduce advertising costs, global distribution 24 hours a day and greater interactivity with customers (Anckar & Walden, 2001; Buhalis, 1999; Buhalis & Zoge, 2007). Dogac et al. (2004) argue that the Internet enhances the level of collaboration between tourist operators and brings about greater levels of interoperability with internal and external applications, which were previously only available to the major players in the industry via proprietary systems.

The challenges and limitations to technological innovation in small enterprises have been well researched. Concerning Internet adoption, the most commonly cited obstacles are the costs involved with adopting and using the technology, and the lack of relevant knowledge and skills (Kuwayama, 2001; Purcell, Toland, & Huff, 2004; Rizk, 2006; Uwamariya, Cremer, & Loebbecke, 2015b). Nevertheless, STEs have many opportunities to apply ICT tools and even smaller companies can use affordable and simple solutions such as software service applications and a range of distribution solutions to participate in the marketplace (IFC- World Bank Group, 2013; Paraskevas & Buhalis, 2002).

#### **2.4 Value of ICTs in STEs**

ICTs enable STEs to have a global presence as well as to form partnerships with organisations around the world in an efficient and cost-effective manner (Buhalis, 2003). The Internet offers STEs opportunities to improve their competitive position in relation to their larger counterparts by giving them representation in the global marketplace, become independent of intermediaries and to promote and distribute their own services, keep their doors open 24 hours a day at minimal costs to customers all over the world, give customers the choice to view and self-book services at a distance, and automate many business processes (Anckar & Walden, 2001).

Main (2002) has demonstrated that integrating technology into the business process and operating in an e-business environment can offer STEs many advantages in operational, tactical and strategic management. More importantly, Apulu, Latham, and Moreton (2011) highlighted that STEs need to ensure that the technology implemented is appropriate to the needs and management of their business. However, several studies provide evidence that there is only a small minority of STEs taking full advantage of the electronic marketplace and benefiting from the opportunities ICTs provide, because STEs frequently perceive ICTs as a problem or challenge (Anckar & Walden, 2001; Buhalis, 2003; Madasu, 2013). These authors suggest that STEs need to take advantage of the emerging ICTs in order to reduce their marginalisation from the mainstream tourism industry and to make their products available to institutional and independent buyers. They may be able to achieve competitive advantages if they manage to develop and

position their niche products as unique and authentic (Buhalis, 2003). Innovative small entrepreneurs who appreciate the power of new media can use web marketing to give their STEs a suitable presence in the electronic marketplace and thereby compete with some of their larger competitors.

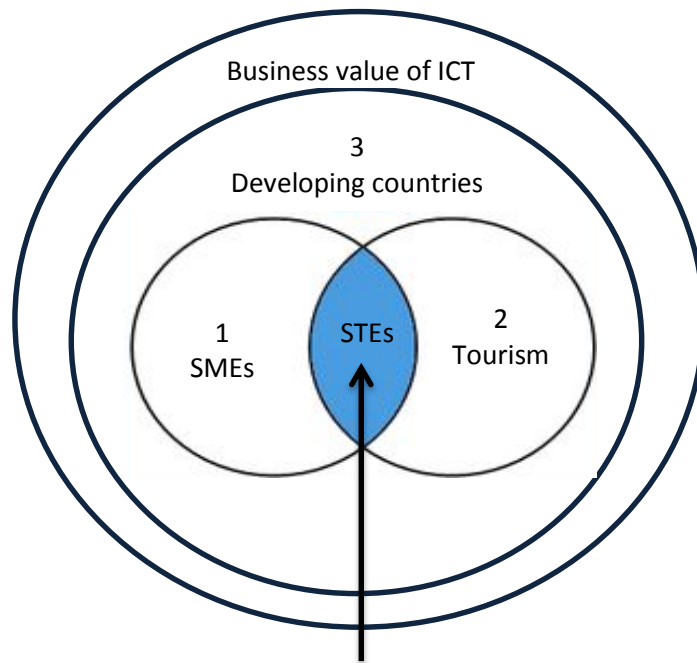
## **2.5 The Knowledge Gap**

This chapter has drawn together literature from two domains – ICT business value and ICTs in tourism – to provide a thorough understanding of the existing knowledge on ICT business value and the utilisation of ICTs in the tourism industry. Although prior studies give some indications as to how business value is gained through ICTs, the majority of these studies are focused on large-scale organisations. There is a gap in the research regarding ICT business value for small businesses in general and in particular for tourism. Further, in both the domains most of the studies have been conducted in developed countries; there is little research on the business value of ICT for small businesses in developing countries. By combining the two research domains, and considering tourism as a highly information intensive and unique industry, the literature review identified a gap in the knowledge on business value of ICTs for small tourism businesses. This gap has been more fully expanded into three sub areas:

1. Business value of ICTs for small businesses in general;
2. Business value of ICTs for small businesses in tourism; and
3. Business value of ICTs for small businesses in developing countries.

The convergence of the knowledge gap on business value of ICT and ICTs in tourism within the context of developing countries is illustrated in a Venn diagram (Figure 2.3) and will be elaborated further.





The knowledge gap: Business value of ICTs for Small Tourism Enterprises (STEs) in developing countries

Figure 2.3 : The knowledge gap

#### 1. Business value of ICT for small businesses

As discussed in detail in section 2.2.1, the business value of IT has been widely studied and it is now well established that IT does add value to businesses. However, it is clear that these studies were primarily focused on large-scale businesses. Small businesses have unique features and fundamental to this is the recognition that a small firm is not a “scaled-down” version of a large firm (Gibbons & O'Connor, 2003; Sainaghi, Phillips, & Corti, 2013). Hence the widely available knowledge regarding how to gain business value from ICTs which stems mostly from larger organisations may not be readily applicable or highly useful for small businesses.

A few studies have identified the benefits of e-commerce and adoption of Internet for small businesses; these studies basically focused on the overall implementation of ICTs in the business. No studies were found which look at the mediating role that business processes play between ICT implementation and business value. The studies tend to investigate what ICTs are being used or not used, and what benefits have been achieved from those ICTs (Parker & Castleman, 2007). They do not look at how the processes of

the small businesses have changed and how to use ICTs in the processes of small businesses. Therefore as illustrated in Figure 2.3 the first gap identified in the ICT business value literature is in relation to small businesses overall.

## 2. Business value of ICTs for small businesses in tourism

The tourism industry has been recognised as highly information intensive and the tourism product itself has some unique features as well its own unique business processes. A wide range of ICTs are used in all segments of the tourism industry and it is considered one of the industries most highly affected by information and communication technologies. While there is a rich body of literature on the application of ICTs in tourism, only a few studies were found which focused on performance effects of ICTs in tourism. Those available were also predominantly focused on large-scale businesses (Cohen & Olsen, 2013; Melián-González & Bulchand-Gidumal, 2016). The literature on small firms in tourism was mostly focused on the challenges and barriers to adopting ICTs. Research which examined the contribution of ICT to business value particularly for small tourism businesses was lacking. This is illustrated in Figure 2.3 as the second area of the gap identified in the ICT business value literature in relation to small businesses in tourism.

## 3. Business value of ICTs for small businesses in developing countries

The established knowledge on ICT business value provides some indicators that the macro level factors of a country affect the level of business value gained by ICTs (Melville et al., 2004). There are also some counter-arguments that although facilities and context are important, they do not have a significant effect on gaining business value from ICTs (Silvius, 2012). However, it was evident that the majority of these studies were conducted in the context of developed countries. Hence to determine whether SMEs in developing countries use ICTs differently and experience the business value of ICTs differently, studies which deepen the understanding in the context of developing countries are still needed. This is illustrated in Figure 2.3 as the third area of the gap identified in the literature in relation to the business value of ICTs.

By addressing the three major areas of the knowledge gap identified and by converging the two domains – ICT business value and ICTs in tourism – this research contributes to the body of knowledge by addressing the question of how ICTs contribute to the business value of STEs in Sri Lanka.

## **2.6 Chapter Summary**

The aim of this chapter was to discuss the theoretical foundations of this study by reviewing the literature in the two research domains of business value of ICT and tourism. Section one of the chapter discussed the definitions of ICT and the concept of value along with the business value of ICT. Section two explored the tourism industry as a whole and the impact of ICTs on tourism. The crucial areas in tourism in which ICT makes a great contribution to their performance were identified through the tourism production system by paying special attention to STEs. Building on the strong foundation discussed in this chapter, the following chapter brings together the two main sections and develops a conceptual framework that will be used as a theoretical lens for the research.

## **Chapter 3 - Theoretical Basis and the Conceptual Framework**

### **3.1 Chapter Introduction**

The purpose of this chapter is to introduce the main theoretical basis of this study which is the Resource-Based View (RBV) of the firm. Using the RBV as a guide, this chapter brings together the main topics discussed in the literature review and introduces the conceptual framework for this study. This conceptual framework is based on the RBV and the integrative model of business value of IT developed by Melville et al. (2004) combined with a set of modified business processes adopted from Poon (1999) and Alford (2005). The chapter begins with an overview of the RBV. This is followed by a discussion of the development of the RBV in IT business value research and the Melville et al.'s model itself. Then the conceptual framework of this study is presented with a detailed description of its variables. The chapter ends with a summary.

### **3.2 Resource Based View of the Firm (RBV)**

RBV is rooted in the strategic management literature and is based on the notion that the sustained competitive advantage of a firm derives from the resources and capabilities a firm controls (Barney, 1991). The basic argument of RBV is that firm performance is determined by the resources it owns. The firm with more valuable scarce resources is more likely to generate sustainable competitive advantages (Liang, You, & Liu, 2010). The resources of a firm have been classified by Barney (1991) into three categories:

- 1- *Physical capital resources* include the physical technology used in a firm, a firm's plant and equipment, its geographic location and its access to raw materials;
- 2- *Human capital resources* include the training, experience, judgment, intelligence, relationships and insight of individual managers and workers in a firm; and.
- 3- *Organisational capital resources* include a firm's formal reporting structure, formal and informal planning, controlling and coordinating systems as well as informal relationships among groups within a firm and between a firm and those in its environment.

These resources and capabilities can be viewed as bundles of tangible and intangible assets, including a firm's management skills, its organisational processes and routines,

and the information and knowledge it controls (Barney, 1991). However not all the resources are strategically relevant. Barney (1991) specifies the conditions required for a resource to confer a competitive advantage. If the valuable resource is rare, i.e., few firms have access to it, it confers a temporary competitive advantage. If it is also imperfectly imitable – for example, competitors do not know what factors lead to success and therefore what to imitate – and there are no readily available substitutes, the resource confers a sustained competitive advantage.

The RBV is based on two underlying assertions, as developed in strategic management theory: (1) that the resources and capabilities possessed by competing firms may differ (resource heterogeneity); and (2) that these differences may be long-lasting (resource immobility) (Mata, Fuerst, & Barney, 1995). In this context, the concepts of a firm's resources and capabilities are defined very broadly. Therefore the ability of a firm to conceive, implement, and exploit valuable IT applications could certainly be included under the firm resources (Barney, 1991; Mata et al., 1995). Further Lockett, Thompson, and Morgenstern (2009) argue that, as RBV does not require many assumptions, it can be deployed with other theories to explain strategic behaviour. This can often be seen in IT business value research as well, where the RBV is linked with process theory, micro-economic theories or contingency theory (Melville et al., 2004; Wiengarten, Humphreys, Cao, & McHugh, 2013).

The basic perspective of RBV on firm resources was later extended to include additional elements (Liang et al., 2010). For instance, Milgrom and Roberts (1995) leveraged the concept of complementary resources to further explain the role of resources and how these resources contribute to business value. The value of an organisational resource can increase in the presence of other complementary resources because it is difficult for competitors to copy the total effect (S. Bharadwaj, Bharadwaj, & Bendoly, 2007; Bhatt & Grover, 2005; Wade & Hulland, 2004).

The RBV has been around for over two decades. During this time it has been both widely adopted and subjected to some criticism. An early critique of the RBV was that it lacks substantial managerial implications or operational validity (Priem & Butler, 2001).

However later studies have confirmed the viability of the theory in empirical studies (Armstrong & Shimizu, 2007; Kraaijenbrink, Spender, & Groen, 2010). Connor (2002) argues that the RBV applies only to large firms with significant market power. According to him the smaller firms with their static resources fall beyond the bounds of the RBV. However other authors deny this argument, claiming that when nontangible resources are included, small firms may have unique competitive advantage-generating capabilities (Kraaijenbrink et al., 2010). The application of RBV in IT business value research is discussed in the next section.

### **3.2.1 RBV in IT business value research**

IT business value research examines the impact of information technology on organisational performance (Melville et al., 2004). Researchers have adopted many approaches to assess the mechanisms by which the business value of IT is generated. Barney, Wright, and Ketchen (2001) suggest that the RBV has important implications for the study of ICTs. The RBV has helped to shed some light on the controversial argument about whether IT resources can be a source of long-term performance improvement thereby increasing IT business value (Wiengarten et al., 2013). Wade and Hulland (2004) argue that RBV is a robust theory that has received wide acceptance in other management fields and is likely to uncover an enhanced role for information systems in sustained firm competitiveness.

Hence the RBV is frequently applied in IT business value research to understand the relationship between IT resources and organisational performance (International Moneytory Fund, 2015; Lockett et al., 2009; Wiengarten et al., 2013). Wade and Hulland (2004) specified the following arguments for applying the RBV in the IT business value domain: (1) by defining sets of resource attributes, the RBV facilitates the specification of IT resources; (2) by using the same set of resource attributes, IT resources can be compared with one another and, perhaps more importantly, can be compared with non-IT resources; and (3) the RBV sets out a clear link between resources and sustainable competitive advantage through a well-defined dependent variable, providing a useful way to measure the strategic value of IT resources. This explains why the RBV is a good framework to apply in IT business value research. Also in support of Barney's argument

on ICTs and complementary resources, studies have demonstrated that IT does not create business value in isolation but needs to be combined with other organisational resources (Barua et al., 2010; Brynjolfsson & Hitt, 2000; Kohli & Grover, 2008; Melville et al., 2004). The well-known article by Carr (2003), "IT doesn't matter", also raised the issue that as ITs are so widely accessible and affordable to everyone they do not create competitive advantage. From the perspective of the RBV, this is accepted because technologies that can be readily transferred do not generate profit (Barney, 1991). However, the RBV does hint at a potential source of sustainable competitive advantage in the context of ICTs. The interface between skilled users and ICTs might prove to be inimitable, e.g., an organisation highly proficient in translating computing power into knowledge would be capable of developing a substantial edge over less-skilled competitors (Barney et al., 2001).

Using the RBV, the link between IT resources and firm performance has been investigated by a number of researchers (Bharadwaj, 2000; Gu & Jung, 2013; Luo, Fan, & Zhang, 2012; Mata et al., 1995; Ross, Beath, & Goodhue, 1996; Weill, 1992). The ICT literature distinguishes between several types of performance measures such as financial performance and operational performance (Liang et al., 2010), but the findings of the research are inconclusive. Many authors have suggested that one of the reasons for inconsistent findings about IT payoffs might be the existence of lag effects since they may require time to materialise or there may be mediating factors such as internal organisational factors and external environmental factors (Bayo-Moriones et al., 2013).

Small enterprises may differ from larger firms in the way they address ICT adoption (Haug, Pedersen, & Arlbjørn, 2011). However, the majority of papers on ICT effects and IT business value relate to large firms. Since the RBV focuses on a firm's unique set of resources, identification of those resources is equally important for the survival of small firms. The RBV provides a framework with which small firm owners can strategise based on those resources which will provide the basis for a sustainable competitive advantage. Runyan, Huddleston, and Swinney (2007) suggest that the application of RBV is equally important in small firms as it can guide the small firms to utilise their limited resources

to improve the business value. Yet little has been done to uncover the resources which small firms possess or utilise to gain competitive advantage (Runyan et al., 2007).

The RBV has been employed in IT business value research since its early stages (Bharadwaj, 2000; Gu & Jung, 2013; Luo et al., 2012; Ross et al., 1996; Weill, 1992) and recently it has been widely accepted as the predominant theory (Cao, Wiengarten, & Humphreys, 2011; Kohli & Grover, 2008; Liang et al., 2010; Patas, Bartenschlager, & Goeken, 2012; Vinekar & Teng, 2012; Wiengarten et al., 2013). However, in relation to IT business value, the RBV has attracted criticism as well (e.g., Melville et al., 2004; Wade & Hulland, 2004). For example Melville et al. (2004) highlight a limitation of the conventional resource-based view as the RBV assumes the resources are always applied optimally, saying little about how this is done. While RBV provides a set of necessary conditions for the attainment of sustainable competitive advantage via a firm resource, it does not specify the underlying mechanisms on how to accomplish it (Melville et al., 2004; Patas et al., 2012; Vinekar & Teng, 2012). However Melville et al. (2004) suggest that such limitations can be mitigated by integrating RBV with other secondary theory and using the accumulated IT business value knowledge to inform understanding of how IT contributes to organisational performance.

After a careful investigation of its strengths and weaknesses, the RBV was considered an appropriate theoretical lens through which to conduct this study. Because of its clear definition of resources' attributes and the concept of resource complementarity it is useful in explaining how and why IT creates business value, which is directly related to the overarching question and the aims of this research. Further, as previously described RBV is considered a better framework for small businesses to use in strategising their unique resources to gain competitive advantage. This research focuses on small enterprises where the application of RBV is rare in the literature. However as previously described, rather using RBV alone, to mitigate the known limitations of this theory, this study uses the accumulated knowledge in the IT business value research. Hence the IT business value model developed by Melville et al. (2004) was used to develop an initial conceptual framework for this study. The key features of this model and its suitability for this research is discussed next.



### 3.2.2 Melville et al.'s model of IT business value

Applying RBV as the primary theoretical base and integrating the microeconomics and the related industrial organisation literature as a secondary theoretical basis, Melville et al. (2004) derived a model of IT business value. Synthesising the internal and external perspectives using the resource-based theory, they suggest that although the focal firm has an influence on performance, the external environment shapes the impacts. Figure 3.1 illustrates the IT business value model by Melville et al. (2004).

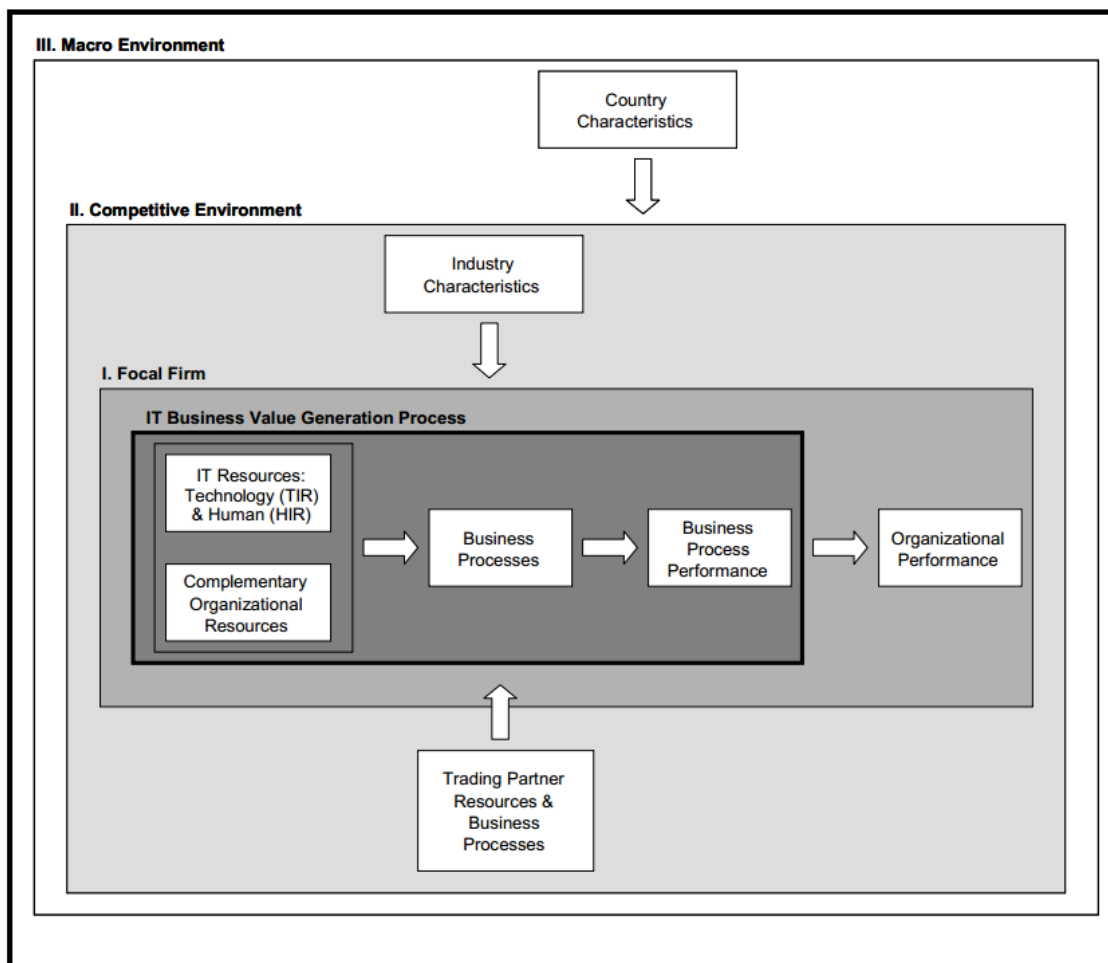


Figure 3.1: IT Business value model (Melville et al., 2004)

This model comprises three domains: (1) focal firm; (2) competitive environment; and (3) macro environment. Using the resource-based view as a primary theoretical lens, the model describes how phenomena resident within each domain shape the relationship between IT and organisational performance which leads to business value.

### **Focal firm**

The first domain of the model is the organisation (focal firm) which acquires and deploys IT resources. Within the focal firm IT business value is generated by the deployment of IT and complementary resources in business processes. As illustrated in figure 3.1, application of IT and complementary resources may improve business processes which ultimately may affect organisational performance (Melville et al., 2004).

### **Competitive environment**

The second domain of the model is the competitive environment in which the focal firm operates. It is separated into two components: industry characteristics and trading partners. Industry characteristics include salient features of specific industries such as competitiveness, regulation, technological change and other factors that shape the way in which IT is applied within the focal firm to generate business value. Trading partners increasingly affect the generation of IT business value for the focal firm (Melville et al., 2004). For example, inefficient business processes and antiquated technology within trading partner firms may inhibit the attainment of IT business value of an inter-organisational system initiated by the focal firm.

### **Macro Environment**

The final layer of the model is the macro environment. It denotes country- and meta-country specific factors that shape IT application for the improvement of organisational performance. Examples include government promotion and regulation of technology development and information industries, IT talent, and information infrastructure, as well as prevailing information and IT cultures.

The integrative model of IT business value (Figure 3.1) is considered appropriate to adopt for this research which intends to study how ICT contributes to the business value of STEs as it takes ICT resources owned by the firm into consideration so it can be used to study the STEs with limited ICTs. Also the model focuses on how these resources are utilised in business processes. This can be used as a guide to study the contribution of ICT in tourism business processes and thereby contribute to the business value. In addition to the focal firm, it includes the industry and country level which have an effect on STEs. Collaboration with industry partners is considered crucial for STEs to assist in

creating a global presence (Buhalis, 2003). As the Melville et al. (2004) model includes trading partner resources in the competitive environment it supports the study of industry collaboration of STEs. Different countries have different levels of government support for ICT infrastructure developments and policies encouraging the use of ICTs in small enterprises. These country-level factors affect the contribution of ICT. The Melville model supports the study of the country-level effect on ICT business value by including the country characteristics.

To further confirm the academic merit of the model an analysis of the articles which cited this paper was conducted. According to Scopus, Melville et al. (2004) had been cited by 724 articles (1,386 according to Google scholar) up to March 2013. Among them more than 700 were found to be related to the domain of IT business value research which enhanced the suitability of this model to be adopted in this study.

However most of the articles on ICT value in the tourism are based on the value chain model developed by Porter (1985) and are at the industry level (Cabiddu et al., 2013; Ndou & Passiante, 2005; Tajzadeh-Namin, 2012; Wagner & Weitzel, 2007). The main focus of this study is STEs which are business entities with a limited set of resources who utilise those resources in all their business activities. There are a few studies which take a resource-based view of STEs (Intan Salwani, Marthandan, Daud Norzaidi, & Choy Chong, 2009; Runyan et al., 2007). Therefore a conceptual framework for this research was developed focusing on the resources and the business processes of the STEs.

### **3.3 Conceptual Framework**

The literature on business value of IT and ICTs in tourism revealed a gap in the knowledge related to how ICTs contribute to the business value of small businesses in tourism. In order to address this, based on the RBV and using a well-accepted model of business value of IT (Melville et al., 2004) a conceptual framework was built to guide this study (Figure 3.2). As the focus of this study is STEs, the amalgamated business processes in tourism by Poon (1993) and Alford (2005) (discussed in Section 2.3.2) were incorporated into the model to better represent the STEs. The purpose of the conceptual framework as presented in this section is to draw the reviewed literature together in order to provide a structured overview of the possible ways in which ICTs contribute to the business value of STEs in Sri Lanka.

The focus of this study is the STE and the aim is to get an in-depth understanding of how ICTs contribute to the business value of these small businesses. Hence when deriving the conceptual framework for this study attention was given to the focal firm layer of the original model of business value of IT. To further the understanding of how STEs operate, business process mapping was conducted (Section 2.3.2) and specific tourism processes were incorporated into the framework. Although the focal firm (STE) is the major focus of this study it is essential to include the external environment as it affects the focal firm in generating business value through ICTs. Therefore to integrate environmental impacts the conceptual framework includes a second layer: external environment as a combination of the competitive and the macro environments of the original model of business value of IT. The conceptual framework displayed in Figure 3.2 consists of two layers.

The first layer of the framework refers to the focal firm which includes the organisational variables which were used to explore the organisations in depth. It consists of ICT resources, complementary resources, and business processes to make an in-depth investigation of the IT business value generation process in STEs in Sri Lanka.

The second layer is the external environment which consists of the industry characteristics, government support and trading partner resources and processes. Due to the information-intensive nature of the tourism industry as described in Section 2.3.2, to better represent the influence of tourism characteristics both variables in the competitive environment of the original model (industry characteristics and trading partner resources and processes) were included in the external environment of the conceptual framework. The literature suggests that government assistance and the infrastructure of a country influences the performance of small businesses (Apulu et al., 2011; El-Gohary, 2012; Hung et al., 2011). To represent these facilities which are usually provided by the government of a country, the “government support” variable was incorporated into the external environment of the conceptual framework. The following sections explain each layer of the framework and its variables in detail, connecting them to the relevant literature and linking them to research aims.

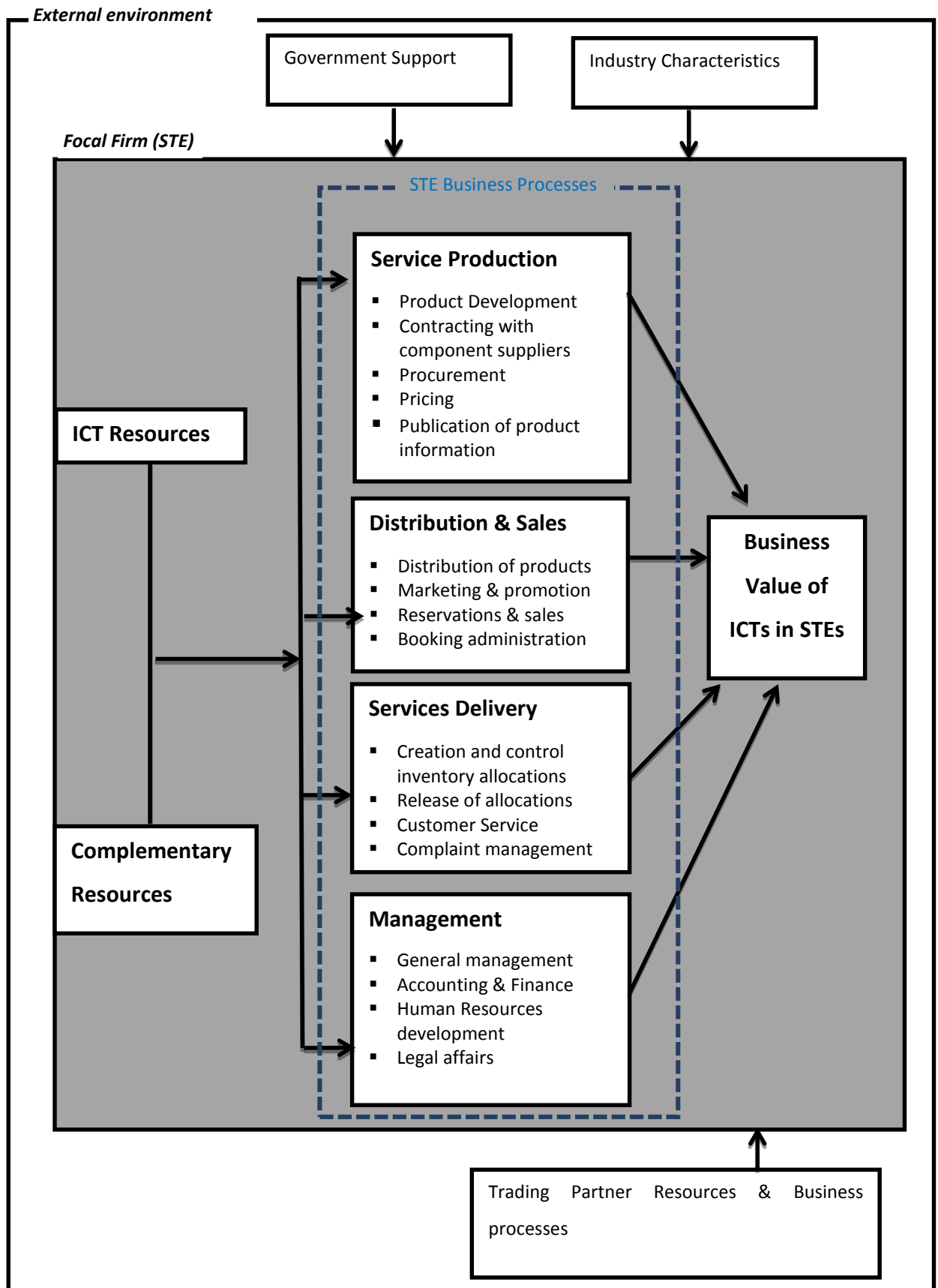


Figure 3.2: Conceptual framework – How ICT contributes to the business value of STEs adapted from Melville et al. (2004); Poon (1993); and Alford (2005)

### **3.3.1 Focal firm**

The focal firm (STEs) is the main unit of analysis in this study. The firm owns the resources and deploys them in business processes to gain business value (Melville et al., 2004). The focal firm's variables are directly linked to the three research aims and the overarching research question. Within the focal firm the study investigates the firm's ICT and complementary resources, STE business processes and business value of ICTs.

#### ***ICT Resources***

This study uses the categories of ICT resources defined by Melville et al. (2004) based on the RBV. ICT resources include technological IT resources and human IT resources. Technological ICT resources consist of the firm's ICT infrastructure and specific business applications. Therefore this includes both hardware and software. Human ICT resources refers to expertise and knowledge (Barney, 1991), and denotes both technological and managerial knowledge. This is considered especially important in STEs as the manager's knowledge and perception of ICT have been identified as a leading barrier to the adoption and the effective use of ICTs in small enterprises in general as well as in STEs specifically (Kuwayama, 2001; A. J. Morrison & King, 2002; Purcell et al., 2004; Rizk, 2006). Identification of firm ICT resources will address the first section of the second research aim: the organisational factors that affect the STEs' ability to gain business value from ICTs.

#### ***Complementary Resources***

It is well accepted that ICT alone cannot generate business value but should be combined with other complementary assets of the organisation (Barua et al., 2010; Brynjolfsson & Hitt, 1996; 2000; Hitt & Brynjolfsson, 1996; Kohli & Grover, 2008; Melville et al., 2004). The RBV literature provides guidance regarding the classification of complementary organisational resources. They may include non-IT physical capital resources, non-IT human capital resources (e.g. accountants, marketing and customer service staff), and organisational capital resources (Melville et al., 2004; Barney, 1991). The examination of the availability of complementary resources within STEs will also facilitate the addressing of the same research aim as the ICT resources variable.

### ***STE Business processes***

The Melville model describes how ICT resources affect the business process, potentially leading to improvement of business performance. This framework consists of the business processes derived from the tourism business processes (refer to Section 2.3.2). This variable is directly related to the first research aim: examining how STEs in Sri Lanka use ICTs to gain business value. In the literature review it was identified that the contribution of ICTs is made through the deployment of ICT resources in business processes (Buhalis, 2003; SLTDA, 2015b). Examining the ways in which ICTs are utilised in STE business processes also assists the third aim of the research: finding reasons why different businesses gain different levels of business value from ICTs.

### ***Business value of ICTs in STEs***

In this study the business value of ICTs is defined as the “impact of IT on overall organisational performance, whether the performance is financial or nonfinancial and whether it is tangible or intangible in aspect”. This study investigates how ICT contributes to each tourism business process separately and how it collectively contributes to the business value of ICTs in STEs overall in order to answer the overarching research question.

### **3.3.2 External environment**

Under the external environment of this model, industry characteristics, trading partner resources and government support were studied. Industry characteristics are considered important because of the nature of the tourism industry. They consist of diverse characteristics such as: global markets and the salience of destinations; high volumes of transactions and customised products; structured, standardised data; and multimedia representations (Favre-Bonté & Tran, 2015; Law, Qi, & Buhalis, 2010; Poon, 1993). These characteristics have a positive effect on the contribution of ICTs to increasing the business value of tourism enterprises (Buhalis, 2003). Government support for small businesses is considered crucial for small businesses in terms of financial assistance, training facilities and infrastructure development (El-Gohary, 2012; Rantšo, 2016). This study investigates how tourism industry characteristics, the business partner resources, and government support affect the contribution of ICTs. This layer of the framework is

directly linked to the second section of the second research aim: to examine external factors that affect the ability of STEs to gain business value from ICTs. It also addresses the third aim by understanding the reasons for the varied levels of business value gained by STEs.

### **3.4 Chapter Summary**

The purpose of this chapter was to introduce the RBV which is the main theoretical basis and the conceptual framework of this research. The discussion of the RBV included its significance in IT business value research and the integrated model of IT business value by Melville et al. (2004). The conceptual framework for this study was described with reference to relevant literature and the research aims. This conceptual framework was used as a preliminary guide in conducting this research. The next chapter introduces the research context; Sri Lanka and its tourism.



## **Chapter 4: Research Context - Sri Lanka and its Tourism**

### **4.1 Chapter Introduction**

This chapter is dedicated to providing a comprehensive understanding of the research context. The significance of a detailed description of the research context in case research has been pointed out by Benbasat, Goldstein, and Mead (1987) and Yin (2009). Further, in accordance with the post-positivist stance, in order to assess credibility and to determine generalisability it is important to provide a detailed account describing where the research was conducted, the procedures followed and the specific time of the investigation (Dubé & Paré, 2003). According to Stockdale and Standing (2006), in addition to the research context, it is also important to consider trends and developments in the wider business environment. Thus, to more fully understand the context of this study, a PESTEL analysis of tourism in Sri Lanka has also been carried out. The chapter is structured in three main sections. First, it introduces the research site with background information on Sri Lanka. The second section describes the Sri Lankan tourism industry from its history to current status. The third section presents a generic analysis of Political, Economic, Social, Technological, Environmental and Legal factors (PESTEL) that affect tourism Sri Lanka.

### **4.2 Background of Sri Lanka – The Research Site**

The Republic of Sri Lanka, formerly called Ceylon, is an island nation. It lies in the Indian Ocean, located southeast of India (refer to Figure 4.1). Sri Lanka has a total area of 65,610 square kilometres with a coastline 1,340 kilometres long. Its terrain is mostly low, flat to rolling plains, with mountains in the south-central interior (Pathirana, 1980; Worldatlas, 2014).

Sri Lanka's climate can be described as tropical, with year-round warm weather, moderated by ocean winds and considerable moisture (The Climate Change Secretariat of Sri Lanka, 2014). According to the 2012 census, the population of Sri Lanka was 20,359,439, giving a population density of 325/km<sup>2</sup>. It has an active working population, with 67% aged between 15 and 59. A great emphasis is given to education and the overall literacy rate is 95% for those aged 10 and over (Department of Census and Statistics, 2012).

The Sinhalese make up 74.9% of the population (Department of Census and Statistics, 2012) and are concentrated in the densely populated south-west and central parts of the island. The Sri Lankan Tamils, who live predominantly in the north and east of the island, form the largest minority group at 11.1% of the population. Other minorities include Moors, Indian Tamils, Malays and the Burghers. Buddhists make up 70.1% of the population and the rest consists of Hindus, Muslims and Christians.

The main economic sectors of the country are apparel and textiles, tea export, tourism, and rice production and other agricultural products (Central Bank of Sri Lanka, 2014).

Figure 4.1 presents a map of Sri Lanka.

In 1948 Ceylon (as Sri Lanka was previously known) received independence from its British colonial rulers and power transferred to the country's own government. Since then, due to its multi-ethnic nature, the country has faced several issues concerning the sharing of power among the Sinhala majority and other minorities. The ethnic conflict in Sri Lanka came to a head in the early 1980s, with the altercations that occurred in Sri Lanka between majority Sinhalese and the Tamil minority. An armed group of Tamil youth called Liberation Tigers of Tamil Eelam (LTTE) began violent activities towards the government and non-Tamils, demanding independence for Tamil people. After a prolonged war lasting over 2 decades, the Sri Lankan army defeated the LTTE in 2009 and re-established a peaceful environment in the country (Aaronson et al., 2012).

Following the end of the civil conflict in May 2009, the Sri Lankan economy experienced strong annual growth at 6.4% over the course of the five years from 2009 to 2014, well ahead of its regional peers (SLTDA, 2014). While growth was mostly private sector driven, public investment also contributed through investment in infrastructure, including post-war reconstruction efforts in the North and Eastern provinces. Tourism has been a high priority in the government's development programmes since the year 2009 (Wij, 2011). A national tourism development strategy (2011-2016) was implemented (Ministry of Economic Development, 2010) along with supporting investment promotions and infrastructure developments (refer to Table 4.9).



### 4.3 Overview of Tourism Sri Lanka

This section provides a brief history of tourism in Sri Lanka, its economic significance to the country, and the demand and supply sides.

#### 4.3.1 Sri Lankan tourism – A brief history

Tourism is one of Sri Lanka’s oldest economic sectors. Since the Silk Route merchants travelled to the east, Sri Lanka has always been a favoured destination to visit. The first attempt to develop tourism in Sri Lanka was made by the colonial government prior to the Second World War. Although initiatives to develop the tourism industry were taken in 1937 with the establishment of the first tourism bureau, closed economic policies and a rigid foreign exchange system did not favour the tourism sector during the 1950s and 1960s (Fernando et al., 2012). With the opening of the economy in 1977, the tourism industry, like other export-led industries, boomed. There were large numbers of tourist arrivals, as well as increased foreign exchange earnings, and increased employment was generated from tourism related activities. Figure 4.2 shows the tourist arrivals from 1970 to 2014.

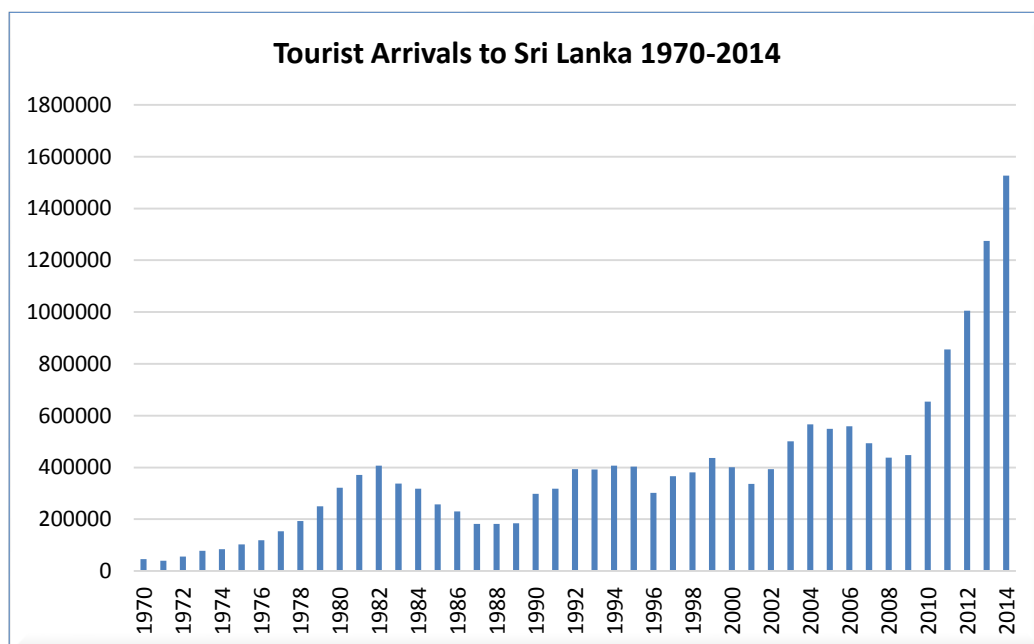


Figure 4.2: Tourist arrivals to Sri Lanka 1970-2014

Sources: SLTDA, Central Bank of Sri Lanka (2014).

In 1983, however, this changed, as the civil war caused Sri Lanka to become less attractive to foreign tourists. National security issues related to ethnic conflict caused

major fluctuations in tourist arrivals from 1983. In 2002 the ceasefire agreement between the government and militant groups created a peaceful environment and tourist arrivals began to increase. In addition to the effects of the political environment, the tsunami of 2004, one of the most severe natural disasters ever to afflict Sri Lanka, also adversely affected its tourism (Nawaratna, 2011). With a stable peace since 2009, tourist arrivals have been rapidly increasing. In 2010, immediately after the end of the war, Sri Lanka saw a growth of 46% in tourism arrivals (SLTDA, 2011a). International tourist arrivals grew by 4.7% in 2014 and were the highest in South Asia with a new record of 1,527,153 arrivals in 2014 (SLTDA, 2014). In addition to international tourist arrivals, numbers of domestic tourists also increased, especially between the northern region and the rest of the regions of the country, mainly due to curiosity to visit the areas which had until 2009 been restricted (UNWTO, 2013). Despite the natural and political setbacks during the course of the latter 20<sup>th</sup> century, the Sri Lankan tourism sector has been growing significantly, contributing substantially to GDP and employment.

#### **4.3.2 Tourism as a major economic activity of Sri Lanka**

Tourism is considered a key instrument of economic development in Sri Lanka (Welgamage, 2015). The main positive economic impacts of tourism relate to its foreign exchange earnings, contributions to government revenues, and generation of employment and business opportunities (UNEP, 2015). The direct contribution of Travel & Tourism to GDP in 2014 was LKR462.1bn (US\$3.5bn), which is 4.8% of GDP (WTTC, 2014). Its relative contribution to foreign exchange earnings is vital. Tourism is the third largest source of foreign exchange, after private foreign remittances and textiles and garments (SLTDA, 2014). Its growth is rapid, moving from sixth to third in only 5 years. Table 4.1 shows the relative importance of tourism as a foreign exchange earner for Sri Lanka.

Table 4.1: Top 10 sources of foreign exchange for Sri Lanka 2009 & 2014

2009				2014			
Rank	Sector	FE Earnings Rs. Million	% of Total FE Earnings	Rank	Sector	FE Earnings Rs. Million	% of Total FE Earnings
1	Workers' Remittances	382,818	26.6	1	Workers' Remittances	916,344	29.3
2	Textiles & Garments	376,146	26.2	2	Textiles & Garments	643,688	20.6
3	Tea	136,171	9.5	<b>3</b>	<b>Tourism</b>	<b>317,502</b>	<b>10.2</b>
4	Transportation Services	99,391	6.9	4	Transportation services	251,086	8.0
5	Rubber Based Products	44,163	3.1	5	Tea	212,588	6.8
<b>6</b>	<b>Tourism</b>	<b>114,790</b>	<b>4.1</b>	6	Rubber Based Products	116,168	3.7
7	Computer & Information Technology Services	28,161	2.0	7	Computer & Information Technology Services	97,652	3.1
8	Minor Agriculture Products	27,616	1.9	8	Gems, Diamonds and Jewellery	51,385	1.6
9	Petroleum Products	15,484	1.1	9	Coconut	46,517	1.5
10	Others	286,495	19.9	10	Others	472,205	15.1

Source: SLTDA (2010, 2014) and Central Bank of Sri Lanka (2014)

Travel and tourism attracts a large amount of investment to the country, for example it attracted capital investment of LKR115.7bn (US\$ 0.87bn) in the year 2014 (WTTC, 2014). Public sector institutions derive revenue from tourism in a variety of ways: direct and indirect taxes, fees and levies, profits from business undertakings etc. (SLTDA, 2014). However, statistics of revenue collections are readily available only for few sources, such as the tourism development levy, embarkation tax, income of Tourism Development Authority, entrance fees to Cultural Triangle, wildlife parks, museums, botanical gardens etc. Table 4.2 shows the public sector revenue from various tourism sources from 2011 to 2014.

Table 4.2: Public sector revenue from tourism (in Rs. Million) 2011-2014

Source of Revenue	2011	2012	2013	2014
Tourism Development Levy	649.7	809.4	1,014.2	1,005.6
Tourism Development Authority Income	110.1	130.3	136.4	149.3
Embarkation Tax on Foreign Tourists	1,041.7	1,161.7	1,604.8	1,779.8
Cultural Triangle	998.2	1,330.7	1,727.1	2,178.5
Botanical Gardens	253.9	279.0	314.9	369.8
Zoological Gardens	470.2	480.7	550.9	745.8
WWildlife Parks	301.0	424.8	578.4	831.6
Museums	14.2	16.8	14.9	15.8
BMICH	178.3	239.2	233.7	400.2
<b>Total</b>	<b>4,017.3</b>	<b>4,872.6</b>	<b>6,175.3</b>	<b>7,476.4</b>

Source: SLTDA (2010, 2014)

Being a service-oriented and labour-intensive industry, tourism also contributes substantially to employment generation. Travel & Tourism generated 129,790 jobs directly in 2014, contributing to 4.3% of the country's total employment (SLTDA, 2014). This consisted of employment by hotels, travel agents, airlines and other passenger transportation services. Almost 80% of the total employment was in the accommodation and catering sector. According to reviews by SLTDA, one job is created for every five tourist arrivals. Table 4.3 shows direct employment numbers in the tourism industry for the year 2014.

Table 4.3: Direct employment in the tourism industry 2014

Category of Establishments	No. of Establishments	Managerial Scientific & Professional	Technical Total Clerical Allied and Supervisory	Manual & Operative	Total
Hotels and Restaurants	2,040	14,889	50,853	39,259	105001*
Travel Agents and Tour Operators	678	2,394	5,830	868	9092*
Airlines	29	896	3,826	1,214	5936*
Agencies Providing Recreational Facilities	71	179	372	267	818*
Tourist Shops	63	224	1,287	169	1,680*
Guides	-	-	4,420	-	4,420*
National Tourist Organisation	4	190	212	196	598*
State Sector	18	673	708	864	2,245*
<b>Total</b>	<b>2,903</b>	<b>19,445</b>	<b>67,508</b>	<b>42,837</b>	<b>129,790*</b>

Source: SLTDA (2014) (\*estimated)

### 4.3.3 Tourism demand

Tourism demand is defined as the total number of persons who travel or wish to travel, and use tourist facilities and services at places away from their places of work or residence (Cooper, 2008). The demand for Sri Lanka as a tourism destination (by international tourists) in terms of its key markets, seasonality of arrivals, average duration of stay, purposes of visits and major tourist attractions is described in the following sections.

#### 4.3.3.1 Key markets.

Since the beginning of the tourism industry, even before its formal institutionalisation in 1937, Sri Lanka has been a popular destination for Western European travellers. More recently (2006–2010), Western Europe was considered the primary source region for tourism in Sri Lanka. However, Sri Lanka has also experienced increasing demand from other regions such as South-East Asia, Australasia, North America and the Middle East. Table 4.4 shows the top ranked market regions for Sri Lankan Tourism.

Table 4.4: Relative importance of market regions (2012, 2013 & 2014)

Market Region	Percentage Share		
	2012	2013	2014
Western Europe	37.1	33.0	31.4
Asia - South	24.6	25.6	24.2
Asia - North-East	7.4	8.1	12.2
Eastern Europe	7.2	9.9	10.1
Middle East	5.9	6.3	5.8
Asia - South-East	5.8	6.3	5.8
North America	5.9	5.1	4.8
Australasia	5.7	4.8	4.3
Others	0.7	0.9	1.4
World	100.0	100.0	100.0

Source: SLTDA (2014)

Although Western Europe is the top market region, as an individual country India dominates the Sri Lankan tourism industry as the leading source of tourists to the country. The UK is in the second place. While these two countries remain the leading source markets for Sri Lanka, arrivals from the US, Canada, Germany, Australia and Japan have increased considerably since 2009. The top 10 markets accounted for almost 65 of the total tourist traffic to the country in 2014. Table 4.5 provides the numbers of



tourist arrivals and their percentage share from the top 10 markets during 2013 and 2014.

Table 4.5: Top ten source markets (2013 & 2014)

2013			2014		
Market	Total Arrivals	percentage share	Market	Total Arrivals	Percentage share
India	208,795	16.4	India	242,734	15.9
UK	137,416	10.8	UK	144,168	9.4
Germany	85,470	6.3	China	128,166	8.4
Middle East	80,509	6.3	Germany	102,977	6.7
Maldives	79,474	6.2	Maldives	86,359	5.7
France	64,388	5.1	France	78,883	5.2
China	54,288	4.3	Russia	69,718	4.6
Australia	54,252	4.3	Australia	57,940	3.8
Russia	51,235	4.0	USA	39,371	2.6
Ukraine	38,607	3.0	Japan	39,136	2.6
Total	854,434	63.4	Total	989,452	64.8

Source: SLTDA (2014)

Identification of key markets and source regions is important to small businesses as it can help them to make business decisions such as choosing distribution channels and marketing methods. Tourists from different regions have unique characteristics and patterns of online behaviour. Further, the dominance of OTAs also varies according to the regions. For example, Agoda.com caters mainly for the Asian market, while Expedia is considered the most established OTA in Europe (Buultjens, Ratnayake, & Gnanapala, 2015).

#### **4.3.3.2 Seasonality of tourist arrivals to Sri Lanka.**

The tourist season in Sri Lanka is considered to be between November and March, with arrivals peaking in November and December. There is a secondary peak in July-August, a shoulder period in September-October and a low season in May-June. The five peak months of the season account for nearly 50% of the annual total arrivals with the months of November and December accounting for nearly 25% of the yearly arrivals' aggregate. Figure 4.3 shows the seasonality of tourist traffic in Sri Lanka in the year 2014.

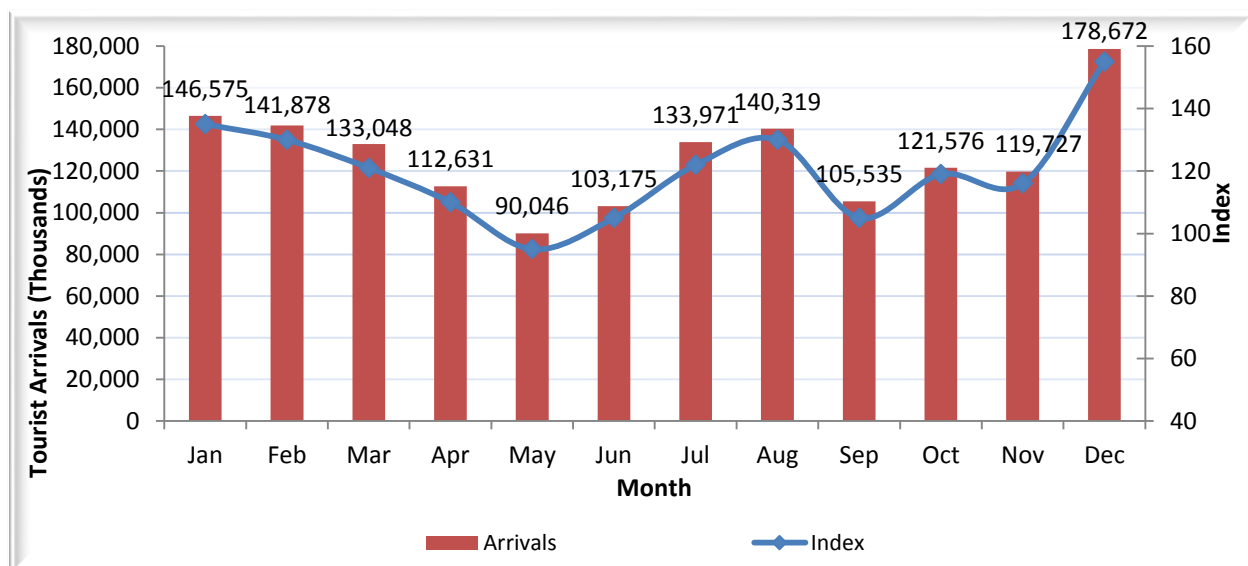


Figure 4.3: Seasonality of tourist traffic 2014

Source: SLTDA (2014)

Seasonality of tourist arrivals affects the use of technology in small businesses. Businesses should give more priority to increasing their visibility in online searches of potential guests during peak periods.

#### **4.3.3.3 Purpose of visit of travellers to Sri Lanka.**

The prime motivation for travel to Sri Lanka is for pleasure, such as holiday, recreation and site-seeing, for over 68% of the total tourist population (SLTDA, 2014). Visiting friends and relations is the second most common reason, accounting for 28% of visitors, and most of those from India (SLTDA, 2014). Private and official business, conventions and meetings, religious and cultural activities, health and sports are the other reasons for travellers to visit Sri Lanka. The majority (45%) of pleasure travellers are from Europe, followed by Asia.

It is important for businesses to identify the purpose of visits and the regions of their guests so that they can customise their tourism services and decide on marketing media. They can focus on a market segment with a common set of purposes and specialise in providing such services. For example, small hotels based on their regions can specialise in different types of recreational activities such as surfing, adventure travel or meditation and site-seeing, using ICTs such as websites, social media, and user review

sites to promote these specialisations to potential travellers (Howison, Finger, & Hauschka, 2014).

#### **4.3.4 Tourism supply**

Tourism supply is the provision of the key elements of the tourism industry by the host governments or destinations resources. Tourism resources that are necessary for tourism supply range from natural to man-made (Goeldner & Ritchie, 2007). Related to the tourism supply of Sri Lanka, major tourist attractions, accommodation establishments, capacity and occupancy of accommodation establishments are described in the following sections.

##### ***4.3.4.1 Major tourist attractions of Sri Lanka***

Sri Lanka has a diversity of tourist attractions and resources within its relatively compact area. These include beaches, a warm tropical climate, historical and religious vestiges, scenic beauty and other resources such as precious gems, bio-diversification and Ayurveda medication. These are some of the main factors in attracting international tourists to the country. Domestic tourists also avail themselves of these resources though they have a greater preference for the cultural attractions such as religious festivals (Shantha, 1999). These attractions are spread throughout the country and can be put in to three main categories:

1. Beaches;
2. Natural resources and scenic beauty;
3. Cultural heritage.

Based on these major tourist attractions, the SLTDA has defined seven major resort regions, namely, Colombo City, Greater Colombo, South Coast, East Coast, High Country, Ancient Cities and Northern Region. Figure 4.4 illustrates the seven regions and is followed by Table 4.6 which provides a brief description of each region.

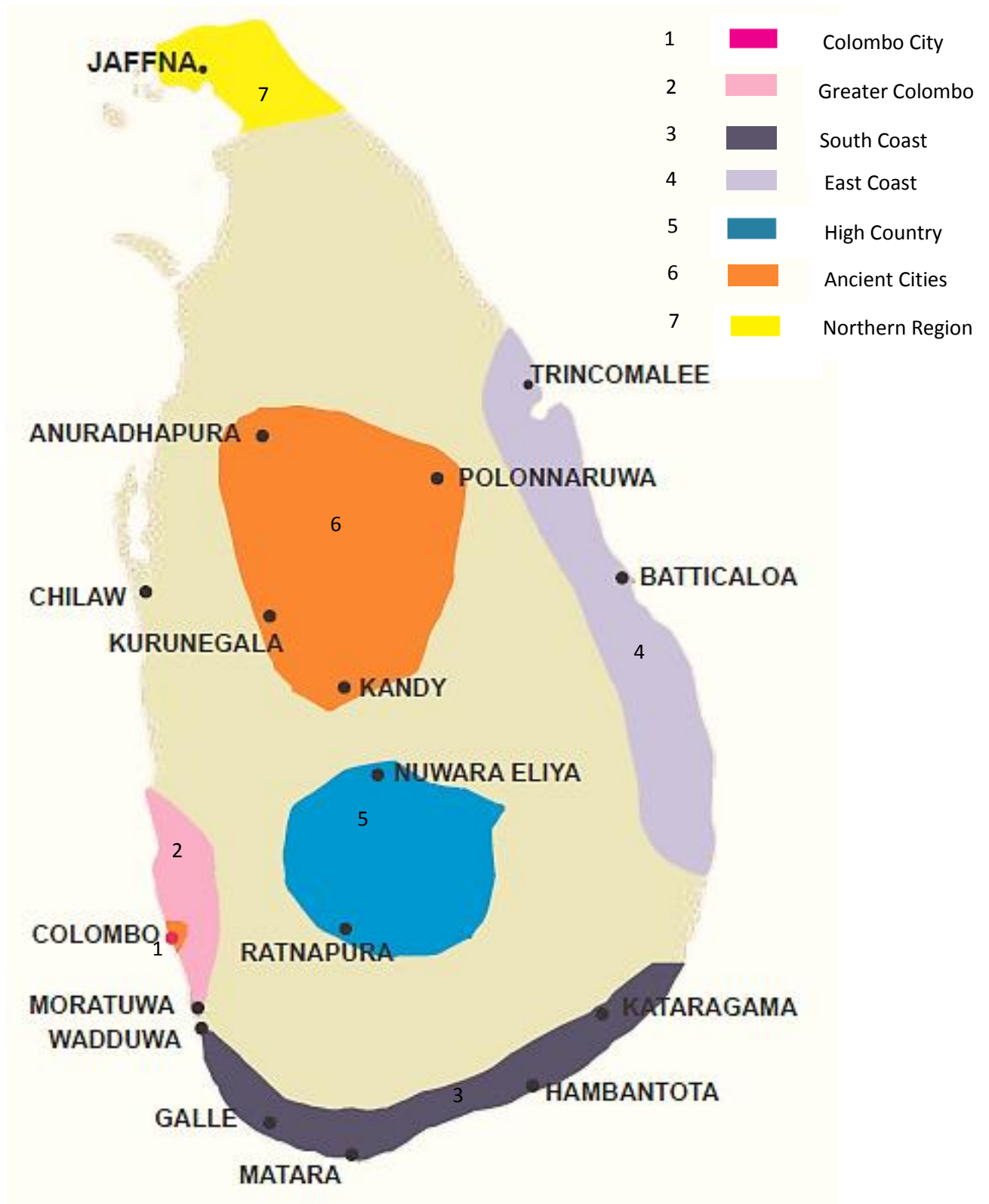


Figure 4.4: Tourist resort regions in Sri Lanka (SLTDA website, 2013).

Table 4.6: The seven tourist regions of Sri Lanka

Tourist Region	Description
<b>1. Colombo City</b>	Colombo is the capital city of Sri Lanka. With 37.31 square kilometres of land area, it has the largest population with 2.2 million people. The only international airport, Katunayake Airport is located next to Colombo, allowing easy access to the capital city. The city also has the highest number of tourism accommodation establishments (WTTC, 2012). Colombo City is identified as a separate resort region because of its importance to business travellers by being the commercial city and the gateway for all international tourists.
<b>2. Greater Colombo</b>	While Colombo City mostly facilitates business travellers, Greater Colombo includes famous beaches and other resources such as Mount Lavinia Beach, the Galle Face Green and the national zoological garden. Most of the beaches in Greater Colombo are crowded by both domestic and international tourists alike (SLTDA, 2014).
<b>3. South Coast</b>	The South Coast includes many popular beaches with well-known international destinations for board-surfing and water sports. It is also famous for delivering Ayurveda medication which is an ancient art of healing in Sri Lanka. The South Coast is the home to the main marine national park of Sri Lanka. The park contains a fringing coral reef with a high degree of biodiversity. Its beaches and night life make it a popular tourist destination. Further, this region includes the Dutch fort of Galle, which is a world heritage site and considered the most popular destination for international tourists (SLTDA, 2014).
<b>4. East Coast</b>	Since the end of the civil war in 2009 and the completion of tsunami rehabilitation projects, the east coast has become a popular tourist destination among locals and foreigners alike. This is because this region is known to have one of the longest

	<p>stretches of shallow coastline in the world. People can walk kilometres into the sea because the water is only a few inches deep and the current is relatively weak compared to the rest of Sri Lanka's coasts. This region includes not only the beaches but also many other tourist attractions such as lagoon tours, bird watching, elephant watching and archaeological sites (SLTDA, 2014).</p>
<b>5. High Country</b>	<p>The High Country region includes one of the most prominent tourist cities in Sri Lanka, Nuwara Eliya. The city is called 'Little England' because of the prevailing climate of the city. The cool weather along with its scenic beauty means this region focuses more on luxury tourism (SLTDA, 2012a). This region is also home to the Horton Plains national park and the Singharaja rain forest, which are world heritage sites and are visited by both international and domestic tourists alike (SLTDA, 2014).</p>
<b>6. Ancient Cities</b>	<p>The Ancient Cities region or the cultural triangle includes the famous cultural cities of Sri Lanka. This region contains five of the eight world heritage sites in Sri Lanka. The cultural capital Kandy, the sacred city of Anuradapura, the ancient city of Polonnaruwa, the rock fortress of Sigiriya, and the golden rock temple of Dambulla are in this region, all of which are frequented by tourists. Kandy is the home of The Temple of the Tooth Relic, one of the most venerable places for the Buddhist community of Sri Lanka and all around the world. Esala Perahera (the festival of the tooth) is the grand festival of Esala held in Sri Lanka. It is a unique symbol of Sri Lanka and a major tourist attraction (SLTDA, 2014).</p>
<b>7. Northern Region</b>	<p>The northern part of Sri Lanka which was completely out of action under the civil war is now becoming an important tourist destination. Though it has natural resources, due to rehabilitation projects and lack of accommodation facilities international tourism is not well established in this region yet.</p>

The seven tourist resort regions represent a diverse collection of tourist attractions with different types of tourism businesses in these regions. These seven regions were taken as the basis for the selection of the cases researched in this study. The selection of businesses from these regions is further described in Chapter 5, which deals with research methodology.

#### **4.3.4.2 Accommodation establishments.**

As defined by SLTDA, there are several categories of accommodation establishments in Sri Lanka. Table 4.7 provides a brief description of these different categories.

Table 4.7: Accommodation establishments in Sri Lanka

<b>Category</b>	<b>Description</b>
Tourist hotels (star category and small hotels)	Tourist hotels provide paid lodging, usually on a short-term basis. They have high standards and an extensive range of first-class guest services with comfortable, clean rooms and high quality furnishings depending on the star rating of the hotel.
Guest house	Guest houses range from low budget rooms to luxury apartments, and are similar to small hotels in larger cities.
Bed and breakfast units	These units are usually family owned. The family generally lives on the premises and provides services to tourists.
Boutique villas/ boutique hotels	An accommodation establishment that provides unique facilities and highly personalised services to guests which are normally classed as luxury.
Heritage homes/ bungalows	Heritage Homes are old 'Walawwas', residences and thematic bungalows that were built at least 100 years ago. The homes, set on a large block of land, have a colonial or aesthetic architecture.
Homestay	A stay at a residence by a traveller and especially by a tourist who is hosted by a local family to learn about the local lifestyle.
Rented apartments/ houses	A room or suite of rooms designed as a residence and generally located in a building occupied by more than one household.

Although these different categories are classified separately, some categories such as small hotels, guest houses, and bed and breakfast units share common features. Except for the star category tourist hotels, all other types are mostly run by small business operators (IFC- World Bank Group, 2013). These accommodation establishments are spread throughout the country in different tourist resort regions described in the Table 4.6.

#### 4.3.4.3 Capacity and occupancy of accommodation.

By the year 2014 the total number of graded accommodation (star category tourist hotels) units available throughout the country was 334, with 18,510 rooms (SLTDA, 2014). In addition to these, another 1,265 supplementary units guest houses, B& B units and homestays were also available. These accommodation establishments are not evenly distributed among the resort regions. Out of the seven tourist regions the South Coast has the highest number of accommodation establishments (36.3%), as well as the highest rate of growth in the number of new establishments added after the year 2009 (SLTDA, 2014). Colombo City, Ancient Cities, Greater Colombo and High Country are next in order respectively. Table 4.8 shows the accommodation capacity (rooms) and regional distribution from 2005 to 2014.

Table 4.8: Accommodation capacity (rooms in graded accommodation) and its regional distribution from 2005 to 2014

Resort Regions	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Colombo City	2,926	3,209	3,209	3,188	3,190	3,141	3,086	3,054	3,170	3,633
Greater Colombo	2,490	2,520	2,555	2,651	2,494	2,640	2,573	2,856	2,913	2,883
South Coast	4,431	5,112	5,505	5,370	4,940	5,099	5,037	5,660	5,868	6,717
East Coast	178	184	184	230	230	238	238	296	628	842
High Country	709	726	734	772	928	847	940	743	838	789
Ancient Cities	2,428	2,467	2,417	2,582	2,679	2,749	2,779	2,901	3,217	3,595
North Region	-	-	-	-	-	-	-	-	21	51
All Regions	13,162	14,218	14,604	14,793	14,461	14,714	14,653	15,510	16,655	18,510

Source: SLTDA (2014)

The overall annual room occupancy rate of tourist hotels in Sri Lanka is 74% (SLTDA, 2014). Ancient Cities, South Coast, Colombo City, and Greater Colombo have a higher rate of occupancy when compared to the other regions.

#### 4.3.5 Summary of the Sri Lankan tourism industry

A brief history and its current status of the tourism industry was described in this section. The importance of the industry as a main contributor to the economy by means of attracting foreign exchange as well as increasing the employment opportunities was highlighted. Tourism demand in terms of key markets, seasonality, duration of stay, and purpose of visit was discussed. These factors are significant for the use of technology in the accommodation businesses, which is the focus of this study. The major tourist



attractions of the country were described along with the seven tourist resort regions defined by the SLTDA which will be taken as a basis for case selection. Finally, the current tourism supply in terms of the available accommodation categories, the number of establishments and their occupancy were detailed. In order to obtain a broader understanding of tourism in Sri Lanka a PESTEL analysis of the tourism industry of Sri Lanka was undertaken.

#### **4.4 PESTEL Analysis – Tourism in Sri Lanka**

PESTEL is an analytical tool that considers external factors and their impacts on an industry or a business (Scholes & Johnson, 2002). The analysis includes the Political, Economic, Social, Technological, Environmental and Legal factors that affect the operations of an industry. An organisation's success is influenced by factors operating in its internal and external environment and the organisation can increase its success by adopting strategies that manipulate these factors to its advantage. A successful organisation will not only understand existing factors but also forecast change, so that it can take advantage of change within the environment in which it operates (Babatunde & Adebisi, 2012). Therefore PESTEL analysis is considered a useful tool to pick up trends and developments in the external environment that can be used to inform longer term planning and strategy formation (Yüksel, 2012).

Further, Johnson, Scholes, and Whittington (2008) define PESTEL analysis as a model to analyse the factors affecting international companies. As the tourism industry deals with invisible exports and operates in the international market, this type of analysis can be applied to the businesses in the tourism industry as well. However, many of the factors considered in a PESTEL are linked together (for example technological developments may simultaneously change economic factors by creating new jobs), and hence overlap can occur (Scholes & Johnson, 2002).

In this study, PESTEL analysis has been applied to Sri Lanka with the aim of focusing on factors affecting the tourism industry and its small businesses, to find out how ICTs contribute to business value. This analysis discusses the political, economic, socio-cultural, technological, environmental and legal factors related to Sri Lanka's tourism industry. How these factors of the external environment affect the STEs in their business operations is further discussed in section 6.3.

#### **4.4.1 Political factors**

Political factors mainly refers to the role of the government of a country and its initiatives that would influence business (Scholes & Johnson, 2002). Sri Lanka is a democratic, socialist republic and a unitary state that is governed by a mixture of a presidential system and a parliamentary system. Stability of the political environment and the attitudes of political parties or movements affect the tourism industry of any country. Sri Lanka has gone through a changing political scenario over the years and experienced ethnic related terrorist problems from 1983 to 2009. Since the end of the civil war in 2009 the country has gained considerable political stability.

##### ***Positive political effects on tourism industry***

Due to the lack of demand for tourist accommodation during the civil war period even luxury hotels had to offer very low prices to attract the limited number of tourists entering the country. Although there was a sudden increase in demand for hotel rooms in Colombo and other regions just after the war, the low prices of hotel rooms had a negative effect on the revenue of the industry and small hotels were finding it difficult to survive in such a competitive environment. Identifying this crisis in the industry, the government introduced minimum rates for the graded hotels in Colombo City according to the star classification of the hotels (lanka business online, 2009). The hotels in Colombo were then required to charge above or equivalent to the minimum rates for each type of customer segment, as specified by the government (Nawaratna, 2011). Although the policy changes at first received considerable resistance from tour operators and had an adverse effect on large hoteliers in the short term, they helped bring the room rates to sustainable levels (Nawaratna, 2011). They also benefited small businesses as well as the industry as a whole in the long term.

The government was also involved in developing the infrastructure of the country in order to create opportunities and support the tourism industry. These projects consisted of the development of highways, airport development projects and port development. Road development and expansion projects included the Southern Highway Project, Colombo-Katunayake Expressway and National Highway Sector Project (Nawaratna, 2011). These development projects had a positive effect on the tourism industry by providing connectivity to various cities and tourist destinations. In particular the

Colombo-Katunayake expressway provided an enhancement to the transport of tourists to Colombo City from the airport.

As a special tourism infrastructure development, a One-Stop-Unit (OSU) for tourism under the SLTDA was established in Colombo to fast track the approvals required for hotel and resort projects and encourage investments in tourism. The functions of the OSU include the provision of information to potential investors regarding tourism projects, and acting as liaison in obtaining all approvals required for a project from various ministries and agencies and obtaining incentives such as tax breaks and exemption from import duties for the project (Wij, 2011). Table 4.9 presents government’s initiatives to develop the tourism industry after the year 2009.

Table 4.9: Sri Lankan government initiatives to develop the tourism industry after 2009

Initiative	Description
Establishment of policy framework to support investors and the industry (2010-2013)	<ul style="list-style-type: none"> <li>• Unification of the regulatory environment and creating a single authority for tourism promotion named SLTDA</li> <li>• Simplification of the investment approval process by setting up of a ‘One-Stop-Shop’ at SLTDA for tourism related investments</li> <li>• Streamlining the process of alienating government land for tourism development projects</li> <li>• Reduction of the high electricity tariffs</li> <li>• Attracting internationally reputed tourist hotels</li> <li>• Implementation of a new visa rule and facilitating online visitor visa processing</li> <li>• Establishment of the Tourist Police ensuring both local and foreign tourists have a safe, pleasurable and memorable travel experience in Sri Lanka</li> </ul>
A conducive taxation strategy for tourism (2013)	Profit / income is subject to a 12% upfront cost of investment in leisure and tourism related activities and plant and machinery and branded consumer products are subject to low taxes. Duties on vehicles have been reduced to promote tourism related services
Development of infrastructure to meet the industry requirements (2010-2014)	<p><b>Airports</b></p> <ul style="list-style-type: none"> <li>• Building of a new passenger terminal with segregated departure and arrival areas, new parking aprons, and additional area with duty free retail at the existing Katunayake Airport</li> <li>• Development of a second airport in Hambantota with a capacity to handle 1 million passengers in the south of Colombo</li> </ul> <p><b>Ports:</b></p> <ul style="list-style-type: none"> <li>• Expansion of the existing Colombo port, under the Colombo South Port Project</li> </ul> <p><b>Roads:</b></p> <ul style="list-style-type: none"> <li>• Development of the Southern highway and Colombo-Katunayake Expressway</li> </ul> <p><b>Power:</b></p> <ul style="list-style-type: none"> <li>• Development of Coal Fired Power Plants in four major areas to</li> </ul>

	improve uninterrupted power supply
Supporting STE sector (2010)	<ul style="list-style-type: none"> <li>• Concessions are given for STEs when participating in events organised by the SLTDA (only 25% of the actual cost is charged to attending a recognised trade fair).</li> <li>• Introduction of minimum rates by the government for the star rated hotels in the capital city of Colombo</li> </ul>
Human resources developments of the industry (2010)	<ul style="list-style-type: none"> <li>• Meeting the human resources gap of the accommodation industry: Providing training for four major sectors, namely: a) Food &amp; Beverage, b) Professional Cookery, c) Housekeeping and d) Front Office Operation. Sri Lanka Institute of Tourism and Hotel Management is providing programmes specialising in these areas and</li> <li>• Providing training for tour guides, home stay hosts and other formal and informal sector service providers</li> </ul>
Marketing and promotion (2010-2014)	<p><b>Visit 2011 campaign</b></p> <ul style="list-style-type: none"> <li>• In the visit 2011 campaign, Sri Lanka Tourism focuses on eight product categories under the theme ‘Eight wonderful experiences in eight wonderful days’ and launched the programme internationally</li> </ul> <p><b>Web Portal</b></p> <ul style="list-style-type: none"> <li>• Sri Lanka Tourism has developed a web portal for tourism that is accessible to any potential tourist who needs information about the country, attractions, events, accommodation, tours organisers, transport etc.</li> </ul> <p><b>Promoting domestic tourism</b></p> <ul style="list-style-type: none"> <li>• Increase government investments in large scale domestic rest houses.</li> <li>• Creation of awareness about lesser-known attractions using different media accessible to the domestic tourists such as TV documentary series narrated by popular artists.</li> </ul>

Sources: (Ministry of Economic Development, 2010; Nawaratna, 2011; SLTDA, 2014)

### ***Negative political effects and risks to tourism industry***

Even though the war has come to an end the government is still facing human rights issues, and these factors affect the country’s image and influence the tourism industry in a negative manner (Pluss, 2015). Frequent elections have also created a threat to the tourism industry because during the election period curfews were implemented in some places to control the situation.

When political risk introduces additional elements of uncertainty into the rules governing tourism investment projects, the risk of capital loss is also raised for longer term projects (Nawaratna, 2011). Political risk also negatively influences the timing and pricing of the tourism production process. The negative image of the country, lack of foreign exchange for tourism development, weak institutional frameworks for tourism

planning, political instability caused by communal violence, and civil war conflicts are some of the political risks and inhibitors to tourism development in Sri Lanka.

***Impact of political factors on technology***

Political factors affect technology in terms of infrastructure and other facilities such as training and awareness programmes available for the businesses to operate smoothly. One of the six main post-war goals set by the government was converting Sri Lanka into a technology hub in the region. Targeting this, several initiatives have been taken to develop ICT infrastructure in the country and to provide ICT training programmes to improve ICT literacy, especially in rural regions. With the development of infrastructure, access and affordability of the Internet and other technologies for businesses were improved (Central Bank of Sri Lanka, 2014). Before 1996, all the telecommunication services of the country were centralised to Sri Lanka Telecom. Liberalising the authority in telecommunication allowed private businesses to enter the industry, which provided a great improvement in coverage and availability of the services throughout the country. It also reduced prices, making telecommunication services affordable for small businesses. The government launched e-Sri Lanka, a national development initiative in 2003, with the aim of enhancing growth and equity through improved access and use of information communication technology, in particular of the knowledge industry and SMEs (refer to Table 4.10). Under this Information and Communication Technology Agency (ICTA) of Sri Lanka initiated training centres for communities called ‘*Nana Sala*’. Training programmes conducted in these centres and ICT support programmes in schools also positively affected the use of technology in an effective manner in society as well as in businesses (ICTA, 2010). Table 4.10 presents recent government initiatives to promote ICTs in Sri Lanka.

Table 4.10: Sri Lankan government initiatives to develop ICTs in the country

Initiative	Description
(Establishment of the ICTA (established in 2003 and expanded in 2010)	ICTA was created in 2003 as the body in charge of the implementation of ICT policies for Sri Lanka. The agency is responsible for the main programmes: <ul style="list-style-type: none"> <li>• ICT Policy, Leadership, and Institutional Development;</li> <li>• Information Infrastructure;</li> <li>• Re-engineering Government;</li> <li>• ICT Human Resource Development;</li> </ul>

	<ul style="list-style-type: none"> <li>• ICT Investment and Private Sector Development; and</li> <li>• E-Society</li> </ul>
Develop high-speed broadband services in Sri Lanka and increase its usage (2010)	<p>Telecom Regulatory Commission of Sri Lanka (TRCSL) commenced its broadband initiative in 2010</p> <p>A unit has been established to monitor broadband quality and the speeds of services, which publishes its findings regularly to raise public awareness</p>
e-Sri Lanka Initiative (extended e-Launch in 2011)	<ul style="list-style-type: none"> <li>• Establishment of the Lanka Government Network (LGN) to provide the necessary infrastructure to connect government organisations and local bodies.</li> <li>• Launching the Lanka Gate to provide online information and services relating to Sri Lanka.</li> <li>• Introduced a new Electronic Travel Authorization Visa called ETA VISA for a short visits to Sri Lanka.</li> </ul>
ICT skill development (2011)	<p><b>The Nenasala Project</b> Provide facilities for rural primary schools throughout the country.</p> <p><b>Telecentres or knowledge centres</b> Provide ICT services to rural and semi-urban communities.</p> <p><b>Connect a School, Connect a Community</b> Telecommunication regulation commission of Sri Lanka with the International Telecommunication Union (ITU) inaugurated a project in 2011 to connect schools in rural areas using a public-private-people's partnership. Telecommunication operators and NGOs have joined the project as partners to provide access to education through ICTs.</p> <p><b>eNable project</b> ITU and the National Information Society Agency of the Republic of Korea are implementing a joint programme on Korean IT Volunteers in 2012 to provide ICT training for disabled and rural communities.</p>

Sources: (ITU, 2012), (Department of Census and Statistics, 2014), (ICTA, 2010)

#### 4.4.2 Economic factors

Economic factors in the PESTEL refers to the macro economic factors such as economic growth rates, unemployment rates and exchange rates etc. that affect an industry and businesses (Scholes & Johnson, 2002) .

According to the International Monetary Fund (IMF), Sri Lanka is recognised as a fast growing middle income country. It has a yearly gross domestic output of US\$67.2 billion as of 2013 and a GDP of US\$158 billion in terms of purchasing power parity. It recorded a GDP growth of 8.3% in 2013 (International Moneytory Fund, 2015). The Sri Lankan tourism industry is one of the fastest growing sectors of the economy with an average annual revenue of US\$2,400 million (SLTDA, 2014). At present, nearly half a million

international tourists visit the country every year. Tourism makes an immense contribution to the country's economy.

With the aim of converting the tourism industry into the largest foreign exchange earner in the economy by 2020, the Sri Lankan government has initiated several programmes and projects to promote the industry. Implementing a favourable taxation policy for investors and the promotion of the Homestay project are two such projects to improve the tourism industry after the war (SLTDA, 2014). The Homestay project was introduced with the objective of empowering local communities by creating tourism related employment and distributing economic benefits through tourism and to support the demand for supplementary accommodation in urban areas. (SLTDA, 2011b). To promote the project, an interest free loan and free comprehensive training was given for eligible home owners. During the first year of the launch of the programme, 125 homestays were registered at SLTDA with more than 300 rooms (SLTDA, 2011b).

For other investments, the government currently offers a 4- to 12-year-tax holiday depending on the nature and scale of the project (BOI, 2015). Foreign investors are given very attractive incentives for investments, including income tax exemption on interest on foreign loans including investor friendly rules and regulations (KPMG, 2015). The incentives provided by the government have mainly attracted investment in the hotel sector. The present hotel capacity of the country is 16,223 rooms. Through the investment incentives it is expected that the present hotel rooms' capacity will be increased by up to 21,000, which will accommodate the target of 1 million tourists by 2016 (Ministry of Economic Development, 2010).

#### **4.4.3 Socio-cultural factors**

The socio-cultural environment consists of the whole range of behaviours and relationships in which individuals engage in their personal and private lives, including the characteristics of the population (e.g. age, sex, race or ethnicity, class), values and attitudes, lifestyles and relationships (Scholes & Johnson, 2002).

Sri Lanka is a multicultural nation with a population of 20 million. The culture and the society of Sri Lanka revolves around religion, which has a long history of over 2500 years. There are many Buddhist temples in Sri Lanka and many mosques, Hindu temples and

churches. Most of these religious and ancient places are tourist destinations that attract both local and international tourists.

There are unique food and culinary arts available in Sri Lanka. The country offers a variety of food and tropical fruits, which is one of the main parts of the stay of an international tourist in Sri Lanka. Many hotels use this as a strategy to attract more customers as many travellers have a preference to taste local foods as a part of their travel experience. Another major attraction is the tea culture in Sri Lanka. Being one of the largest and best tea producers in the world, Sri Lanka offers various types of tea for its international guests.

The tourism industry of Sri Lanka suffers from a shortage of skilled labour in all areas of work. Considering this issue, SLTDA implemented several programmes to fill the human resources gap. Specifically in order to meet the human resource gap of the accommodation industry it provides training for three major sectors, namely, professional cookery, housekeeping and front office operation (SLTDA, 2015a). Sri Lanka Institute of Tourism and Hotel Management and the University of Colombo provide the programmes specialising in these areas (Nawaratna, 2011). To provide the human resources for related services in tourism, SLTDA also conducts training programmes for tour guides, homestay hosts and other formal and informal sector service providers (SLTDA, 2011b).

Although tourism revenues help maximise economic benefits to local communities, the continuous growth of this sector and large number of tourist arrivals has negative impacts on society and culture as well. Tourists may not be aware of local customs and traditions and they may not be informed of cultural differences and what is deemed acceptable behaviour within a traditional Sri Lankan community (Nawaratna, 2011). Unawareness of these customs may cause tourists to face difficult situations and result in a bad holiday experience in Sri Lanka. These factors can lead to a decrease of international tourists as well as causing long term social and community issues within the country (Pluss, 2015).

Recent social changes in Sri Lanka as well as globally have meant that customers' attitudes towards new technology and how they interact with their social groups have had a direct impact on technology as well as the tourism industry. For example travellers are getting more skilled and advanced in using technology and this has a major impact



on the tourism businesses. Domestic travellers are also keen to use the Internet as a source of information for their travel searches within the country. As mobile phone usage with Internet facilities has greatly increased among the population (Central Bank of Sri Lanka, 2014) these changes are also increasingly affecting how businesses use technology in their key business processes.

#### **4.4.4 Technological factors**

Technological factors refers to the rate of new inventions and developments, changes in information and mobile technology, changes in the Internet and e-commerce and government spending on research (Scholes & Johnson, 2002).

In recent years Sri Lanka has achieved a commendable increase in the use of ICTs in economic activities. The sharp growth in Internet services was the key highlight of recent developments in the ICT sector in Sri Lanka (Central Bank of Sri Lanka, 2014). Internet penetration grew by 9.8% in the year 2013. This has been largely supported by the accelerated growth in mobile internet connections, followed by fixed internet connections. Considering the rapid expansion in the coverage of Third Generation (3G), Fourth Generation (4G) and fixed line internet services by mobile and fixed line operators, it is expected that the drive for growth in Internet penetration will continue in the years to come (Central Bank of Sri Lanka, 2014). Furthermore, according to a report published by the International Telecommunication Union in May 2013, Sri Lanka ranks first in the world for the lowest entry level fixed broadband charges. This is also another factor that facilitates the growing trend of increasing use of the Internet in economic and other general activities.

Other than technological infrastructures, the rest of the market in Sri Lanka in terms of devices and software is dominated by Microsoft Corporation. Microsoft's partnership with Sri Lanka has firmly established itself as an integral part and significant contributor towards the local IT industry (Microsoft Sri Lanka, 2015). The company is an active participant in the government's ICT development programmes in the country. Therefore, from devices to software and training facilities in all the areas of ICTs, their influence is widespread throughout the country.

Technological changes in the country along with the global trends have made major changes in how the tourism industry operates. Due to the fact that reservations are

mostly done through online means, it can be seen that the role played by the traditional travel agents has greatly diminished. Especially among the small businesses, OTAs are becoming much more established and traditional agents seem to be limited to grade and luxury hotel services.

#### **4.4.5 Environmental factors**

Environmental factors refers specifically to 'green' issues such as pollution and wastage and the influence made by regulations related to environmental issues (Scholes & Johnson, 2002).

Sri Lanka is a beautiful tropical island in the Indian Ocean with an abundance of natural resources. Sri Lanka has been a tourist destination for centuries because of its strategic location and uniqueness. It is identified as one of the most popular tourist destinations in the region due to its unique mixture of golden beaches, rich cultural heritage, diverse landscapes and a significant number of wildlife destinations (SLTDA, 2012a) (SLTDA, 2012b). While the environment is a motivating factor for the tourism industry, the large number of tourist arrivals also adversely affects the country's natural environment. With increasing tourists in coastal areas, which leads to development of mass tourism and luxury tourism, there are negative outcomes such as social division, inflation of property prices, congested traffic and increased environmental pollution (Nawaratna, 2011).

In order to establish a sustainable and environment friendly tourism, the government of Sri Lanka has taken initiatives to promote "ecotourism". Ecotourism resorts aim to preserve the environment, culture and heritage, and benefit local communities who play an active role in conserving biodiversity (SLTDA, 2013a).

#### **4.4.6 Legal factors**

The current legal system of Sri Lanka is a highly complex one. It is a blend of diverse legal systems originating from Rome, England, Holland, South Africa, Arabia, South India and Old Ceylon (Bary, 2003; Ministry of Justice of Sri Lanka, 2014). In recent years, there have been many significant legal changes in Sri Lanka that have affected businesses in many industries. The rules and regulations governing the tourism industry have also been affected by these changes.

Sri Lanka’s tourism industry, which was institutionally set up in 1966 under the Ceylon Tourist Board act No. 10 of 1966, operated together with the Tourism Development Act number 14 of 1968 for over 40 years (ICRA Lanka, 2012). This law on tourism determines the principles, regulations and measures on the establishment, activities and administration of tourism, with the aims to promote, develop and extend tourism in sustainable ways (Nawaratna, 2011). The key central government agencies for tourism include:

- Ministry of Tourism
- Sri Lanka Tourism Development Authority (SLTDA)
- Sri Lanka Tourism Promotion Bureau (SLTPB)
- Sri Lanka Institute of Tourism and Hotel Management (SLITHM)
- Sri Lanka Convention Bureau (SLCB)

Figure 4.5 illustrates the structure of these government establishments

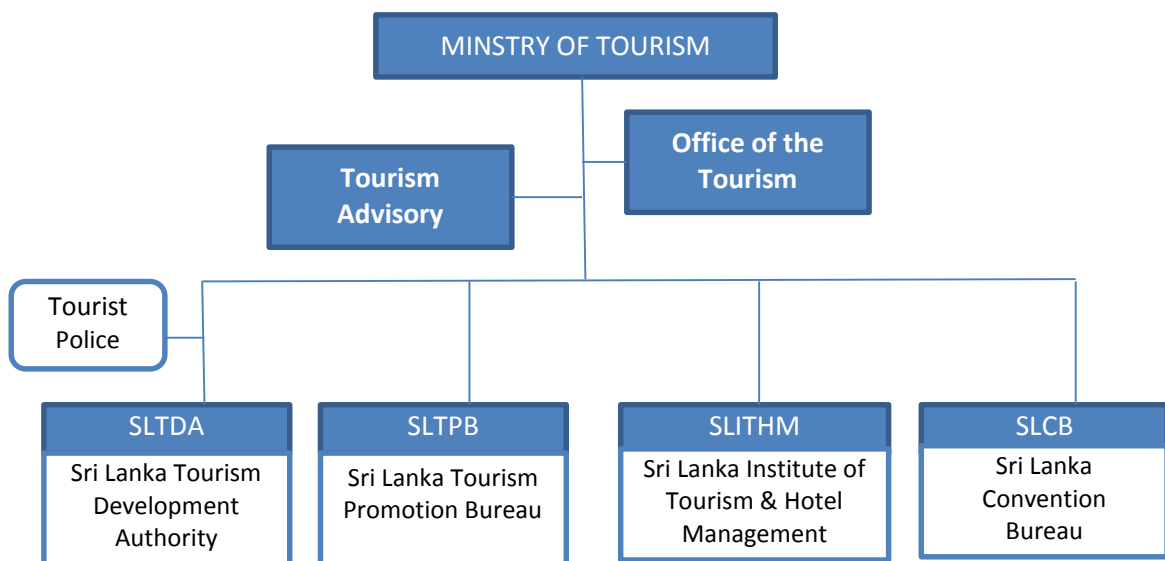


Figure 4.5: Institutional structure of tourism authorities in Sri Lanka.

Source: (SLTDA, 2013b)

The principal organisation for tourism projects is the SLTDA of the Ministry of Tourism. The organisation aims to transform Sri Lanka into Asia’s foremost tourism destination. Some of its major activities include the following: Identifying and developing tourist specific, unique products and services; formulating and implementing tourism development guidelines; and facilitating and implementing the legal and administrative process for new product and service development. Most of the tourist attractions are

owned by the Government of Sri Lanka. They are managed with the control of several government ministries such as Cultural Affairs, Tourism and Natural Resource Management. Private business organisations in tourism that meet at least the minimum standard criteria can be registered with SLTDA and avail themselves of its services. Recent changes to the laws related to the tourism industry include:

#### ***Changes to the Sri Lanka tourist visa rule***

Sri Lanka attracted a large number of visitors because of the easy access to the country. Up until 2012 foreigners visiting the country could get an on-arrival visa, except those from Singapore and the Maldives who are exempted from visa requirements. In January 2012, Sri Lanka implemented the Electronic Travel Authorization (ETA) for all travellers visiting Sri Lanka, with a visa fee of US\$15 for South Asian countries and US\$30 for all other countries ("Sri Lanka Electronic Travel Authorization System," 2012). Sri Lankan hoteliers had initially expressed serious concern over this government move to charge for visas for foreigners visiting the country (Nawaratna, 2011). However, with everything going online it provided the visitors a convenient service to obtain visitor visas to Sri Lanka.

#### ***Establishment of the tourist police***

To ensure the safety of both local and foreign tourists, a fully-fledged tourist police force has been established at SLTDA premises. It functions as a network of tourist police stations in key areas for both local and foreign visitors. The division is responsible for safeguarding Sri Lankans from negative practices such as the use of children for commercial sex, drugs, and other undesirable activities as well as safeguarding international tourists from harassment from locals (SLTDA, 2012b). The establishment of the tourist police not only ensures the safety of the tourists but also ensures business owners keep records of their guests. For security purposes accommodation establishments are required to maintain at least basic information about their guests such as their names, country, passport number and some form of contact details. The Sri Lankan government has made arrangements to provide a facilitating legal environment to both the tourism investors as well as the international tourists who arrive in the country.

The PESTEL analysis provided an overview of tourism and ICTs in Sri Lanka. In order to provide a comprehensive context, the next section provides an overview of Sri Lanka's ICT and tourism performance compared to the neighbouring countries in the South Asian region (refer to Table 4.11). These countries have a similar economic, technological and social background to Sri Lanka.

Table 4.11: Overview of Sri Lanka's ICT and tourism industry performance compared to other countries in the South Asian region

Development Indices	Country					
	Sri Lanka	Maldives	India	Pakistan	Nepal	Bangladesh
<b>ICT</b>						
<b>ICT Development Index - overall value/ world rank</b>	3.77 116	5.04 86	2.69 138	2.35 146	2.50 142	2.35 145
<b>ICT Access sub-index / world rank</b>	4.51 113	6.22 80	3.32 139	3.39 136	3.16 143	3.06 145
Fixed-telephone subscriptions per 100 inhabitants	12.0	6.1	2.0	1.6	3.0	0.5
Mobile-cellular subscriptions per 100 inhabitants	112.8	206.7	78.8	66.9	96.7	83.4
International Internet bandwidth Bit/s per Internet user	13886	88008	5725	11907	2700	6181
Households with a computer (%)	24.2	68.5	14.1	19	8.9	8.2
Households with Internet access at home (%)	18.1	49.6	20	24	6.3	11.0
<b>ICT Use sub-index / world rank</b>	1.70 131	4.30 72	1.25 142	1.09 148	1.35 139	1.02 139
Individuals using the Internet (%)	30	54.5	26.0	18.0	17.6	14.4
Fixed-broadband subscriptions per 100 inhabitants	3.1	6.5	1.3	1.0	1.1	2.4
Active Mobile-broadband subscriptions per 100 inhabitants	15.8	63.6	9.4	13.0	21.1	13.5
<b>ICT Skills sub-index / world rank</b>	6.41 75	4.15 126	4.29 122	2.78 150	3.50 138	3.51 137
Gross enrolment ratio (Tertiary)	20.7	13.2	23.9	10.4	15.8	13.2
Mean years of schooling	10.8	5.8	5.4	4.7	3.3	5.1
<b>Tourism</b>						
The Travel & Tourism Competitiveness Index/ world rank	3.80 63	Not listed	4.02 52	2.92 125	3.27 102	2.90 127
Direct contribution to GDP (US\$ bn) % of total GDP	3.5 4.6%	1.4 52.4%	41 2%	7.4 2.8%	0.8 4%	5.2 2.4%
Total contribution to employment ('000 jobs) / % of total employment	798.1 9.8%	94.5 60.4%	37315 8.7%	3638.4 6.2%	918.5 6.9%	2346.2 4.1%

(Sources: ITU – Measuring the Information Society Report, 2016; WTTC – travel and tourism economic impact South Asia, 2015; The travel & tourism competitiveness report, 2015)

The ITU's ICT Development Index (IDI) is a unique benchmark of the level of ICT development in countries across the world. The IDI combines eleven indicators on ICT access, use and skills, capturing key aspects of ICT development in one measure that allows for comparisons across countries and over time (ITU, 2016). The ICT Access sub-index captures ICT readiness and includes five infrastructure and access indicators. The ICT Use sub-index captures ICT intensity and includes three intensity and usage indicators. The ICT Skills sub-index captures capabilities or skills which are important for ICTs and include three proxy indicators (refer to Table 4.11). When compared to Sri Lanka, as shown in Table 4.11 the overall rankings of the countries in the south Asian region show a similar level of ICTs while Maldives has a somewhat higher rank. For mobile, broadband, and household internet connectivity and facilities the figures reveal that the countries in this region have a common level of accessibility to these facilities with slight variations among the countries. It should be noted that Maldives has consistently ranked higher in all indices except for ICT skills which is lower than for Sri Lanka and India. While Bangladesh and Pakistan are ranked relatively low in several sub-indexes, all the countries in this region are between 100 and 150 in the world ranking of 175 countries.

While having a common ICT background within the region, tourism also provides common ground for the region while again highlighting Maldives as the country which receives the highest contribution from tourism to its economy. As a region, South Asia possesses many valuable tourism resources and attractions, which could be important vehicles for reducing the widespread poverty in South Asia (Rasul & Manandhar, 2009). The region has a great potential for tourism development and demand has been growing fast at a rate of 6.7% (WTTC, 2015). Its centuries old civilisations, rich and unique cultural and biological diversity, diverse and vast array of geographic features, attractive oceans and beaches, mountain ranges and very hospitable people, make the region a very attractive place for intra-regional as well as international tourists. South Asia is the 'Buddhist Heartland' and the history, iconography and art associated with Buddhism are found in numerous important archaeological sites in Sri Lanka, Nepal, India, Bhutan and Bangladesh, and are major attractions for Buddhists all over the world (Rasul &

Manandhar, 2009). Hence, tourism is considered a key revenue generating sector in the economies of this region.

The Travel & Tourism Competitiveness Index (TTCI) covers 141 economies and provides a comprehensive strategic tool for measuring the contribution of the travel and tourism sector to the development and competitiveness of a country (Blanke & Chiesa, 2015). In this ranking (where Maldives is excluded), all these countries are ranked above 125 of the 141 countries considered. The economic impact of travel and tourism reports on each country by the WTTC provide a clear picture of the contribution of tourism to the economies of the countries in this region (refer to Table 4.11). In this regard, Maldives stands out from all the countries in the region. Although not as high as Maldives, the rest of the countries also receive a considerable contribution from tourism to their economies ranging from 2 to 10% contribution to GDP and the total employment. Therefore, tourism is seen as an important means of economic growth for the countries in the South Asian region.

#### **4.5 Chapter Summary**

This chapter has explained the need for a detailed account of the research context in line with the philosophical stance behind the research. First, it provided a general overview of the country where the research was conducted. Next, the tourism industry of Sri Lanka was described in more detail to provide a better understanding of the research context including its different tourist regions. Finally, a PESTEL analysis of tourism Sri Lanka was presented in order to provide a clear picture of the current situation of the country and its tourism industry followed by an overview of the tourism and ICT performance of other countries of the South Asian region. The next chapter explains the design and methodological approach used for the empirical phase of the research.

## **Chapter 5: Research Methodology**

### **5.1 Chapter Introduction**

This chapter explains the methodological approach and design used in this research. The chapter begins by identifying the research paradigms commonly used in IS research. Then it justifies the choice of the post-positivist approach as the research paradigm for this study, followed by an outline of the research design and process. Subsequently, Section 5.3 details the case study research method including the rationale for choosing the multi-case design followed by a description of the unit of analysis and case selection. Section 5.4 details how data collection was performed in order to obtain the information required to address the research question and aims. Section 5.5 introduces the analytical framework that guided the template coding for data analysis and presentation. Section 5.6 describes the ethical considerations of the study followed by a detailed description of the validity and reliability of the study in section 5.7. The chapter concludes with a summary.

### **5.2 Research Paradigm and Approach**

A research paradigm is a belief system based on epistemological and ontological beliefs which represent a worldview that defines, for its holder, the nature of the world, the individuals placed in it and their possible relationships to that world and its parts (Guba & Lincoln, 1994). Ontology is concerned with the form and nature of reality and what relationships exist whereas epistemology is concerned with the nature of knowledge, what valid knowledge is, and how valid knowledge is acquired (Guba & Lincoln, 1994). Understanding the research paradigm in a study is important as it informs the choice of research methodology. In the IS research field there are four commonly applied research paradigms: positivist, post-positivist, interpretive, and critical (Myers, 1997; Orlikowski & Baroudi, 1991; Walsham, 2006). These four paradigms are briefly described in the next section followed by a justification of the research paradigm applied in this research.

Positivism is considered the dominant paradigm in information systems research (Liu & Myers, 2011). Positivist researchers take the ontological stance that there is one



knowable and observable reality. Epistemologically, positivism follows the natural sciences and researchers take a scientific and objective perspective. Positivists generally assume that reality is objectively perceived and can be described by measurable properties which are independent of the observer and his or her instruments (Myers, 1997). A research methodology aligned with the positivist paradigm focuses on developing and testing falsifiable propositions that specify relationships between concepts occurring in the world (Orlikowski & Baroudi, 1991). Further, IS research is classified as positivist if the research includes formal propositions, involves the quantifiable use of variables, and seeks to test hypotheses and/or draw inferences from a sample to the general population (Orlikowski & Baroudi, 1991).

Post-positivism has similar ontological and epistemological beliefs to positivism; however it challenges the concept of positivism and suggests that when studying human behaviour and actions, researchers cannot be certain about claims of knowledge (Creswell, 2003). The limitations of positivist concepts are addressed by carrying out inquiries in more natural settings, collecting more situational information, and reintroducing discovery as an element in inquiry (Guba & Lincoln, 1994). In the post-positivism paradigm, researchers must be able to see the whole picture, and rely not just on facts but also on the context within which those facts occur (Ryan, 2006). While post-positivist researchers continue to focus on reductionism, they also take into account a broader picture than that of the traditional positivist. These aims are accomplished largely through the increased utilisation of qualitative techniques (Guba & Lincoln, 1994).

The interpretive philosophy assumes that people create and associate their own subjective and inter-subjective meanings as they interact with the world around them (Orlikowski & Baroudi, 1991). Interpretive studies usually attempt to understand phenomena through the meanings that people assign to them (Myers, 1997). Hence while other researchers enter the field with informing theory, interpretive researchers aim to avoid preconceptions. Interpretive methods of research in IT are aimed at producing an understanding of the context of the information system, and do not predefine dependent and independent variables, but focus on the full complexity of human sense making as the situation emerges (Walsham, 1995a).

On the other hand, critical researchers assume that social reality is historically constituted and that it is produced and reproduced by people (Myers, 1997). Critical research focuses on the oppositions, conflicts and contradictions in existing society, with the aim of transforming society for the better. Critical research is common in social science but very uncommon in the field of information systems (Liu & Myers, 2011).

### **Research paradigm of this study**

Paradigm choice for a research project is influenced by three main considerations (Guba and Lincoln, 1994; Orlikowski & Baroudi, 1991):

- 1) The basic belief system of the researcher,
- 2) The nature of the phenomenon of interest, and
- 3) The research questions.

The post-positivist research paradigm most closely aligns with the basic belief system, or worldview, of the researcher in this study. Eagleton (2003, in Ryan, 2006) asserts that the post-positivist worldview, though still objective and believing in a single reality, considers not just the factors, but also recognises the importance of context in deriving meaning and understanding of a situation. Thus, context is an important factor in making sense of the world (Creswell, 2003). Ryan (2006) argues that post-positivists “learn from”, rather than “test” reality. This fits comfortably with the aims of this research as well as the way in which this researcher acts within the world.

The phenomenon of interest of this research was the business value of ICT and the purpose is to extend the existing theory on ICT business value towards small enterprises. The literature on ICT business value provided a strong basis for the study. The initial guideline for this study uses the IT business value framework developed by Melville et al. (2004) based on the theory of the resource based view. Thus, in keeping with the post-positivist stance of commencing a study with some element of established theory (Creswell, 2003), the researcher was able to identify a broad range of priori factors applicable in ICT business value research, which form the basis of this study. The adoption of the Melville et al. framework also supported the exploration and analysis of the study findings to discover what role is played by these priori factors. This prior

theorising from the literature provided an orienting framework from which overlaps, contradictions, refinements, and qualifications to the existing theory could be developed (Miles & Huberman, 1994, p. 22) in order to expand the theory into the context of small businesses.

Although the overarching research question of this study “How do ICTs contribute to the business value of STEs?” is exploratory, the literature review has identified several aspects of business value of IT that are assumed to be generally applicable in the context of larger organisations, yet it also implies that small businesses do not necessarily experience the same contribution from their limited ICT resources. They may use different strategies and face different barriers to utilising ICTs and gain business value differently. The post-positivist approach accommodates the need for an in-depth understanding of a study within a specific context. Accordingly, a combination of a priori factors and the context within which they are studied formed the basis of the findings of this study. Furthermore, Sri Lanka is the research context and this strongly affects the sample and therefore the findings of this study may not necessarily be applicable to other settings. A post-positivist approach acknowledges these limitations by accepting that research findings are inherently connected to their research context. Although internal generalizability of data can be achieved, this does not necessarily result in universal generalizability (Yin, 2014).

This study is exploratory and needs in-depth understanding and is specific to the context of Sri Lanka, hence it goes beyond a solely positivist approach. Interpretive exploratory studies which have used a deductive approach also have some provision to use conceptual elements of theory for a thematic analysis of data (Andrade, 2009). For example, a study of an ICT initiative intended to bring development to rural communities in Peru used a thematic analysis informed by the conceptual elements of actor-network theory (Andrade & Urquhart, 2010). However, in this exploratory study, the conceptual framework was used extensively to guide the research throughout the entire process: from data collection to the drawing of conclusions. This approach went far beyond the use of the deductive approach in the interpretive paradigm. Hence the

interpretive stance was not considered an appropriate paradigm choice for this particular study.

The phenomenon of interest, business value of ICT to STEs, might be amenable to an interpretive stance, since different people might interpret business value differently. However the underlying conceptual framework focuses on ways in which ICTs could be used in business processes to gain business value by forming a set of business strategies. A business strategy is not a social construct since it involves actual observable actions taken by owner-managers in utilising their ICT resources. Since the focus of this research is not on people's different interpretations of these strategies, but rather the activities which can be proven by evidence, an interpretive approach was not felt to be appropriate to address the research question. Critical research is not considered suitable for this study as social improvement is not a major focus of this study.

In summary, the post-positivist research paradigm supports both the focus of this study as well as the methodological approach taken to answer the research questions by acknowledging the subjective impacts of individual perceptions on IT business value, yet also being concerned with the prior theorised literature. The next section describes and justifies the method chosen to conduct this research.

### **Research Method**

To conduct this exploratory study under the post-positivist paradigm a multi-case study was identified as appropriate. This study requires an in-depth understanding of how ICTs contribute to the business value of STEs. Quantitative methods such as surveys are less appropriate in this type of exploratory study as description is difficult to acquire using these methods. Furthermore, the literature review showed that, though a rich body of research on the business value of ICT exists, the findings are inconclusive and there is a lack of research in the context of small organisations. Therefore, a qualitative methodology was chosen for this study. Qualitative research methods were developed in the social sciences to enable researchers to study social and cultural phenomena. Examples of qualitative methods which can be used based on a post-positivist epistemology are action research, case study research, ethnography and grounded

theory (Myers, 1997). Out of these methods, the case study approach, a comprehensive research strategy defined by Yin (2003), was chosen for this study.

According to Orlikowski and Baroudi (1991) and Liu and Myers (2011), the case study is one of the primary research designs for IS research along with surveys. In fact, case study research is the most common qualitative method used in information systems research (Orlikowski & Baroudi, 1991; Palvia et al., 2004). Yin (2003) defined a case study as an empirical enquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. This study involves a complex phenomenon which is still under debate and findings so far are inconclusive. Studies on the business value of ICTs are considered complex as ICT creates value in different ways and it is difficult to isolate and separate the value created by ICT specifically. Moreover based on the literature review it is evident that research focusing on ICT business value for STEs is lacking, which makes the case study method a better choice for the research method of this study.

Case study research can be carried out within any of the research paradigms: positivist, post-positivist, interpretive, or critical (Myers, 1997). Positivist and post-positivist forms are currently the most popular, followed by interpretive, whereas there are few examples of critical case studies (Dubé & Paré, 2003). Post-positivist case studies present objective facts which should ultimately lead to generalizable findings. Literal and theoretical replication techniques facilitate the generalizability of case study research findings (A. S. Lee, 1989; Yin, 1994). Eisenhardt (1989) and Eisenhardt and Graebner (2007), from a positivistic/ post-positivist perspective, affirm the usefulness of the case study approach for building and extending theory, which is expected to be strongly attached to empirical reality. The main difference between positivist and post-positivist case studies is that the latter have a more exploratory element (Ryan, 2006).

Case research has been identified as a particularly suitable research method for exploratory studies asking “How” or “Why” questions for investigating phenomena within their natural settings (Yin, 2003). By having the overarching research question (RQ) of how ICTs contribute to the business value of STEs and by analysing reasons for

(RA3) why small businesses gain varied levels of business value from ICTs, this research satisfies both the conditions specified by Yin, qualifying the case study as the appropriate method to conduct this research. Table 5.1 depicts the key characteristics of case studies according to Benbasat et al. (1987).

Table 5.1: Key characteristics of case research (Benbasat et al., 1987)

1	Phenomenon is examined in a natural setting
2	Data are collected by multiple means
3	One or few entities (person, group or organization) are examined
4	The complexity of the unit is studied intensively
5	Case studies are more suitable for the exploration, classification and hypothesis development stages of the knowledge building process; the investigator should have a receptive attitude towards exploration.
6	No experimental controls or manipulation are involved
7	The investigator may not specify the set of independent and dependant variables in advance
8	The results derived depend heavily on the integrative powers of the investigator
9	Changes in site selection and data collection methods could take place as the investigator develops new hypothesis
10	Case research is useful in the study of “why” and “how” questions because these deal with operational links to be traced over time rather than with frequency or incidence
11	The focus is on contemporaray events

As illustrated in Table 5.1 (Benbasat et al., 1987; Yin, 1994) one of the key characteristics of case study research is the need for the phenomenon to be examined in a natural setting. To better understand the contribution of ICTs to business value, it should be studied in a natural environment where ICTs are being used in the business processes of STEs and no experimental controls or manipulations are involved.

Case study research can involve either single or multiple cases. Yin (1994) suggested that a single case study is appropriate for studies where the case is unique or where the research problem is exploratory in nature. Single cases enable researchers to investigate phenomena in depth to provide rich description and understanding (Walsham, 1995b). However, single case study research has been criticised as an inadequate methodology in terms of inferring generalizability from the sample to a general population (A. S. Lee, 1989). To overcome the limitation of the single case study, research can be extended to multiple case studies.

Multiple-case designs allow cross-case analysis and the investigation of a particular phenomenon in diverse settings (Darke, Shanks, & Broadbent, 1998). Multiple cases may also be selected to predict similar results or to produce contrasting results for predictable reasons (Yin, 2003). A multi-case study enhances the external validity of findings by showing that the theory generated is applicable in more than a single instance (Benbasat et al., 1987). The authors further suggest that multiple-case designs are desirable when the intent of the research is description, theory building, or theory testing as well as the extension of theory. Yin (1994) suggested that if research is to be focused on building a theoretical framework and exploring its implications in different settings, multiple case studies are important. The objective of this study is to explore how small tourism can gain business value through ICTs and revise the existing business value of IT framework towards the small organisations in similar contexts. Further, multiple case studies enable the comparison of evidence, better data triangulation (Yin, 1994), and the use of procedures for coding and analysis (Guba & Lincoln, 1994; Miles & Huberman, 1994). Hence multiple case design was chosen for this study to facilitate the cross-case analysis and thereby mitigate the issues related to generalizability and validity of qualitative research.

### **5.3 Research Process**

The research process follows a sequence designed by Dubé and Paré (2003) to improve the rigour of case study research in information systems. Their guidelines cover each phase of the process: the research design, data collection, and analysis of the data.

Phase one of the research consisted of identifying the research gap and question and aims of this study based on the literature review, as outlined in Chapters 1 and 2. This was followed by the identification of the theoretical lens and development of an initial conceptual framework to provide high-level concepts and their relationships to guide the research design, data collection, and analysis. Then the theoretical and empirical literature was located to verify that a post-positivist multi-case study was appropriate to address the research question.

Phase two involved the research design. First, it was necessary to gain a comprehensive understanding of the research context including insight into the types of small tourism businesses in Sri Lanka and circumstances in which they operate their businesses. Without this knowledge, an appropriate selection of cases would not have been possible. Using this knowledge, theoretical and practical criteria for case selection were determined. Then based on the research question the case study protocol was developed including an interview protocol and other appropriate additional data sources. Using the interview protocol a pilot study was conducted using five cases. This enabled the research design to be reviewed, assessed, and refined prior to the full data collection.

In phase three of the research process, 35 semi-structured in-depth interviews were conducted with owner-managers of STEs selected from each of the tourist regions of Sri Lanka. In parallel with interviews, data were collected from other sources such as documents, archival records and websites to verify and support the data collected at the interviews.

At the beginning of phase four of the research, an analytical framework was developed based on the conceptual framework to guide the data analysis and presentation in template coding. Then an overall analysis of the 35 cases and a cross-case analysis were performed. Finally, the results were interpreted and the initial conceptual framework was revised in order to reflect how ICTs contribute to the business value of small tourism organisations in Sri Lanka. Figure 5.1 illustrates the research process and the purpose of each phase. Each of these phases are discussed in the following sections.



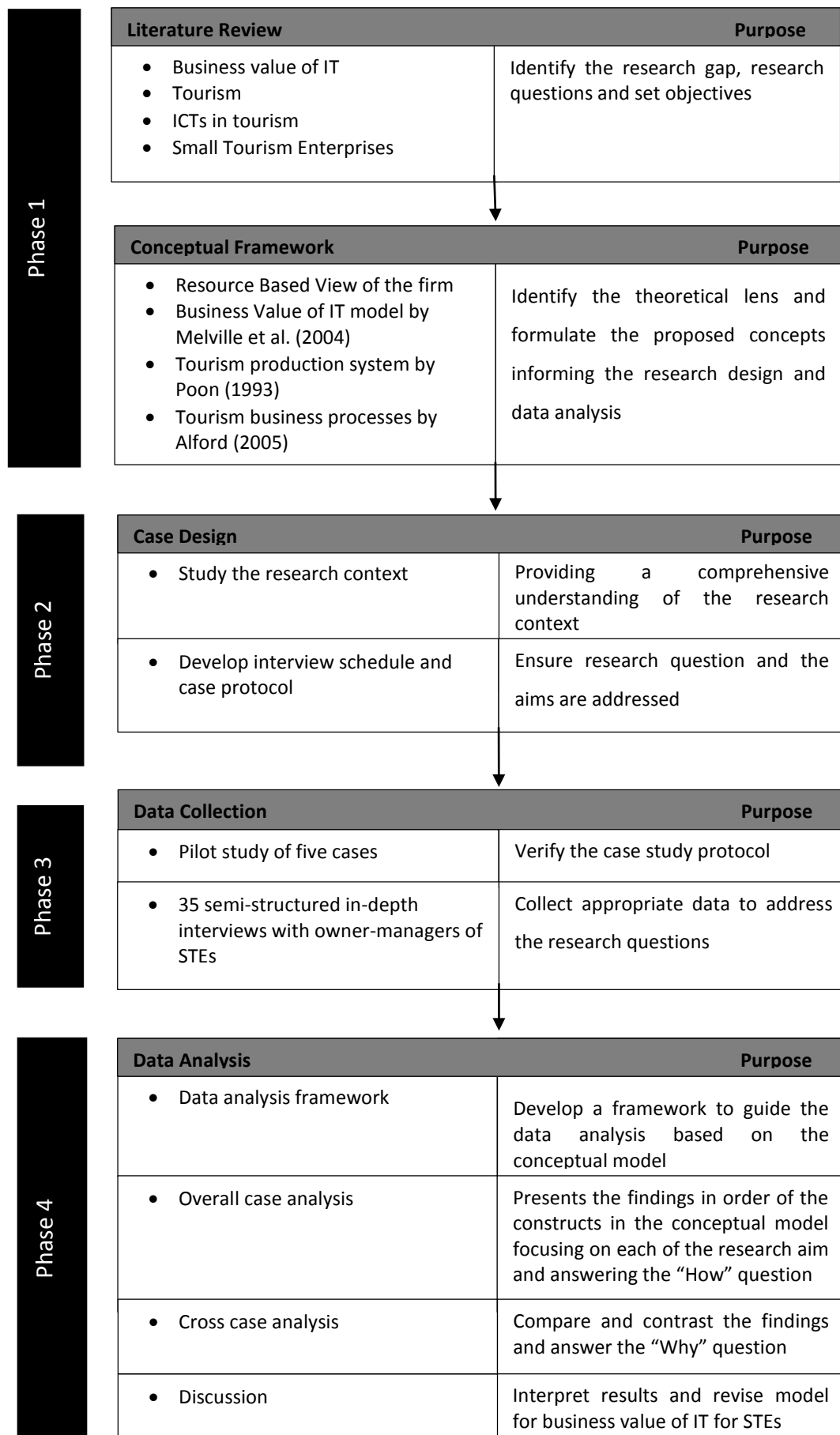


Figure 5.1: Research process

## **5.4 Case Design**

Case study design involves identifying the unit of analysis, choosing criteria for case selection, determining an appropriate number of cases, selecting appropriate methods for collecting data pertaining to each case, and designing data collection instruments (Yin, 2003). The data analysis phase also involves design decisions. For example, should a pre-defined framework of categories or analytic codes guide data analysis, or should the analysis be purely inductive? The following sections describe how this study addresses these issues.

### **5.4.1 Unit of analysis**

In case study research, the unit of analysis determines the 'case' under investigation (Yin, 2003), and sets a boundary around the phenomenon of interest (Miles & Huberman, 1994). The unit of analysis can be any bounded phenomenon such as an individual, group, role, process, project, activity, event, organisation, nation, intervention, or geographical location and should be determined by the research question (Miles & Huberman, 1994). The research question of this study is how do ICTs contribute to the business value of STEs? Therefore, following the advice of Miles and Huberman (1994) on case selection, the unit of analysis in this study was primarily determined by the research question, which is a study of organisations (STEs). The information intensive nature of tourism which enhances the ability of ICTs to contribute to businesses in this industry and the significance of small tourism businesses to the economy of Sri Lanka were described in detail in Section 1.4 and Section 2.6 which guided the choice of organisations for this research.

### **5.4.2 Case selection**

Both theoretical criteria and practical constraints guided the case selection. Theoretical criteria ensure that cases selected have the potential data to answer the research question whereas practical considerations constrain the nature and number of cases (Eisenhardt, 1989; Yin, 2003).

### ***Theoretical Case Selection Criteria***

Theory-based case selection is a recommended practice in multi-case study research when working in the post-positivist paradigm (Eisenhardt, 1989). This is done through the replication logic suggested by Yin (2003). Each case must be carefully selected so that it either (a) predicts similar results (literal replication) or (b) predicts contrasting results but for predictable reasons (theoretical replication) (Yin, 2003, p. 47). Following Yin (2003), in this study cases were selected to predict similar results and to facilitate cross-case analysis by comparing like with like. Therefore out of the different categories of accommodation (as described in Table 4.6) only small hotels, guest houses, bed and breakfast units and homestays were considered when selecting the cases. These categories of accommodation mostly share common features regardless of the resort region and market focus. Therefore the findings from these organisations will be applicable in general to STEs. These business types are evenly spread throughout the resort regions thereby facilitating a representative choice from each region. Literal replication cases met the following theoretical criteria:

- *Registered as a small tourism enterprise*

STEs selected as a case should be registered as a business under the Tourism Development Authority of Sri Lanka (SLTDA). To obtain the registration businesses need to maintain SLTDA set standards which in turn provided an appropriate selection of businesses as cases for investigation.

- *Comes under the category of accommodation*

The business should be in the category of accommodation under the tourism sector profiles of a guest house, small hotel, bed and breakfast unit or a homestay. Out of the various sectors of tourism businesses, the accommodation category was selected as it is one of the major contributors to tourism and a tourism sector that increasingly uses ICTs in business processes (refer to Section 2.3).

- *Number of fulltime employees between 0 and 20*

As described in Section 2.3.4 one of the criteria to define a small business in Sri Lanka was that the number of employees is fewer than 20. Therefore a business

selected for the study could be a zero-employee enterprise which is managed and operated by the owner him or herself or with labour input provided by fewer than 20 employees.

- *Uses ICTs at least in one business process*- The business should use any kind of ICT in operating the business which may vary from maintaining records in a personal computer to conducting business online. This criterion was used to ensure ICTs are contributing to the businesses at least at a minimum level.

### ***Practical Case Selection Criteria***

Eisenhardt (1989) argues that the number of cases in post-positivist case study research should be between four and ten for the practical reasons of controlling time and managing complexity. However, Yin (2014) argues that one of the main considerations in multiple case studies is deciding on the number of cases sufficient for the study. Yin further suggests that based on the literal and theoretical replications the researcher should decide on the number of cases deemed sufficient for answering the research question. The cases selected for this study are small organisations which have 0 or fewer than 20 employees and are mostly managed by the owner of the business. Therefore each case could be covered in one in-depth interview with either the owner or the manager of the business. Miles et al. (2013) suggest that when data collected from each case is thin (not rich and complex) 20 to 30 cases should be studied for sampling adequacy. Following this advice, based on the number of STEs registered at SLTDA (refer to Table 5.2), 35 organisations were considered appropriate to provide enough cases to support the theoretical design discussed in the previous section, and to provide enough meaningful data to answer the research question.

Another practical constraint in selecting cases was the selection of sites for the 35 cases. The application of theoretical replication in selecting the case sites is described next.

Table 5.2: Registered tourist accommodation businesses in resort regions of Sri Lanka

Resort Region	District	Tourist Hotels (Star Rated)					Small Hotels	Guest Houses	Bed & Breakfast Units	Boutique Hotels/ Villas		Bangalows/ Rented Homes & Apartments			Grand Total
		****	***	**	*					Boutique Hotels	Boutique Villas	Home stays	Bangalows	Rented Homes / Apartments	
<b>1 Colombo City</b>															
	Colombo	6	4	3	2	9	12	41	40	3	1	48	25	15	
<b>Colombo City (Total)</b>		<b>6</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>9</b>	<b>12</b>	<b>41</b>	<b>40</b>	<b>3</b>	<b>1</b>	<b>48</b>	<b>25</b>	<b>15</b>	<b>209</b>
<b>2 Greater Colombo</b>															
	Gampaha	0	0	0	3	3	11	33	27	1	1	7	10	3	
	Negombo	1	1	0	2	1	12	12	8	0	1	5	2	1	
<b>Greater Colombo (Total)</b>		<b>1</b>	<b>1</b>	<b>0</b>	<b>5</b>	<b>4</b>	<b>23</b>	<b>45</b>	<b>35</b>	<b>1</b>	<b>2</b>	<b>12</b>	<b>12</b>	<b>4</b>	<b>145</b>
<b>3 South Coast</b>															
	Galle	2	1	1	6	4	32	50	43	10	13	15	17	1	
	Hambantota	0	0	1	2	2	9	8	16	0	2	3	1	0	
	Kalutara	2	2	0	4	1	17	24	22	1	2	7	8	0	
	Matara	0	0	1	1	1	6	15	18	1	0	5	2	0	
<b>South Coast (Total)</b>		<b>4</b>	<b>3</b>	<b>3</b>	<b>13</b>	<b>8</b>	<b>64</b>	<b>97</b>	<b>99</b>	<b>12</b>	<b>17</b>	<b>30</b>	<b>28</b>	<b>1</b>	<b>379</b>
<b>4 East Coast</b>															
	Ampara	0	0	0	0	0	2	4	19	0	0	28	0	0	
	Bataloa	0	0	0	0	0	4	4	5	1	1	0	0	0	
	Trincomalee	0	1	0	2	0	3	7	4	0	0	1	3	0	
<b>East Coast (Total)</b>		<b>0</b>	<b>1</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>9</b>	<b>15</b>	<b>28</b>	<b>1</b>	<b>1</b>	<b>29</b>	<b>3</b>	<b>0</b>	<b>89</b>
<b>5 High Country</b>															
	Badulla	0	0	0	0	0	7	10	16	0	0	7	7	0	
	Monaragala	0	1	0	0	1	4	7	6	0	0	0	0	0	
	Nuwara Eliya	0	2	2	0	4	4	11	6	0	4	6	2	0	
	Ratnapura	0	0	0	1	1	1	10	7	1	0	0	1	0	
<b>High country (Total)</b>		<b>0</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>6</b>	<b>16</b>	<b>38</b>	<b>35</b>	<b>1</b>	<b>4</b>	<b>13</b>	<b>10</b>	<b>0</b>	<b>129</b>
<b>6 Ancient Cities</b>															
	Anuradhapura	0	0	1	1	2	3	10	11	1	0	2	4	0	
	Dambulla	1	0	1	0	0	0	0	0	0	0	1	0	0	
	Kandy	2	1	1	5	3	13	24	18	1	4	22	18	0	
	Kegalla	0	0	0	0	0	1	16	7	0	0	0	0	0	
	Kurunagala	0	0	0	1	1	0	11	18	0	1	0	0	0	
	Matale	1	1	2	2	1	7	13	5	2	1	2	1	0	
	Polonnaruwa	0	2	1	1	1	4	11	5	0	0	0	0	0	
<b>Ancient Cities Total</b>		<b>4</b>	<b>4</b>	<b>6</b>	<b>10</b>	<b>8</b>	<b>28</b>	<b>85</b>	<b>64</b>	<b>4</b>	<b>6</b>	<b>27</b>	<b>23</b>	<b>0</b>	<b>269</b>
<b>7 Northern Region</b>															
	Jaffna	0	0	0	0	0	1	7	10	0	0	0	0	0	
	Vanniya	0	0	0	0	0	0	3	2	0	0	0	0	0	
<b>Northern Region (Total)</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>10</b>	<b>12</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>23</b>
<b>Grand Total</b>		<b>30</b>	<b>32</b>	<b>28</b>	<b>66</b>	<b>70</b>	<b>306</b>	<b>662</b>	<b>626</b>	<b>44</b>	<b>62</b>	<b>318</b>	<b>202</b>	<b>40</b>	<b>1243</b>

Source: SLTDA &amp; IFC World Bank (2013)

### **Case Site Selection**

Once the number of cases to be selected was established, the next step was the site selection. Site selection for this study was guided by type (b) replication logic. Each case was carefully selected so that it predicts contrasting results but for predictable reasons (Yin, 2003, p. 47). This facilitated the selection of cases from different tourist resort regions which have unique attractions. Further Benbasat et al. (1987) suggest that the organisation-level phenomena require site selection based on the characteristics of firms. These may include the company size, the nature of the businesses, organisational structure, and geographic coverage and so on. Since this study is about organisations in the tourism industry, following Benbasat et al. (1987) and Yin (2014) this study considered the types of tourism accommodation businesses and their geographical distribution in Sri Lanka when selecting the case sites.

When considering the seven resort regions of Sri Lanka, greater Colombo Region, South Coast, East Coast and the Northern Region can be put into one major category as their main tourist attraction is beaches and other coastal resources. The other three regions are unique in their tourist attractions they offer such as Colombo City by being the gateway to tourists and for its business importance, the High Country for its natural resources and scenic beauty and the Ancient Cities for their cultural heritage. Among the regions which are famous for their beaches, the Northern Region and the East Coast are yet to be developed for international tourism. Though the greater Colombo Region includes well-developed accommodation and other facilities for the tourism industry, the largest region among the four is the South Coast and it has been the most prominent tourism destination since the beginning of the tourism industry in Sri Lanka (Tranter et al., 2009). Further, this region contains the highest number of registered tourism accommodation businesses. Therefore the South Coast can be considered broadly as a representative of the other three regions which have common tourism attractions of beaches and coastal resources. Hence three unique regions, along with the South Coast were selected as the case sites for this study: Colombo City, High Country, and Ancient Cities. The distribution of the accommodation STEs in major resort regions is depicted in Figure 5.2.

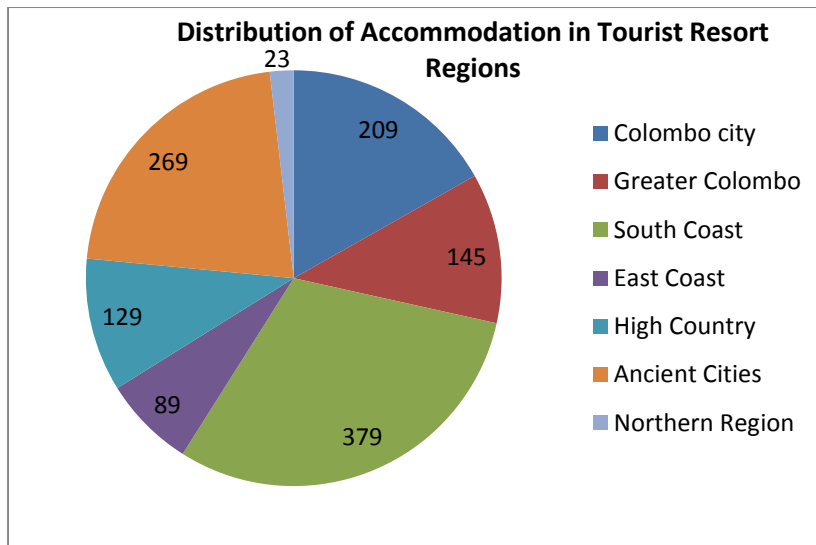


Figure 5.2: Distribution of accommodation in resort regions of Sri Lanka

Based on the theoretical criteria described above a list of organisations was generated representing the selected categories of accommodation for each region. The number of organisations selected from each category was decided on the basis of their percentage distribution in each region. A systematic technique was used in order to select organisations which best represent each category of accommodation (O'Leary, 2009). From the list of each category of STEs arranged in alphabetical order every third organisation was selected. If the selected organisation was not willing to participate the next in the list was selected until the required number was reached. The distribution of the selected 35 organisations among the four regions is depicted in Table 5.3.

Table 5.3: Distribution of cases selected from resort regions

Region	Type of Business				Total
	Small Hotels	Guest House	Home-stays	Bed & Breakfast Units	
Colombo City	1	2	1	2	6
South Coast	2	5	2	5	14
High Country	1	2	1	1	5
Ancient Cities	2	4	1	3	10
<b>Total</b>	<b>6</b>	<b>13</b>	<b>5</b>	<b>11</b>	<b>35</b>

## 5.5 Data Collection

Yin (2003) explains six main sources of evidence that can be used to collect data in a case study: documentation, archival records, interviews, direct observation, participant-

observation, and physical artefacts. This method of collecting data from different sources is a recommended practice in post-positivist case research as well as making data triangulation possible (Benbasat et al., 1987; Dubé & Paré, 2003; Eisenhardt, 1989). The primary method of data collection for this study was semi-structured interviews which followed a pre-designed schedule including closed and open-ended questions. In addition to interviews, other sources of data such as documents, notes and sketches were collected. The data collected from these additional sources along with the archival data and organisation websites were used to facilitate triangulation. The next sections describe how each of these methods was applied in data collection and what purpose they served in answering the research question.

### ***Interview Protocol***

Semi-structured interviews were undertaken to obtain information directly from the respondents. A semi-structured approach is considered less formal but enables the researcher to take “control over the line of questioning” by using the checklist of questions (Creswell, 2003, p. 186). As the interviews were the main method of gathering data, interview questions were crucial to the success of the study. Therefore following Yin (2003), the interview protocol was developed by directly linking to the conceptual framework and focusing on the research question and aims. Table 5.4 illustrates the interview protocol sections with their intended purposes.

Table 5.4: Interview protocol sections

<b>Conceptual Framework</b>	<b>Sections of the Interview Protocol</b>	<b>Purpose</b>
<b>Focal Firm</b>	<b>Firm Profile</b> <ul style="list-style-type: none"> <li>• Interviewee details including the name, age, and role in the organisation</li> <li>• Organisation details, including the category, size, market focus, duration and structure of the organisation</li> </ul>	To obtain firm’s and its owner-manager’s background information
	<b>ICT Resources</b> <ul style="list-style-type: none"> <li>• Organisation’s technological ICT resources; devices software and ICT Infrastructure</li> <li>• Organisation’s human ICT resources</li> </ul>	Focus on first research aim; to identify the organisational factors
	<b>Complementary Resources</b> <ul style="list-style-type: none"> <li>• Organisation’s complementary resources</li> </ul>	Focus on first research aim:



	<b>Business Processes</b> <ul style="list-style-type: none"> <li>• Key business processes of the organisation and the use of ICTs in them</li> </ul>	exploring how ICTs are being used in STEs
<b>External environment</b>	<b>Industry Characteristics</b> <ul style="list-style-type: none"> <li>• Industry trends and changes in the business after the civil war in 2009</li> <li>• Industry characteristics which influence the operations of the organisation</li> </ul> <b>Trading Partner Resources and Processes</b> <ul style="list-style-type: none"> <li>• Trading partners of the organisation and their collaboration with the business</li> </ul> <b>Government Support</b> <ul style="list-style-type: none"> <li>• Assistance received from the government for STEs</li> </ul>	Focus on second research aim: identifying the external factors
<b>Business Value of ICT in STEs</b>	<b>Business value of ICT</b> <ul style="list-style-type: none"> <li>• How ICTs contribute to the business value of the organisation</li> <li>• Participant's view about the role of ICTs in their business and in the tourism industry in general</li> </ul>	Focus on overarching research question and third aim: finding reasons for varied business value gained

The protocol was reviewed by two academics with experience in ICT and tourism before it was used to collect data. Then, a pilot study was conducted with the purpose of confirming whether the case protocol, data gathering procedures and instruments were fit for their purpose. Selection of the pilot case was based on convenience, thus five STEs from Colombo City representing different categories of accommodation were used in the pilot study. The pilot study identified that the business processes of the STEs in Sri Lanka are a simple set of combined processes. Due to the nonexistence of complex business processes and the inability of owner-managers to detail the processes separately, the questions related to detailed business process mapping were slightly modified. The questions were simplified in order to improve the clarity of questions for owner-managers to understand and the questions were re-ordered to provide a better flow to the protocol. The interview protocol used for the post-pilot cases is provided in Appendix A.

### ***Website***

The official organisational websites provided information about the organisations. These sites provided background information about the organisation, facilities, complimentary services, contact details and maps. Some sites provided direct booking through websites and links to guest reviews in TripAdvisor or directly displayed reviews on the website. Analysis of the website content was performed in order to verify the data collected from the interviews. In addition to the business website, data from trading partners' websites were also collected. Using the TripAdvisor website an analysis of reviews was performed to support the findings of the interview data.

### ***Documentary evidence***

Corresponding data was gathered through analysis of relevant documents. According to Yin (2014), documentary information is relevant for every case study topic except for studies of preliterate societies. The term 'documents' covers a wide range of different kinds of sources: personal documents, official government documents, official documents from private sources, and mass media outputs (Yin, 2014). In this research, relevant documents included business documents such as strategic plans, manual records of business accounts and customer databases. Documents created using ICTs such as promotional flyers and restaurant menus for daily display were also examined. Official government documents such as policies, reports, and announcements, ICT project progress reports, and other official records such as statistics from the SLTDA on tourist arrivals and accommodation as well as some economic indicators from the Central Bank of Sri Lanka were also collected and examined. This documentary evidence was important for verifying the data collected from interviews. Yin (2014) explains that documents can provide specific details to corroborate information from other sources. Thus, the analysis and review of documents provided a rich source of information with which to complement and supplement data collected through interviews.

### ***Sketches***

Although structured business process mapping was not performed due to the nature of the STEs, sketches of key business activities were made during the interviews to identify critical points where ICTs could contribute to those business processes. Some

participants also made sketches and explanatory diagrams to describe how ICTs were being used in their businesses. These sketches were stored as field notes for each case file.

Multiple sources of evidence as described above were used to complement and triangulate data gathered through the semi-structured interviews, which enhanced the rigour of data collection and added credibility to the study.

### **Data Collection Process**

Following the case selection criteria outlined in Section 5.4.2, contact details for the owner-managers of the STEs were obtained from the business registry of SLTDA. Initially, an email was sent to each owner-manager inviting them to participate in an interview with a short description of the research. Just over half (50-60%) of the emails were replied to within a week, asking the researcher to make contact over the phone. An immediate phone call was made to the owner-managers who replied to the email to arrange an interview. For the organisations who did not reply to the email, a phone call was made in the second week requesting an appointment for an interview. Almost all (90%) of the phone invitations were accepted and interviews were arranged. The rest of them were also willing to participate but it was difficult to schedule time for an interview due to their business activities and conflicts with the researcher's other interview appointments. A second round of emails and phone calls were made until the required numbers of interviews for each region were fulfilled. Every effort was made to suit the participant's work schedule when organising the interviews. Considering the convenience of the interviewee, all the interviews were conducted in their respective business premises. The process was continued until the required number of interviews had been conducted. Data were collected during the three months from April to June 2014. Starting from the Ancient Cities region interviews were conducted in each region. This helped to build understanding of the regional dynamics of the cases.

Before the interview, a copy of the participant information sheet and the participant consent form were sent (see Appendices B and C) attached to an email message. However, a hard copy was always carried with the researcher in case the document was not printed by the participant. Twenty-seven interviews were conducted in English and eight were in the Sinhalese language. All interviews took between 40 minutes to 1½

hours. After the interview, a thank you email was sent to the participant. All the participants gave permission to record the interviews; however some participants did not want to include their comments on government activities in the transcripts so those comments were removed. Transcripts were sent to the participants for verification (steps taken to ensure the validity of data collection are illustrated in Table 5.6). After all interviews in one region were completed, an initial analysis was conducted using memos to reflect on the particular characteristics of the region.

## **5.6 Data Analysis**

Data analysis is the process of organising and reducing the raw data so that the researcher can bring meaning to it (Miles et al., 2013). The two main approaches for data analysis are inductive and deductive. Inductive analysis is defined as deriving themes and understanding from collected data whereas deductive analysis uses predefined codes (Thomas, 2006). Miles et al. (2013) present a detailed account of data analysis which is consistent with the inductive approach, comprising three phases: data reduction, data display, and conclusion drawing. The purpose of the inductive analysis is to allow findings to emerge from the data without enforcing the constraints of a particular methodology. On the other hand, deductive analysis allows the researcher to begin with a coding scheme agreed in advance based on the conceptual framework and research questions. In alignment with the post-positivist stance which begins the research with an established theory but allows new themes to emerge (Creswell, 2003), this study analysed the data using a combination of inductive and deductive analysis. The deductive analysis was guided by N. King (1998) template coding and the inductive analysis outlined by Miles et al. (2013). This method of analysis is in alignment with Yin (2014) who recommends a combination of two analytic strategies when a case study has 20 or more cases. The steps taken to ensure the validity of data analysis in post-positivist case studies are illustrated in Table 5.7.

As outlined in phase four of the research process, the data analysis began by developing an analytical framework to guide it. The analytical framework was based on the conceptual framework. The analysis consisted of two phases for overall case analysis and the cross-case analysis. Figure 5.3 illustrates the analytical framework with the sequential steps followed in analysing the data.

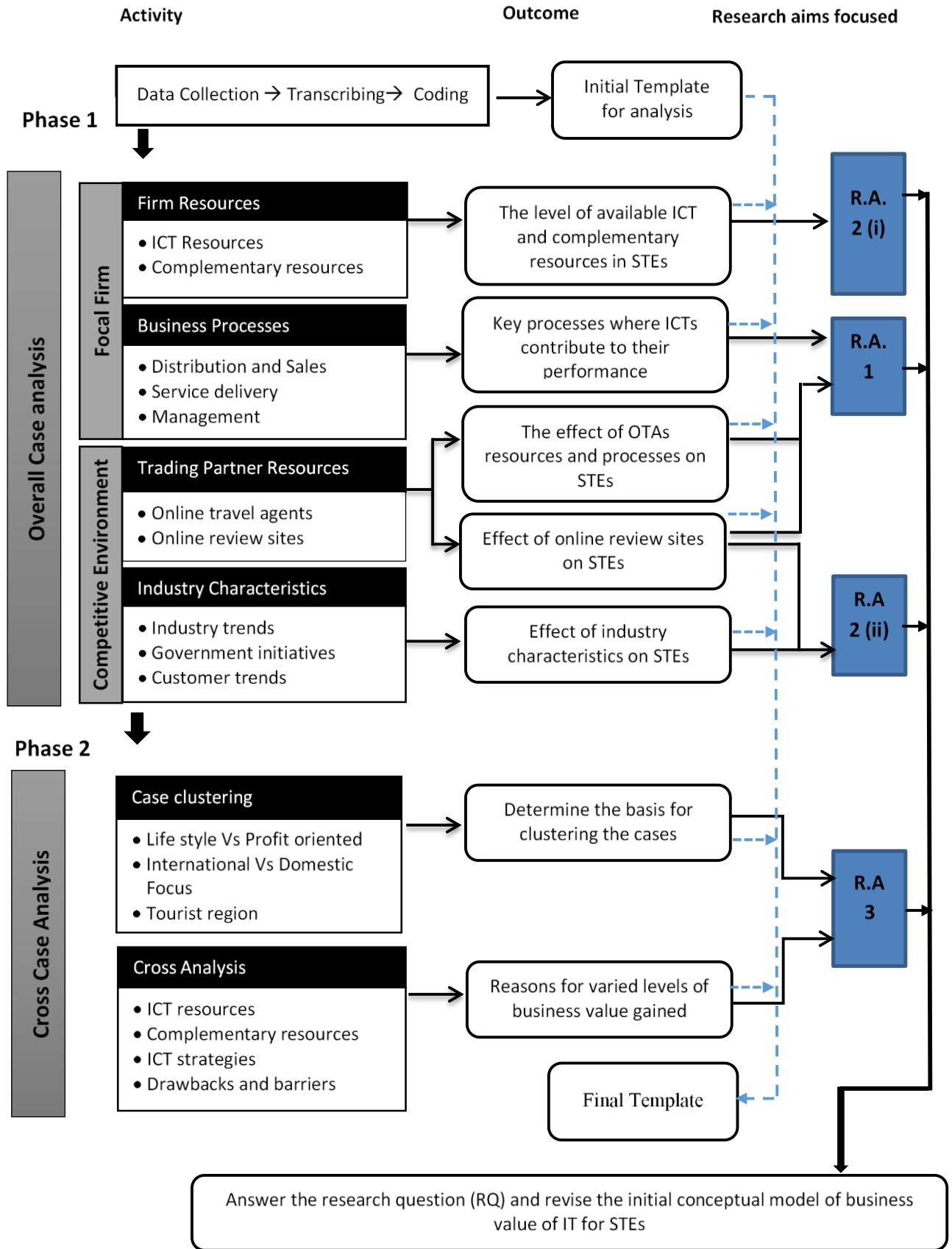


Figure 5.3: Analytical Framework

Starting from the preparation of data for analysis, the following section describes how each step of the analytical framework was followed in this research.

### ***Preparation of Data***

The primary data source was the audio-recordings of interviews. Data collected through interviews needed to be transcribed in order to refine them into text conducive to analysis (Miles & Huberman, 2013). The researcher transcribed all 35 recordings. Out of the 35 interviews eight were conducted in the Sinhalese language and translated into English by the researcher. Translations were validated using a professional translator. Completed transcriptions were sent to the participants to ensure the accuracy and two weeks' time was given for confirmation. Twenty-five participants replied confirming the accuracy of transcripts and as mentioned in the message sent to the participants, the rest were considered to be confirmed at the end of the two-week period. Transcriptions and data from all other sources were organised and stored according to region. For each region, an individual computer folder was allocated with a subfolder for each case which stored electronic records including audio files, transcripts, contact information and website addresses. Once the participant check was completed, the transcripts were uploaded to the qualitative data analysis tool NVivo. An initial template of codes was built based on the conceptual framework of the study. Although initial coding was done using the NVivo tool, the data were later transferred to a Microsoft Excel file. Each element of the theoretical framework could be better addressed by the utilisation of tables and charts for the overall analysis and visualisation of the data was easier in cross-tabular format in Excel for the cross-case analysis.

#### **5.6.1 Template coding**

Template analysis is a type of thematic analysis that balances a relatively high degree of structure in the process of analysing the textual data with the flexibility of adapting it to the specific needs of the study. In template coding, the researcher produces a list of codes (a template) representing themes identified from the existing theory which are defined a priori, but they are modified and added to as the researcher reads and interprets the texts (Guillet & Law, 2013, p. 118). King further suggests that whether to start with tightly defined and largely predetermined codes or with only a few defined

codes which use the template in a flexible way should be determined by the philosophical orientation of the researcher. Therefore under the post-positivist stance selected in this research, codes in the initial template were broadly defined and kept flexible so the template could be modified with emerging codes from the interview data. Developing the template for data analysis involved several steps including setting up the initial template and revising and finalising the template. Each of the steps followed is described below.

### **Creating the initial template**

As suggested by N. King (1998), deciding how extensive the initial template would be was important as too many prior codes could restrict the analysis and prevent exploration of more pertinent issues. On the other hand, too few codes could lead to a lack of clear direction and an overwhelming mass of rich and complex data. Therefore, King suggests the use of an interview topic guide as a better way to start the initial template. Interview questions were mainly based on the conceptual framework. Therefore the variables of the conceptual framework were used to generate initial codes for the template. The main questions from the interview guide were used as the higher-order codes. Higher-order codes were subdivided into several levels of lower-order codes based on their relative importance to IT business value thereby increasing the depth of the analysis.

### **Revising the template**

Once the initial template was constructed, data from the interview transcripts were coded. At this stage, inadequacies in the initial template were revealed, requiring changes to existing codes or the addition of new codes. Following the guidelines of Guillet and Law (2013) this modification process was performed iteratively to develop the final template. Modifications of the template included insertion of new codes, deletion of irrelevant codes, changing the scope of codes, and changing higher-order classification as described below.

*Insertion:* when there were any concepts and views presented by owner-managers which were of relevance to the research question, but not covered by any existing codes in the template, those items were added as a new code.

*Deletion:* When an initially defined code was either not applicable or substantially overlapped with other codes it was deleted at the end of the process of template construction. Some initial codes related to key business processes were deleted at the end as they were not applicable to the context of Sri Lankan STEs.

*Changing Scope:* When the initial codes were found to be either too narrowly or too broadly defined, such codes were redefined at a lower or higher level according to their relevance and importance to the research question. For example, the broader code defined initially for the business value of IT was later divided into several sub-codes representing owner-managers' perspectives.

*Changing higher-order classification:* When some codes were later identified to be a better fit as a subcategory of a different higher-order code than the one to which they were initially classified, their higher-order classification was changed.

### **The final template**

According to King (1998), there is no specific criterion to identify whether the template is finalised; this is unique to a particular project and the researcher. In this study, the template was considered final once all the relevant data gathered through interviews were coded and included in the template. To ensure that all the relevant codes were included, interview transcripts were read several times before finalising the template. The finalised template code with a transcript was sent to another five researchers (two PhD students conducting Information Systems research and three university academics from Sri Lanka involved in Information Systems and tourism research) to cross-check the coding reliability. A 98% coding reliability was achieved in this member checking and no significant changes were suggested. Hence the template was considered complete (Appendix D).

### **Interpreting and presenting template analysis**

King (1998) suggested three main methods to interpret and present the finalised template:

- i. A set of individual case studies, followed by a discussion of differences and similarities between cases;
- ii. An account structured around the main themes identified, drawing illustrative examples from each transcript as required;



- iii. A thematic presentation of the findings, using a different individual case study to illustrate each of the main themes.

In this study, the data analysis process was carried out as an iterative process of modifying the template. Guidelines for analysis of data in multiple case studies by Yin (2014) was used in collaboration with the methods suggested by N. King (1998) to analyse and interpret the template. As the template was built based on the theoretical propositions derived from the conceptual framework, the elements of the framework were used to structure the analysis and presentation of the findings. The analysis was carried out in two main stages: overall case analysis and cross-case analysis.

### **5.6.2 Overall case analysis**

As the study consisted of 35 cases, a within-case analysis of each individual case was not practicable. Further, in answering the research question it was important to consider the country as a whole and analyse the data accordingly. Therefore focusing on each aim of the research, data were analysed based on the elements of the theoretical framework developed for the study. In support of this overall analysis, a PESTEL analysis (Section 4.4) of tourism in Sri Lanka was also conducted prior to the analysis of the research data. The major role of the PESTEL analysis was to deepen the understanding of the competitive environment, particularly of the industry characteristics and external factors affecting the STEs in using ICT in their business processes.

Reporting the overall analysis began by providing an overall case profile. Then using the finalised coding template, data were analysed following the structure of the conceptual framework and incorporating the newly emerged themes from the research data. Some data were quantified in terms of percentage values and counts in order to provide stronger evidence for claims. To bring in the voice of the participants, quotes from interviews were used where appropriate.

Data were analysed in relation to the focal firm (STEs) and the external environment. The availability of ICT and complementary resources within STEs and their use in key business processes were analysed first. Then the integration of trading partner resources was examined. The barriers and drawbacks emerged as an outcome of the

analysis. Once the overall analysis was completed the findings were analysed across the tourist regions.

### **5.6.3 Cross-case analysis**

Cross-case analysis is a research method that facilitates the comparison of commonalities and differences in the events, activities and processes that are the units of analysis in case studies (Denzin, 2001). It involves comparing, contrasting, or combining data from all cases to improve the robustness, generalizability, and applicability of findings in other contexts (Miles et al., 2013; Yin, 2009). As illustrated in the analytical framework (Figure 5.3), in addition to increasing the generalizability of findings within the cases another purpose of the cross-case analysis of this study was to deepen the understanding and explanation of how ICTs contribute to the business value of STEs in Sri Lanka and in turn address the third aim of this research.

The two basic approaches to cross-case analysis are the case-oriented and variable-oriented approaches (Miles et al., 2013). A case-oriented strategy is used where the replication strategy (Yin, 2014) is used in selecting multiple cases. A theoretical framework is used to study the cases and approach the comparison by forming types or families of cases that share certain patterns or configurations (Miles et al., 2013). In a variable-oriented approach, the themes that cut across cases are highlighted by minimising or the case dynamics (Miles et al., 2013). Both Miles et al. (2013) and Yin (2014) recommend using both case-oriented and variable-oriented approaches. This strategy is also aligned with the post-positivist stance which recommends a mix of strategies in data analysis to maintain rigour in post-positivist case studies (Ryan, 2006). Hence this study employed an integrated approach for the cross-case analysis. The process of cross-case analysis which began with clustering cases is described next.

First, alternative options for clustering the cases were considered. Three potential criteria of business motives, market focus and tourist region were identified. After analysing their strengths and limitations as discussed in Section 7.2 the tourist region was chosen as the most appropriate base for clustering the cases. After clustering the cases the next phase was the actual analysis of data across cases.

One tactic suggested by Eisenhardt (1989) for searching for patterns within cross-case studies is identifying dimensions or constructs from the literature, and then looking for within-group similarities and inter-group differences. Further, McGuiggan and Lee (2008), suggest the use of cross-tabular design to compare several categories and allow graphing of continuous measurement scales and iterative comparison of theory to data to provide construct validity. Therefore the cross-case analysis of this study was again based on the propositions of the conceptual framework. Considering the elements in the conceptual framework, the findings of the overall analysis was further analysed using cross-tabulation and charts to display the commonalities and differences among the four clusters.

Once the overall case analysis and the cross-analysis were completed the findings were compared with the literature to address the objectives of the research and answer the major research question. Based on the discussion of findings, the theoretical framework of the business value of ICTs was modified.

### **5.7 Ethical Considerations**

This study involved human participants and their organisational knowledge; therefore approval from the Victoria University of Wellington, School of Information Management Human Ethics Committee was obtained before any formal contact was made with STEs (Appendix E). All research data were confidential to the participant, the researcher, and the research supervisors. In addition, data were stored securely to maintain the privacy of individuals and organisations. Following the principle of informed consent, owner managers of STEs signed a consent form to allow the study of the use of ICTs in their businesses. When a participant requested removal of some of their comments on government policies etc. they were deleted from the transcripts. Such transcripts were reviewed and authorised by the owner-manager. Organisations and the participants were given pseudonyms in the thesis.

### **5.8 Validity and Reliability**

Validity and reliability are considered to be essential tools in post-positivist epistemology. Reliability concerns whether the result is replicable, while validity concerns whether the means of measurement are accurate and whether they are

actually measuring what they are intended to measure (Yin, 2003). Benbasat et al. (1987) suggest that to make the research conclusions a sound basis for future research, a study should achieve accepted standards for both validity and reliability. According to Yin (2003), case study research should examine the construct validity, internal validity, and external validity, along with reliability. The next section describes each of these constructs and how they were achieved in this research.

**Construct Validity:** identifying correct operational measures for the concepts being used (Yin, 2003). Tactics for achieving construct validity should be applied mainly in the data collection phase of the case study research and the following recommendations are made by Yin (2003) and Dubé and Paré (2003):

- Use multiple sources of evidence (triangulation);
- Establish a chain of evidence (e.g. use a research protocol); and
- Have key informants review draft case study reports.

In this study, triangulation is achieved by using multiple sources of evidence, as explained in the Section 5.5 (Data Collection). Establishing a 'chain of evidence' allows an external observer of the case study to follow the derivation of any evidence from initial research question to the research conclusion by tracing the steps in either direction from conclusion to the question or from the question to the conclusion (Yin, 2003). As suggested by Yin (2003) and Dubé and Paré (2003) this was achieved by creating and following a case study protocol. Participants were asked to review interview transcriptions to confirm the validity. As recommended by Miles et al. (2013), when the inductive and deductive coding was carried out, care was taken to maintain a logical link back to their original transcripts.

**Internal validity** seeks to establish causal relationships which explain how one event leads to another. Yin (2003) notes that only explanatory or causal case studies are concerned with internal validity, not descriptive or exploratory case studies. This study is an exploratory case study where causal links are not a major focus.

**External validity** is concerned with the generalizability of the findings to a larger population. One of the major barriers to doing case studies is their limited generalizability. However, the findings can be presented in a way that allows readers to

assess their prospective applicability to other contexts (Miles et al., 2013). To ensure that type of generalizability in case studies Yin (2003) suggests the use of multiple cases and replication logic in selecting multiple cases. As described in section 5.4.2, this study used literal and theoretical replication to ensure the generalizability of its findings. By having a clear description of the research context and explanation of the data analysis process, readers can decide about the applicability (external validity) of the findings to other similar situations.

**Reliability** demonstrates that the operations of a study can be repeated, with the same results. To ensure the reliability of case studies Yin (2003) recommends using a case study protocol and a data repository. A case study protocol is a guide for conducting the case study including an overview, field procedures, case study questions and outline of the case report. A data repository contains the raw material including interview transcripts, researcher's field notes, documents collected during data collection, survey material, coded data, coding scheme, memos and other analytic material, and data displays (Dubé & Paré, 2003). To ensure the reliability of this study, this Chapter presented the detailed research process (Figure 5.2). It described protocols for data collection and how transcripts were verified with the participants. The data analysis was illustrated using the analysis framework (Figure 5.3) and coding was member-checked and achieved 98% reliability. A data repository was maintained throughout the research process as an electronic database. All records related to a particular region or a case were labelled with a unique identifying code and stored in a structured file system for convenient access.

To achieve rigour and address the validity in case studies, particularly under the post-positivist stance in IS research, Dubé and Paré (2003) describe 34 practices. In developing these practices they follow the quality criteria specified by Benbasat et al. (1987), Eisenhardt (1989), A. S. Lee (1989), and Yin (1994) who have had a strong influence on the conduct of case study research. Adapting the criteria relevant to exploratory case studies from Dubé and Paré (2003) and following the style of Strode (2012), the following three tables summarise how rigour was achieved in the research design, data collection and data analysis phases.

Table 5.5: Rigour in the design phase, adapted from Dubé and Paré (2003) and Strode (2012)

Attribute	Purpose	How used in this study
Clear research questions	<ul style="list-style-type: none"> <li>• Provide a specific focus for the study and indicate where the practical and theoretical contributions are likely</li> <li>• Addresses reliability (Miles &amp; Huberman, 1994)</li> </ul>	<ul style="list-style-type: none"> <li>• There is one major research question with three research aims</li> </ul>
A priori specification of constructs	<ul style="list-style-type: none"> <li>• Assists in the initial research design by providing initial concepts of interest</li> </ul>	<ul style="list-style-type: none"> <li>• An initial conceptual framework was developed based on the Resource Based View of the firm and literature on the business value of ICT and tourism</li> </ul>
Clean theoretical slate	<ul style="list-style-type: none"> <li>• Reduces bias in the study analysis</li> <li>• Reduces the likelihood of the researcher placing limitations on the findings</li> </ul>	<ul style="list-style-type: none"> <li>• The initial conceptual framework was based on two well recognised frameworks in business value of IT by Melville et al. (2004) and tourism production system by Poon (1993) and tourism business processes by Alford (2005) and it described concepts and relationships at a high level (Figure 3.2)</li> </ul>
Multiple case design	<ul style="list-style-type: none"> <li>• Improves the robustness of the research conclusions which will be applicable beyond a single case</li> <li>• Case comparison is enabled and case differences enhance theoretical breadth</li> </ul>	<ul style="list-style-type: none"> <li>• 35 cases selected from four major tourist regions representing the country were used in this study</li> </ul>
Replication logic in multiple case design	<ul style="list-style-type: none"> <li>• Cases are selected because of their substantive nature or theoretical relevance</li> <li>• Addresses external validity (Yin, 2003)</li> </ul>	<ul style="list-style-type: none"> <li>• Cases were selected using a set of criteria that includes different categories of businesses with varied market focus which will lead to similar and/or contrasting results</li> </ul>
Unit of analysis (UoA)	<ul style="list-style-type: none"> <li>• Relates the case to a broader body of knowledge</li> <li>• Sets a boundary on both the data to collect and the applicability of research conclusions</li> </ul>	<ul style="list-style-type: none"> <li>• UoA is the small tourism enterprises representing different types of small accommodation establishments</li> <li>• Applicability of the framework is at the level of small organisations</li> </ul>
Pilot case	<ul style="list-style-type: none"> <li>• A case selected to determine the appropriateness of the UoA and refine the case protocol and any instruments used</li> </ul>	<ul style="list-style-type: none"> <li>• Five cases were used in the pilot study to trial the case study protocol and interview schedule which made modifications to the interview schedule by adjusting the business process mapping questions</li> </ul>

Table 5.6: Rigour in the data collection phase, adapted from Dubé and Paré (2003) and Strode (2012)

Attribute	Purpose	How this attribute was met in this study
Elucidation of the data collection process	<ul style="list-style-type: none"> <li>• Ensures external parties can understand how data were accumulated, what sources were used and why, and how each source contributed to the findings</li> <li>• Addresses reliability (Miles &amp; Huberman, 1994) by ensuring another person could follow the same procedures and arrive at the same conclusions</li> </ul>	<ul style="list-style-type: none"> <li>• The methodology Chapter fully describes the data sources, data collection procedures, and how each source contributed to the findings (Figure 5.1 Research Process)</li> </ul>
Multiple data collection methods	<ul style="list-style-type: none"> <li>• Enables convergence of evidence by providing more than one source of evidence for a phenomenon</li> <li>• Addresses construct validity (Yin, 2003)</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple data sources include: in-depth interviews, notes and sketches recorded during interviews, organisational websites, and secondary data from government authorities</li> </ul>
Mix of qualitative and quantitative data	<ul style="list-style-type: none"> <li>• Provides a different perspective on the data and may contribute to better theoretical explanations</li> </ul>	<ul style="list-style-type: none"> <li>• Majority of data is qualitative; however to provide evidence for claims made, some qualitative data were quantified along with industry statistics gained through government authorities</li> </ul>
Data triangulation	<ul style="list-style-type: none"> <li>• Strengthens evidence for findings as they are based on more than one source of evidence</li> <li>• Addresses construct validity (Yin, 2003)</li> </ul>	<ul style="list-style-type: none"> <li>• Whenever possible evidence from more than one source is used to confirm a finding</li> </ul>
Case study protocol	<ul style="list-style-type: none"> <li>• Ensures external parties can understand what procedures were followed, how data were accumulated, what sources were used and why, and how each source contributed to the findings</li> <li>• Contributes to both validity and reliability of the study (Yin, 2003)</li> </ul>	<ul style="list-style-type: none"> <li>• The case protocol includes these documents: <ul style="list-style-type: none"> <li>○ Participant information sheet</li> <li>○ Participant consent form</li> <li>○ Interview schedule for the owner-manager</li> </ul> </li> <li>• Detailed explanation of the research process (Figure 5.1 Research Process)</li> </ul>
Case study database	<ul style="list-style-type: none"> <li>• Contributes to the reliability of a study as findings can be traced to original data sources (Yin, 2003)</li> </ul>	<ul style="list-style-type: none"> <li>• Data pertaining to each case is stored electronically in an easily searchable form and the hard copies of documents given to the researcher were filed manually for individual cases (promotional flyers, name cards etc.)</li> </ul>

Table 5.7: Rigour in the data analysis phase, adapted from Dubé and Paré (2003) and Strode (2012)

Attribute	Purpose	How this attribute was met in this study
Elucidation of the data analysis process	<ul style="list-style-type: none"> <li>Contributes to an auditable trail of evidence from data to research conclusions. Improves reliability and reduces bias</li> </ul>	<ul style="list-style-type: none"> <li>The data analysis process is fully described with an analysis framework (Figure 5.3)</li> </ul>
Field notes	<ul style="list-style-type: none"> <li>Provides evidence to confirm or extend interview data</li> </ul>	<ul style="list-style-type: none"> <li>Notes and sketches on business processes were made during interviews</li> <li>Observations of expressions to emphasise some facts were written down during or shortly after the interviews</li> </ul>
Coding and reliability check	<ul style="list-style-type: none"> <li>Contributes to an auditable trail of evidence from data to final theory; improves reliability and reduces bias</li> </ul>	<ul style="list-style-type: none"> <li>Analytical codes were used in the NVivo application to categorise source data into concepts</li> <li>A reliability check was performed using 3 other researchers from Sri Lanka and 3 PhD students from the school</li> <li>Translations and transcripts were verified</li> </ul>
Data displays	<ul style="list-style-type: none"> <li>Contributes to an auditable trail of evidence from data to final theory; improves reliability</li> </ul>	<ul style="list-style-type: none"> <li>Tables were used to display quantified data out of the interview transcripts</li> <li>Several charts and graphs were created to support the analysis across cases</li> </ul>
Logical chain of evidence	<ul style="list-style-type: none"> <li>Improves reliability of information presented</li> <li>Addresses construct validity (Yin, 2003)</li> </ul>	<ul style="list-style-type: none"> <li>Interviews are transcribed and organisation ID codes attached to quotes so findings can be traced to their source.</li> <li>All written material is kept in a research database and ID codes identify the case</li> <li>Participants' claims were verified against statistical evidence from government authorities where possible</li> </ul>
Modes of analysis	<ul style="list-style-type: none"> <li>How data is analysed and interpreted is described</li> <li>More important in the context of exploratory studies</li> </ul>	<ul style="list-style-type: none"> <li>The method of explanation building from pattern-matching and textual explanation was carried out relying on the propositions of the initial theoretical framework developed for the study</li> </ul>
Searching for cross-case patterns	<ul style="list-style-type: none"> <li>Search for similarities and differences between cases by selecting categories or dimensions for comparison</li> <li>Addresses internal validity (Yin, 2003)</li> </ul>	<ul style="list-style-type: none"> <li>Cross-case analysis is used to compare the findings from each tourist region (which is justified as the basis for clustering)</li> </ul>
Quotes (evidence)	<ul style="list-style-type: none"> <li>Provides evidence for the development of theoretical concepts and their relationships</li> </ul>	<ul style="list-style-type: none"> <li>Quotes are used throughout the overall case, and across-case analysis to support findings</li> </ul>
Project reviews	<ul style="list-style-type: none"> <li>Validate factual information and improves reliability</li> <li>Addresses construct validity</li> </ul>	<ul style="list-style-type: none"> <li>For each case, the interview transcript was sent to the participant to verify its accuracy</li> </ul>
Comparison with extant literature	<ul style="list-style-type: none"> <li>Contributes to internal validity</li> <li>Strengthens the findings of a study because other studies either support the findings, or do not support the findings indicating the theory explains more than previous theories</li> </ul>	<ul style="list-style-type: none"> <li>Findings from extant research studies are used to extend the theory in Chapter 8's section 8.7</li> </ul>



## **5.9 Chapter Summary**

This chapter has described the research paradigm and the research methodology used to address the research question. A justification for the post-positivist multi-case study was provided first. The research process was described in detail with a diagram to illustrate each phase of the research. Then detailed descriptions of case design and data collection were presented. The data analysis was illustrated in a framework and each step was described in detail. Ethical considerations and the approval for data collection were outlined. Finally, the steps taken to ensure validity, reliability and relevance of this exploratory post-positivist case study were discussed against the accepted standards for providing evidence from each phase of the study. As guided by the conceptual framework and the analysis framework the next chapter presents the overall analysis of the cases followed by the cross-case analysis in Chapter 7.

## **Chapter 6: Findings - Overall Cases**

### **6.1 Chapter Introduction**

This first findings chapter aims to provide an overview of the cases. The findings are presented using the structure of the conceptual framework developed for this study. As described in the Section 5.5.2 the overall case analysis and presentation is guided by (Yin, 2014) in collaboration with the methods suggested by King (1998). In this chapter findings are presented based on the topics of the conceptual framework on which the interview questions were developed. The findings are presented in two main sections, one for the focal firm and the other for the external environment. The section on the focal firm includes an overall case profile and covers ICT resources, complementary resources, and the key business processes of STEs. The external environment section presents the effects of industry characteristics, government support and trading partner resources and processes. OTAs and online review sites are discussed as the main trading partners of STEs. The chapter concludes by identifying the drawbacks and barriers for STEs to implement ICTs.

### **6.2 The Focal Firm – STEs in Sri Lanka**

The focal firm for this study was STEs in Sri Lanka. Cases were selected based on the criteria specified in the methodology in Section 5.3.1. Using the concept of the focal firm, this section presents a general case profile and overall findings on ICT resources, complementary resources and business processes of STEs.

#### **6.2.1 Case profiles.**

While all the cases satisfied the criteria specified in the methodology, they had slight variances in their size, nature, and the business duration. These variances were found to have effects on the use of ICTs in performing business activities. During the interviews data about the case background was collected, including accommodation category, age and gender of the owner-manager, number of employees, number of rooms/beds, and number of years in the business, and their market focus. A summary of the 35 cases is provided in Table 6.1.

The 35 cases were selected from four tourist regions representing the main tourist attractions and geographical locations of Sri Lanka (Detailed in Chapter 4). All the businesses were selected from the category of accommodation. Under this category there were different types of accommodation, namely guest houses (37%), B&B units (31%), small hotels (18%) and homestays (14%). In addition to these categorisations, 70% of the owner-managers informally recognised them as budget accommodation according to their registration type with OTAs.

The number of full time permanent employees of these businesses varied depending on the number of rooms and units of accommodation available in the business. 37% of the businesses had 10-15 rooms and the rest had fewer than 10 rooms. Therefore the majority of the cases (57%) were in the range of one to five employees and the rest were in the range of six to 20 employees. Only a few businesses had part time employees while the rest had full time permanent employees (see Table 6.1).

While providing accommodation is the main business activity of all the cases, a majority of them provided many other services such as food and beverages, Ayurveda treatments, airport pickups and drop-offs, excursions, organised tours, tour guide services etc. Many of these services were provided free of charge as a complementary service to accommodation or at a discounted rate.

Among the 35 cases, the majority of the businesses (57%) catered for both international and domestic tourists. Of the remainder only one STE was focused on solely domestic tourists and the rest focused only on international tourists. However, even the businesses who were focused on both market segments also gave high priority to the international market and the domestic segment was promoted mainly to cover the off peak periods for international tourists. Only one case focused mainly on domestic tourists. One of the reasons for this is that the criteria specified when selecting cases specified that the business should be registered in the SLTDA as an accommodation establishment. SLTDA have strict rules on the standards of the services provided by the businesses in order to be listed in their business registry. Most of the accommodation establishments who focus on domestic only clients are not concerned about maintaining these standards as they have a perception that registration with SLTDA is necessary only if they want to attract international tourists.

Table 6.1: Summary of the Case Profile

Case Reference code	Category of Accommodation	No of Employees	No of Rooms	Business Duration (years)	Market Focus	Owner-Manager's Gender/Age
<b>Ancient Cities Region</b>						
AC1	Guest house	2	5	1.3	International	M/B
AC2	B&B unit	18	6	1.5	International	M/B
AC3	Guest house	8	10	5	International	M/B
AC4	B&B unit	10	5	3	Both	M/B
AC5	Guest house	3	10	8	International	M/A
AC6	Small hotel	6	12	3	Both	M/A
AC7	Homestay	5	7	3	International	M/B
AC8	Guest house	12	11	12	Domestic	M/A
AC9	B&B unit	8	15	21	Both	F/A
AC10	Small hotel	18	9	10	Both	M/A
<b>High Country Region</b>						
HC1	B&B unit	5	8	9	Both	M/A
HC2	Guest house	10	15	11	Both	M/A
HC3	Small hotel	19	13	3	Both	M/A
HC4	Homestay	4	4	1	Both	M/A
HC5	Guest House	6	8	8	Both	M/A
<b>South Coast Region</b>						
SC1	B&B unit	2	5	1	Both	M/B
SC2	B&B unit	4	2	21	International	F/A
SC3	Small hotel	7	15	35	Both	M/B
SC4	Guest house	3	13	2	Both	M/A
SC5	B&B unit	3	6	2	International	M/A
SC6	Homestay	3	4	4	International	M/B
SC7	Guest house	6	13	8	Both	M/A
SC8	Small hotel	5	9	31	International	M/B
SC9	Homestay	2	7	21	International	F/B
SC10	Guest house	5	2	8	International	M/A
SC11	B&B unit	6	6	12	Both	M/B
SC12	B&B unit	3	5	5	International	M/A
SC13	Guest house	19	15	5	Both	F/B
SC14	Guest house	2	10	10	International	M/A
<b>Colombo City Region</b>						
CC1	Small hotel	5	4	2	International	M/B
CC2	B&B unit	4	3	3	Both	M/A
CC3	Guest house	11	11	1	Both	M/A
CC4	B&B unit	3	3	11	International	M/A
CC5	Guest house	2	7	24	Both	F/A
CC6	Homestay	2	6	2	Both	M/A

\*Owner-Manager's Gender / Age: Gender: M (Male) F (Female), Age: A (Above 40) B (Below 40)

Out of the 35 cases considered, most businesses (46%) had been in operation for one to five years and the rest of the businesses had been in business for over five years, with 17% for more than 20 years. The reason for higher number of businesses in the category one to five years was due to the increased motivation to enter the tourism industry after the end of the civil war in Sri Lanka in the year 2009. The owner-managers of these businesses agreed that their main drive to start the business was the positive future of the tourism industry they could see with the advent of peace in the country, as well as to obtain the support provided from the government to promote the tourism industry (see Table 4.9).

The majority of the owner-managers were male (86%) and older than 40 (66%). While gender did not seem to have any effect on the use of ICTs and investment decisions it was evident that the perception of ICTs and the knowledge and skills on the use of ICTs varied depending on the age of the owner-manager.

Out of the businesses who had been in the industry for more than 10 years, the majority (70%) identified themselves as lifestyle tourist businesses. They operated their businesses as a family heritage or as a pleasure activity rather than for profit. This study found that these lifestyle motives affect the use of ICTs in these small businesses (see Section 7.2).

Examining the profiles of the 35 cases, it was evident that the cases selected for this study represented different varieties of STEs in Sri Lanka. The next section describes the availability of ICT resources within these businesses.

### **6.2.2 ICT resources in STEs**

This section presents the findings on the availability of ICT resources under the two categories of technological and human IT resources. By analysing the availability of ICT resources within these small businesses, this section focuses on identifying the internal organisational factors affecting their ability to gain business value through ICTs. Hence this section presents the findings related to the first section of the second aim of this research: Identify the organisational and external factors that impact on STEs' ability to gain business value through ICTs.

### 6.2.2.1 Technological ICT resources

Technological ICT resources were further categorised into ICT devices and infrastructure, i.e., shared technology and technology services across the organisation, and specific business applications that utilise the infrastructure (Melville et al., 2004). Therefore, technological ICT resources are discussed under the categories of ICT devices, software and applications, and networking and communication infrastructure.

#### ICT devices

As identified in the interviews, the devices available to the STEs were mostly personal computers (desktops), laptop computers, smartphones, printers, fax machines, scanners, and multifunctional devices. Multifunctional devices consist of the services of a printer, scanner and photocopying services in one device. Figure 6.1 shows the availability of the ICT devices in STEs.

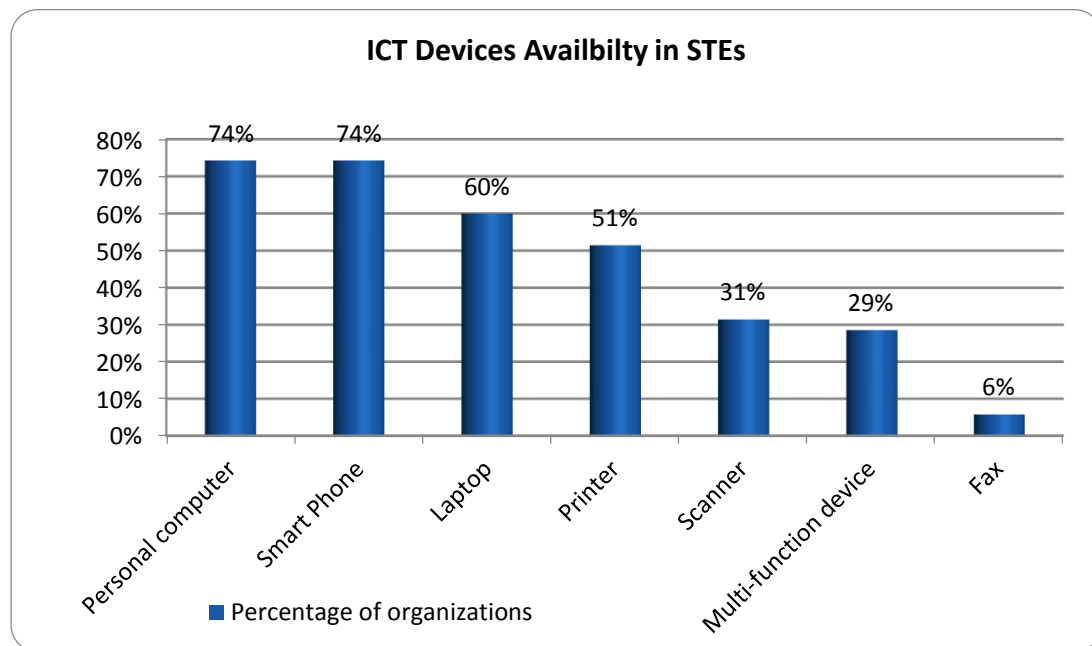


Figure 6.1: ICT devices availability in STEs.

As the graph clearly shows, desktop computers, smartphones and laptops were the main three devices available to STEs in this study. When desktop computers and laptops were combined about 91% of STEs had either one or the other of these devices, and the remaining 9% had a smartphone instead.

Out of these three main devices, the smartphone is the most widely used and available device in the STEs: 74% of the owner-managers use a smartphone and they believe it is

one of the most valuable and useful ICT devices they use in the business. Although the desktop computers were available at a similar percentage it was evident that their usage was very low when compared to smartphones and laptops. As one manager commented,

*“I have this desktop computer. It works fine but I rarely use it for anything. I mostly use my phone or the laptop if I am in the office’.*

AC5

This practice was shared by the majority of owner-managers who use a smartphone in their business activities. More than 80% of the participants mentioned this in the interviews. Smartphones have the features of computing as well as mobile telephony. When compared with computer for activities such as getting access to the Internet, receiving reservation notifications and other business communications, the smartphone provides the same level of functionality together with much higher affordability and portability. Because of this reason smartphones are valued by the managers as the most useful ICT device available to them.

*“Most useful resources are the portable devices. For example, one incident is my wife got sick in a peak season and I had to go to Colombo and, fortunately, using my smartphone I managed to do everything like I am physically in the hotel. If I just had only this big desktop computer I would have been completely failed in my job at that moment’.*

SC3

All the managers who use a smartphone believe that it is very helpful in increasing their efficiency of work by allowing real-time communications with guests as well as updating of reservations notices from online agents. As managers of these STEs engage in all aspects of the businesses it is not very usual for them to sit in front of a computer and perform their tasks for the whole day. Therefore having a smartphone is considered the equivalent of having a portable office with them. As they get notifications through emails or text messages it is easy for them to promptly reply or attend to the requirements of the message. This leads to avoidance of losing guests due to a delay in communication. One manager emphasised the usefulness of the smartphone;

*“It’s only me and another few employees who work here have to look after everything in the business. I can’t just stay seated in the office in front of the computer. But since I bought the smartphone it really helped me getting my work done really well because it gives all the notifications of messages of reservation and other emails. I reply quickly whether I am inside the office or out so I won’t miss any guest who is in urgent need of information’.*

CC4

Another great advantage of the smartphone is its affordability for STEs. When compared to a computer, smartphones were less expensive, in terms of both purchasing and maintenance costs. Based on their comments on this device, the ease of use, real-time connectivity, flexibility and portability together with all the functions and connectivity has made the smartphone the best option for the fulfilment of their technology needs. The device is capable of fulfilling most of the important activities performed by the managers by facilitating access to emails, websites, and financial transactions along with the voice communications with employees, guests or any other party. Further, according to the participants, the devices simplify technical troubleshooting as smartphones have fewer problems than alternatives such as desktop computers and laptops. Moreover, even if there were issues with the phones, due to the high mobile penetration of Sri Lanka (Central Bank of Sri Lanka, 2014), services for mobile repairs and other services are widely available throughout the country making it much more convenient to use. The widespread mobile network coverage throughout the country means it is easy to use smartphones even in rural regions of the country. The uses of the smartphone are further discussed in the next section together with software and applications.

Among the personal computing devices used by the STEs in this study, it was noted that no business was using a tablet device. Although this seemed unusual, the reason was identified as the poorer capability of tablets (at the time of data collection) to operate office applications. The majority of STEs already had a laptop or a desktop computer which had the capability of operating office applications. Therefore it would seem that STEs have skipped the option of tablets and instead selected smartphones as their portable device. As was seen in the majority of the cases a smartphone together with a laptop satisfied all their computing requirements.



Apart from computers and smartphones, other devices available to the STEs were printers or multifunctional devices. Some business organisations (about 30%) use a multifunctioning device for their printing and scanning needs while about 50% still use a single printer with or without a separate scanner for their business activities.

As most of the communications were done through emails, printing letters and memos was rare. Although a printing facility was available to 80% of STEs, usage of the facility could be seen only in 40% of them. Printers were used to produce the salary slips when there were more than five employees and also in businesses with restaurants to display menus and specials on each day. It was rare for even the guests to make a request for printed documents for invoices or receipts. Because of this, the level of usage of printers and scanners was fairly low. Although printers and scanners were not often used, these were considered to be important devices as they contribute to the efficiency of customer service and administration processes. For example, it is a legal requirement in Sri Lanka to keep a copy of the passport (information) of each guest. Scanning devices help the businesses to perform this task effectively.

Although the ICT devices such as computers, printers, and smartphones were available with many STEs, the usage of these devices varied from a high to a minimum level of usage in different functional areas of the business (discussed further in Section 6.3). Therefore, it was important to examine what software and applications they use in their devices in different business processes.

### ***Software and applications***

While the terms software and applications refer to similar programs, in this study the term software is mainly used to refer to programmes used in computers and the term applications for programmes used in mobile phones. Though there was a reasonable ownership of ICT devices with the majority of STEs, it was found that the use of special software and applications in these devices was at a lower level throughout the country. Figure 2 shows the use of ICT applications by STEs in this study.

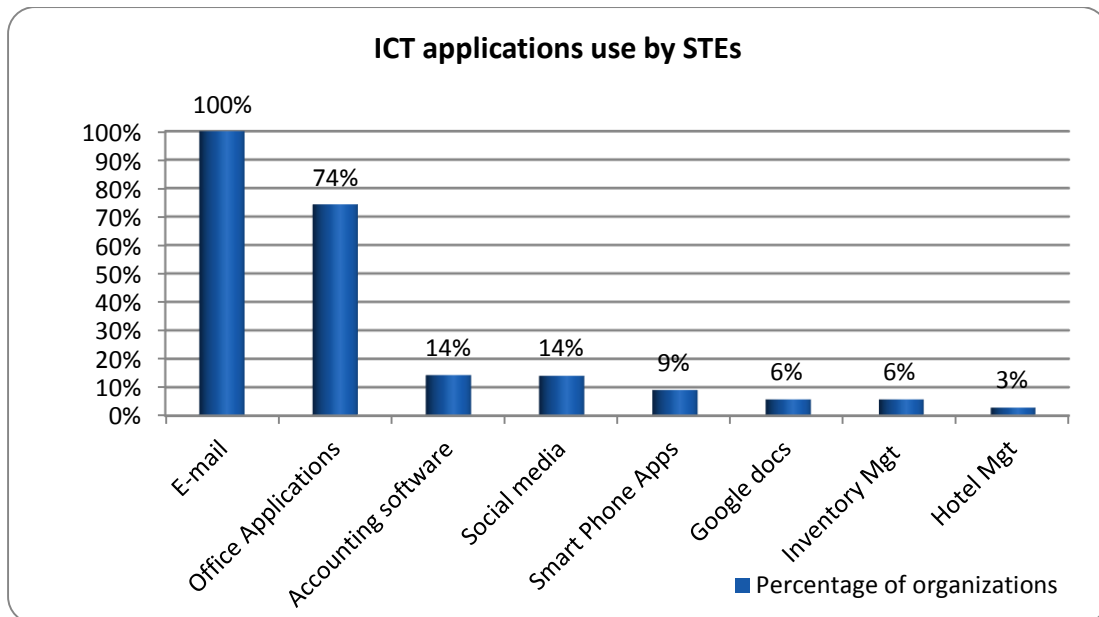


Figure 6.2: Use of ICT applications by STEs

E-mail is the most widely used method to communicate with online agents for bookings and with customers to respond to sales inquiries and other information. Every business has an email address and usage is often very high. Apart from essential email applications there were a few other software and applications used by these STEs in performing their business activities.

Microsoft Office applications were the second most extensively used application by STEs. MS Excel and Word applications were the most used applications, recording 74% for Excel and 30% for Word applications.

Excel was mostly used in functions such as maintaining business accounts, rooms' inventory for reservations, general goods inventories, and recording customer data. While Excel is the application used by the majority of STEs for accounting purposes, 14% of the businesses use accounting software for small businesses, namely QuickBooks accounting. Those STEs who used accounting software were the businesses with a comparatively higher number of employees. The high use of Excel applications for accounting is due to two main reasons, which are:

- 1) In most cases in Sri Lanka the computers are already loaded with the Microsoft Office application suite when they are purchased, so the businesses can use the application at no extra cost,

- 2) The application has the feature of ease of use so managers and other employees with basic skills can work with the application to meet the business requirements.

Conversely, accounting software needs to be separately purchased at a higher price, and also the employees need to be specially trained. Further, as explained by managers, Excel is used not only for accounting purposes, but can also be customised to their own needs such as to maintain a customer database or creating invoices, maintain inventories or even the recording of payroll of their few employees. When compared with the multipurpose Excel application, the managers see accounting software as a limited purpose and expensive application for their record keeping needs.

*'Me and my manager use Excel for lots of things. We maintain our accounts, keep records of payment of salaries and we have our own templates designed for invoices and another file for kitchen inventory and also we have database of our customers, so we use Excel for almost all our administration work and it's not very difficult to work in Excel ...'.*

CC1

These comments of the STE owner-managers displayed their intention to utilise their limited ICT resources in such a way as to bring maximum benefits for them. However, it also highlighted their use of low cost readily available software rather than investigating other options available to them. Further, as was described in the PESTEL analysis, because of the dominance of Microsoft in the ICT industry in Sri Lanka, their products and the skills needed to operate them are widely available even for the small businesses such as these STEs.

Other than the use of computer applications used in administration functions, there were a few STEs that used internet applications such as Facebook and YouTube for their business purposes. For example, they use social media such as YouTube to promote their businesses through videos about the location and facilities, allowing potential guests to have a look before they arrive and to upload photos on special events and guests' moments on Facebook. Using Facebook 'likes' they promote the business among the friends and relatives of the guests through eWOM. However it was evident that use of social media was at a very initial stage. Rather than using social media as a platform for marketing, they did not have any idea how to analyse data on page visits or other

statistics for business advantage. The use of social media in marketing and promotion is further discussed in Section 6.3.

With the high use of smartphones it was important to examine whether they used advanced technologies such as special apps for tourism in their smartphones. While there are smartphone applications specially designed for travel and tourism direct marketing on smartphones, it was revealed that the use of these mobile applications by STE managers and owners is very low. While 74% have a smartphone in use, it was found that only 9% of them use at least some basic mobile apps such as Skype mobile, GPS and mobile banking.

In addition to the usual voice calls and text messages, the main facility they expect to gain from a smartphone over a traditional phone was to get access to the internet and emails promptly. Although the smartphone is a prominent device used by the STE managers in business activities, their responses revealed low awareness of the functionality of this device.

*'Other than the voice calls, I use the smartphone mainly for emailing and reservation communications. I use it for phone banking but not very often, but I am not very familiar with the applications that you mentioned ...'*

HC4

Further, it was evident that the device is used as a replacement for the functions that they would previously have performed through their laptops or desktop computers. The poor awareness of smartphone applications and the limited time available for exploring these options by owner-managers has led the STEs to underutilise the capabilities of their smartphones.

Google Docs is another application used by some managers to control their rooms inventory. However, this is also used by a less than 5% of the businesses as the awareness and the skills for using the application were at a minimum level among the employees and owner-managers. As for the managers who did use Google Docs, it was regarded as a very useful tool for them to maintain and share up-to-date information with various parties. Further, it was even more beneficial for them as it is a free tool as long as they have access to the Internet. However, it was found that Google Docs was popular only in the Ancient Cities region as a result of a government sponsored ICT awareness programme for small businesses.

There was some evidence of the use of inventory management (6%) and hotel management software (3%) by some of the STEs. This was identified as an indication of use of advanced technologies by these small businesses. They have their business activities computerised and well managed internally as well as connecting to the external business partners and other organisations. Further, two cases who use inventory management systems and the one case who used the hotel management system had their applications developed by freelance programmers at an affordable cost. Therefore the functionalities of these systems were simplified to their own requirements rather than being a branded or commercial version of such systems. One very surprising feature found was that about 30% of STEs do not use security software in their computers. The STEs who had low capacity desktop computers complained that a virus guard makes the computer much slower and difficult to work. The cost of the software and the fees for renewing licences were reported as significant. How these STEs use their available systems and applications in improving business performance is further discussed in the cross-case analysis.

***Networking and communication infrastructure***

Available ICT infrastructures for Sri Lankan ICTs include the telephone services, broadband internet services, WiFi services and satellite TV connections. These services were available and well used by all the businesses. Figure 6.3 shows the availability of networking and communication infrastructures in STEs in this study.

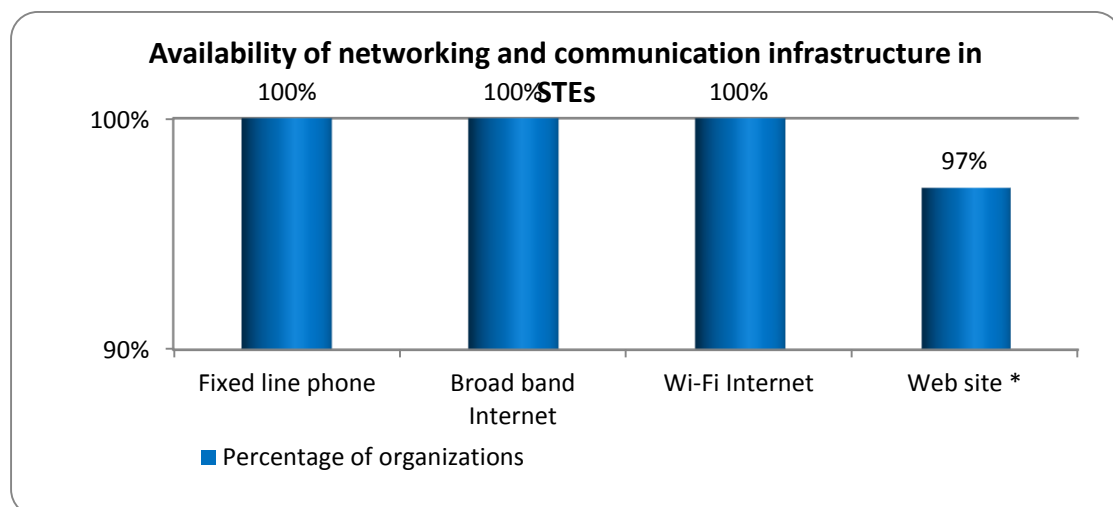


Figure 6.3: Availability of networking and communication infrastructure in STEs.

\*While a website is not an infrastructure it is included here for ease of reference.

All the businesses have Internet facilities and provide free WiFi internet service for their customers. Moreover, they believe it is an essential feature of the accommodation that they must provide free Internet for their guests and it has become a norm in the industry. Although the Internet and telecommunication services were available and well used by these businesses, one of the services that is least available and most expensive for these small businesses is computer repair and maintenance services. However, this limitation varied according to regions and will be further discussed later in the cross-case analysis.

It was unanimously agreed by the owner-managers that having the Internet for their sales activities and providing WiFi services for their customers is a must for their survival as a small tourism business. Providing these services unlimited and for free is an emerging feature of the accommodation sector in tourism, and small businesses are no exception. As one manager commented on this,

*'I really didn't want to get these internet and make it more complex but even the small hotel started recently nearby here has free internet. So I had to do it to save my business at that time ...'*

AC1

In support of this requirement the country has a conducive environment for businesses with widely available Internet services at an affordable price even for these small businesses (see Section 4.4). It was evident that all the businesses considered in this study maintain Internet services at an above average level. However the utilisation of this valuable resource varied depending on factors such as availability of skilled human resources and the availability of general infrastructures such as electricity and other support services. How these other factors affect the use of Internet and communication technologies is further discussed in the cross-case analysis.

Although the business website is not strictly a direct infrastructure it was included in this section as it can be used as an indirect infrastructure for the business in its operations such as reservations, marketing and promotion. Of the small businesses in this study, 97% have a website of their own. These websites were maintained by themselves or by someone else on behalf of them.

One important feature that could be seen in these businesses is that even when they have no computer for their business activities they have a hosted website with at least basic information for their potential guests. Everyone in the business believes that they should be visible to their potential guests and having a website is essential for surviving in the business. For most of them the website is developed by a freelance web developer or by some other small IT business organisation. Some owner-managers with the ICT knowledge maintain and update their websites, for others it was done by educated children in the family. However, it was evident that about a half of them do not keep their website up to date. The reason for this was mainly due to the cost of such services. It was further revealed that owners wait for their children to come home from their universities to get these things done on their website. As one manager explained, and was common to many other cases,

*'I collect photos and other information that I think is good to go in our website in a special folder and when my son comes home (from the university where he is studying for an engineering degree) he chooses stuff and updates the website ...'*  
SC2

To further investigate the content of the websites of these STEs a web content analysis was performed. Figure 6.4 shows the availability of specific features of the websites of the STEs in this study.

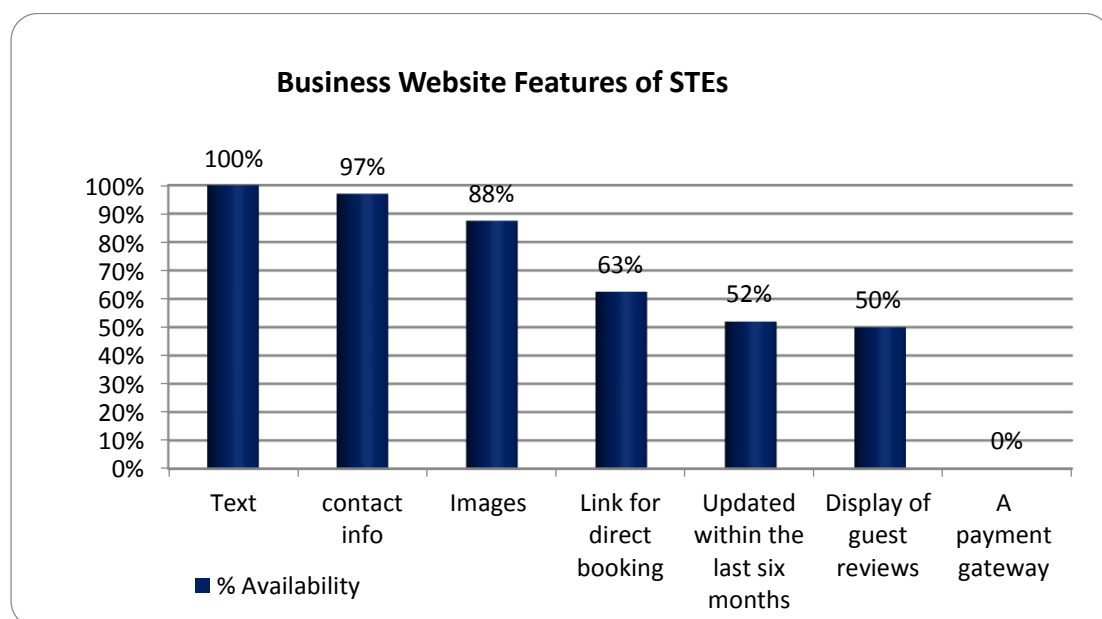


Figure 6.4: Availability of specific features on websites of STEs.

Web content analysis showed that more than 90% of the businesses' websites include readable text, comprehensive contact information, and images and photographs to display their services and amenities available to guests. However, only about half of the websites have updated their information on the web within the last 6 months. The same percentage of websites display guest reviews or have a link to a TripAdvisor review page. None of the websites has a payment gateway, although 63% provide a link to direct booking that redirects the customer to another page that provides direct contact details or online booking inquiry forms. How STEs use their websites in reservations, marketing and promotions is further discussed in the key business processes of STEs, in Section 6.3 of this chapter.

It was evident that although reasonable ICT infrastructures existed within the country, these were not being used to their full potential, mainly due to the lack of ICT skills of the employees of these STEs. The next section presents the findings on the available level of ICT-skilled human resources with the STEs in this study.

#### **6.2.2.2 *Human IT resources.***

Human IT resources refer to knowledge and expertise on both technical and managerial aspects. Examples of technical expertise include application development, integration of multiple systems, and maintenance of existing systems; managerial skills include the ability to identify appropriate projects, marshal adequate resources, and lead and motivate employees to complete tasks within the budgetary constraints (Melville et al., 2004).

Throughout the interviews it was evident that ICT human resource is the scarcest resource within the STEs studied. Less than 20% of businesses have employees with at least a diploma level qualification in ICTs, and only 11% one with a basic certificate; 74% of the business owners and managers said that they only have basic computer knowledge obtained from using the devices. Figure 6.5 depicts the available level of IT skills among the employees of STEs.



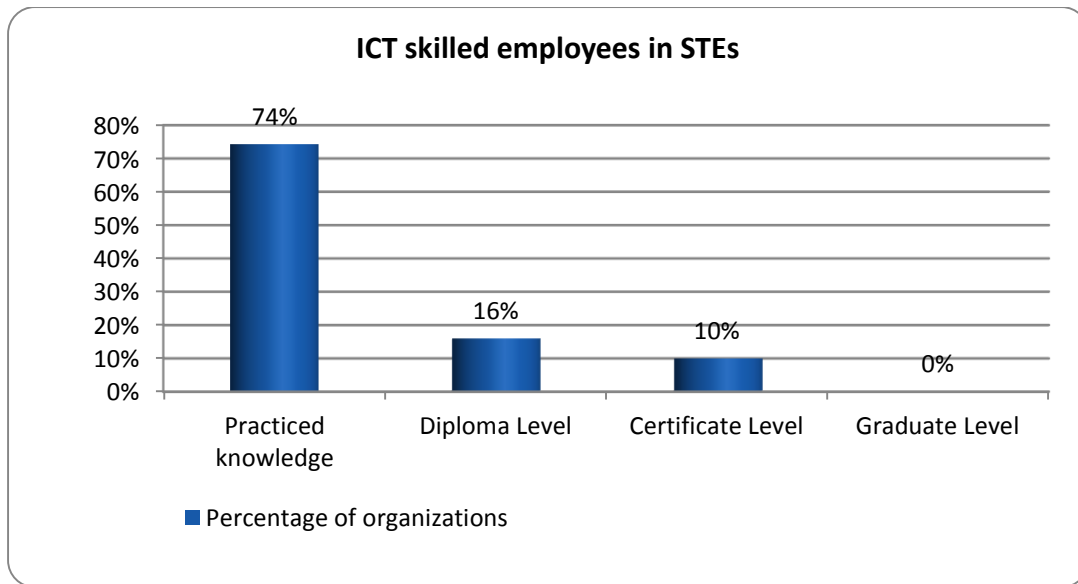


Figure 6.5: Level of ICT skills of employees in STEs.

As Figure 6.5 shows, most employees have gained skills practically using these devices and applications. They learned to use these devices at the time of purchase as the vendors provided them with an introduction to the device. Later they used the instruction manual to learn specific features useful to them.

*'I am the only one using ICTs and I don't have a formal qualification. I don't know much about computers but just use it from the things I learn from operating it'*

HC5

In many other cases a close family member or a friend who is capable of using the devices initially helped them to learn the basics, then later by exploring the features by themselves they learned the essential functionalities. As described in the PESTEL analysis (Chapter 4, Section 4.4.1) the current education system in Sri Lanka includes ICT education in the school curriculum and ICT literacy in school is of a good level. Some family businesses at first use their children who are attending school and capable of handling these devices and applications to carry out the business activities and later adults learn from this young generation how to use the devices. The younger generation is better educated and is familiar with the general use of the computers. They provide support for technological activities such as email communication, reservation updating, website maintenance and responding to online reviews.

*Actually that's been handled by my son. He has a good knowledge in computing.  
So he's the one who deals with it'*

AC1

No manager had a graduate level qualification related to IT in these businesses. However there were a few managers who have graduated with a degree in hotel management, which included courses related to the use of ICTs in hotel management. When analysing cases that use comparatively advanced applications among these STEs, it was found that these were the STEs with well-educated managers with qualifications such as Hotel and Tourism Management degrees from recognised educational institutions of the country. According to them as a part of their study they have gained the theoretical knowledge and some practical experience on how to use computers and ICTs in the tourism industry. It was evident in their business places that they were also using their knowledge of business functions to improve their customer services. This was demonstrated by activities such as maintaining a special database of their customers.

*'We record all the important information of our guest in a computerised file and a system is automated to send them birthday greetings on the day which makes them happy and remind us as a place to visit again, and if there is special preferences for food or room arrangements or whatever they like we spend some time to record them with a little note so when the customers are returning we give them their preferred setting even before they ask for it which makes the guests really satisfied with our services ...'*

SC5

The few owner-managers who have such skills acknowledge that the ICT knowledge gained from their education programmes were very useful and enabled them to perform better in all their business functional areas. A few managers mentioned that they participated in recognised courses leading to a certificate, but due to high work commitments they could not complete these courses. However they were satisfied that they gained knowledge that is valuable when using ICTs in their business activities. The managers and owners who already identified these work commitments sometimes plan their employee training programmes in the off season. These training programmes were mainly Tourism management courses with an IT component, but providing training for employees was too expensive for these small businesses. Therefore, they always try to hire employees with at least basic IT qualifications. However there was a high turnover

of the qualified staff seeking better opportunities. As described in the PESTEL analysis (Section 4.4.1), it seemed that Government of Sri Lanka has identified ICT as a major economic driver and initiated several ICT skill development programmes. However, the above findings indicate that those initiatives have not reached their intended beneficiaries such as these STEs.

When the skilled employees were not available within the business they used external sources to fulfil their IT skill requirements. This included hiring IT skilled people seasonally or occasionally to get specific tasks done. However, it was evident that when the managers and owners had at least an average level of IT skills, they tended to get more benefits out of the existing resources compared to their counterparts.

This section has presented the findings on the ICT resources of the STEs in terms of technological and human IT resources. The next section describes the availability of complementary resources of the businesses.

### **6.2.3 Complementary resources in STEs**

In the process of generating business value for the focal firms, certain organisational resources can become complementary to the IT resource available in the firm (Melville et al., 2004). When synergies between IT and firm's other resources exist, it is known as complementary organisational resources (Wade & Hulland, 2004).

Barney's classification of firms' complementary resources (refer to Chapter 3 Section 3.2) include;

- Non-IT physical capital resources
- Non-IT human capital resources
- Organisational capital resources

The next section presents findings on the availability of complementary resources in STEs.

#### ***6.2.3.1 Non-IT physical capital resources***

Apart from the physical IT resources discussed in the previous section, all other physical resources available in STEs were considered as non-IT physical capital resources. These included the hotel buildings, beds and other furniture, vehicles, additional resources such as swimming pools, playgrounds etc. The hotel building, beds and other furniture

were essential physical resources to run the hotel business for these STEs. However, not every STE had additional resources such as special architecturally designed buildings that enhanced their hotel image, and vehicles, swimming pools, playground and sports items to provide additional services to their guests. The owner-managers' belief was that having these additional resources is important to provide a high quality service and a better holiday experience for their guests. Figure 6.6 shows the availability of these additional resources in STEs.

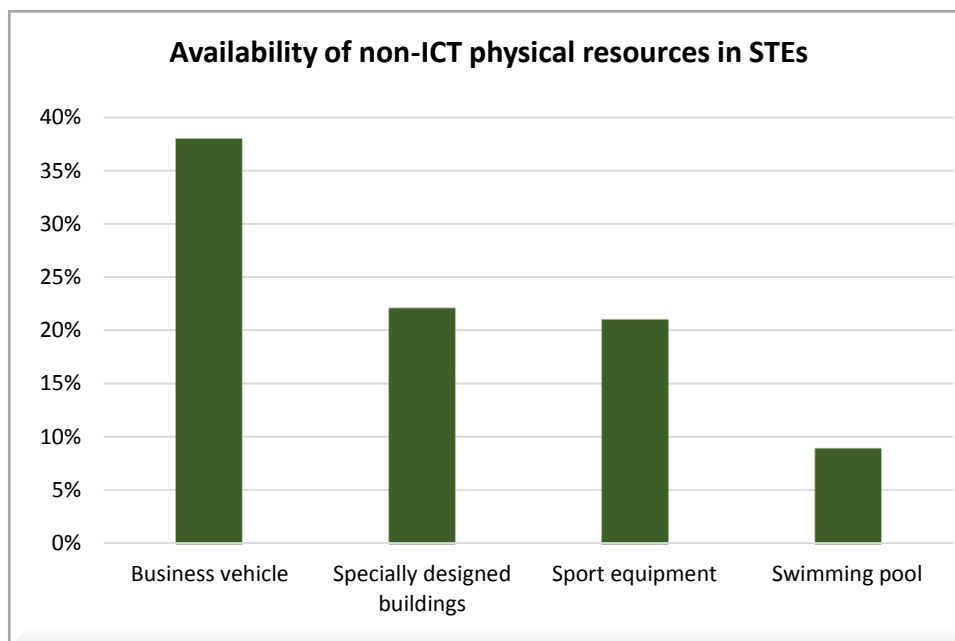


Figure 6.6: Availability of non-ICT physical resources in STEs.

Business vehicles were one of the complementary assets that STEs considered valuable in their business processes. Business vehicles are used to provide customer services such as airport pickup and drop-offs, which was considered a valuable service for guests as it was mentioned in online reviews. However, only 38% of the businesses had a vehicle of their own for business purposes.

Although less than 30% of STEs had specially designed buildings, it was considered one of the most valuable complementary resources. These included some of the family heritage houses, ancient bungalows and some buildings designed by a world renowned architect named Geoffrey Bawa (Robson, 2002) and his students in the 1970s and '80s. These buildings were highly valued assets in hotel businesses as they helped form and develop the image of the business as well as filter the type of guests they were

receiving. Providing evidence for this claim, one of the managers commented on the value of these resources:

*'This has a long history, established in 1977 as a four-room guest house and this was designed by Mr Geoffrey Bawa, one of the most famous architects in the country. The elegant design of the building merged with this village like very calm and quiet location and luxury inner facilities are appealing for high end tourists. So mostly we get Europeans, like 80%, and the rest is from Australia, and we also got some from New Zealand as well ... so the hotel itself with its location gives a boost to attract valuable customers for us ...'*

SC3

Other managers (60%) also mentioned that the appearance of their hotel building played a major role as an attraction for tourists. Further, the rising demand for eco-tourism also increases the value of hotel buildings located in rural regions with environmentally friendly designs. Noting how important hotel building design is for them, one manager commented,

*'While many of the tourists are still looking for free WiFi and access to other facilities, there are genuine high end tourists who are looking for a spectacular atmosphere, getting closer to nature and being ecofriendly and organic dining. Our hotel is specially for such tourists. It is built completely with ecofriendly materials but with very high quality facilities'.*

AC2

STEs who provided recreational activities (about 20%) had sport equipment for hire. These resources were useful to attract customers who search for accommodation with adventure activities and mostly as small groups.

As a tropical country with warm weather throughout the year, swimming pools were also considered a valuable additional service for the tourists visiting Sri Lanka, but not every STE has the financial capability to maintain such services. Only 9% of STEs had a swimming pool for their guests' use.

In combining these valuable complementary assets with ICT, these small businesses were able to gain competitive advantage over other small businesses. Rather than just having the architecturally designed buildings in the business, ICTs provide a platform for them to show it to the world and attract potential customers to them. Business

managers recognised ICTs as a useful tool to exploit the full potential of their special resources. For example, maintaining a website with up-to-date information, photos and graphics as well as customer reviews helps to promote these special features to their potential guests.

It was evident in this study that the availability and the provision of complementary resources in STEs depended on the tourist region they were located in as well the type of tourists they were trying to attract. These variations of complementary resources across regions and ICTs used to promote them is further discussed in the cross-case analysis. The next section discusses the findings on non-IT human resources available in the STEs.

### 6.2.3.2 *Non-IT human capital resources*

As described in the IT human resources section, the human capital resources of the small tourism firms in this study lacked IT skills. Hence, they were categorised under the non-IT human capital resources. The main categories of employees or the positions found under this category were managers, accountants, administration and reception staff, chefs, cooks and kitchen support staff, and butlers or general labourers. Figure 6.7 shows the availability of non-IT human resources in STEs.

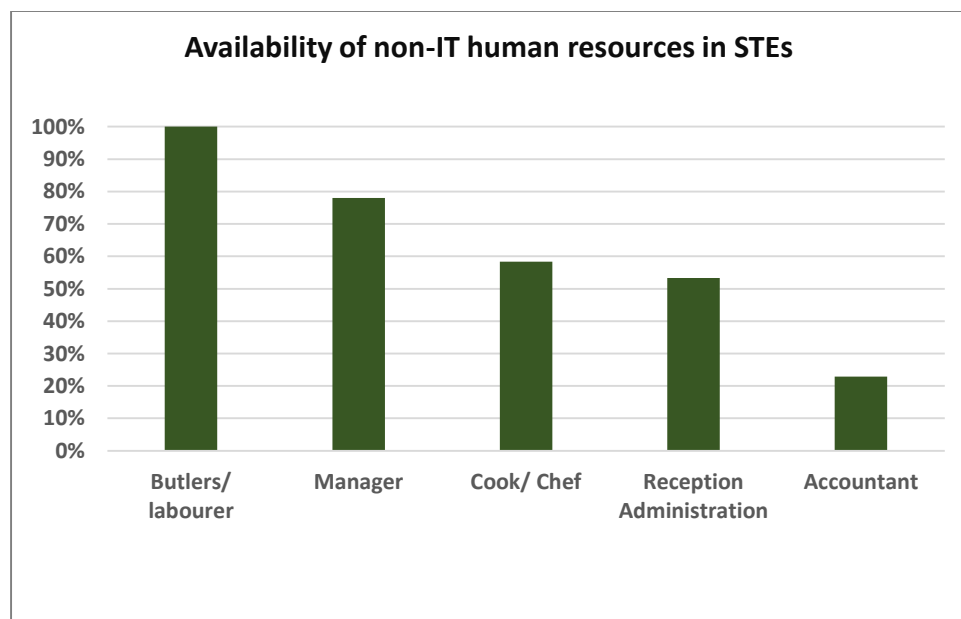


Figure 6.7: Availability of non-IT human resources in STEs.

Apart from the owner of the business itself, when there is a separate person for managing the business it was considered a management position. More than 70% of businesses have a separate assigned person as a manager. A common feature of the non-IT human capital resources of the STEs was having an organisation structure that consisted of a manager and one or a few other overall workers. With this structure it was evident that the manager performs all the management and administration tasks of the business while other general workers perform the routine operational tasks of the business.

Mostly, the reception and administration tasks as well as the accounting functions were also performed by the manager. Even when there is a receptionist and a small administration team, the manager works as a team leader and directs the staff to attend business operations, especially for the fulfilment of their guests' requirements. Therefore the position of the manager was crucial to the success of the business.

Managers of the 35 cases varied in their maturity, experience, and qualifications. However, regardless of these differences, all the managers showed a high commitment and interest in employing technology in their business processes. Even mature managers who were not very familiar with the technologies made the effort to utilise ICTs by using skilled employees in administration and reception tasks. As one manager explained,

*'The receptionist has done IT. I don't know what qualifications she has but she's an expert in computers. She can handle anything coming in applications or in computers or printers'.*

AC9

This positive attitude towards using ICTs in their businesses has led them to find a way of implementing ICTs at least in key business processes. Therefore having such a manager in the business was found to be a valuable complementary resource for these STEs.

Other than the managerial positions, another important position identified as a complementary resource is the position of chef or cook. About 80% of the STEs in this study provide a free breakfast to the guests. They offer authentic Sri Lankan style dining facilities or the other types of meals according to requests. The businesses who provide these services consider having a good chef in their kitchen to be an added value to the business. As one manager highlighted the importance of having a good chef, it is a crucial factor that increases the rate of returning customers to their business.

*'We have a good chef who is very good at fulfilling all customer needs of foods. Whether it is European or authentic Sri Lankan he does the best for our guests. We get special compliments in our reviews for delicious food that the guest enjoyed here. And sometimes we got customers returned to our place several times specially because of the food made by our chef. He is one of the greatest assets we have'*

SC3

Small tourism businesses who provide this type of fine dining facilities to their guests have an improved business image as well. As the managers described in above quote, they get positive reviews for their food services, which increases their customer ratings in review sites.

The position of accountant was another important position available in STEs but it existed only in 23% of the STEs. In addition, in those places it did occur it was mostly a nominal position and apart from the account keeping they were responsible for several other administrative tasks as well. However, among all the positions this was the one that used ICTs most frequently in their work activities. As explained in the IT resources section (Section 6.2.2), the most widely used application for their work was the Microsoft Excel application while in a few places they used small business accounting software.

The most common position available in every STE was that of a butler or general worker. All the businesses have a person assigned in this position. They perform tasks such as cooking, cleaning, gardening, merchandising and any other tasks assigned to them as requirements arise. As customer service is the heart of the tourism businesses, the role played by these employees was considered crucial by the owner-managers as well as by guests. In most of the STEs, employees were given on-the-job training to provide good quality customer service. Well trained employees were a valuable asset to the business as their service will lead to positive reviews on the overall business. How these non-IT human resources are incorporated in ICT strategies is further discussed in Chapter 8.

### **6.2.3.3 Complementary organisational capital resources**

Complementary organisational capital resources are defined as the formal and informal planning of the firm as well as informal relations among groups within a firm, and between the firms and its environment (Barney, 1991). In relation to IT business value



research, these complementary organisational capital resources include the organisational structure, policies and rules, workplace practices, culture, etc. (Melville et al., 2004).

As small tourism accommodation establishments in Sri Lanka, the STEs in this study basically had a common structure and policies dictated by government policies and SLTDA standards. One significant finding related to organisational planning was the availability of a strategic plan for the next five years. Although it was found to be available only in 25% of the businesses, the organisations that did have such a plan showed a keen interest in developing their businesses. However, the emphasis given to ICTs in these plans was moderate compared to the emphasis on other developments. The owners were more interested in expanding their non-IT physical resources in the long term. However, this did vary depending on the regions the businesses were located in and the availability of technology and other general infrastructures. These regional differences are further discussed in the cross-case analysis in Chapter 7.

The way in which ICTs were complementary to these other resources was well recognised by the majority of owner-managers. All the managers agreed that ICTs were the most effective tool they could use to promote these valuable resources to potential guests. They appreciated the way ICTs could promote these attractions on the Internet by means of videos, images and photographs and in some cases by using virtual tours. Therefore, managers identified ICTs as helping them to maximise the gains of complementary resources by:

1. Promoting their complementary resources (attractions) to the world by allowing the guests to get a better idea of the product and services they are purchasing.
2. Improve the efficiency of non-IT human resources by utilising ICTs in their work activities.

A further discussion on these findings with literature is presented in Chapter 8.

### **6.3 Business Processes of STEs**

This section presents the findings on key business processes in the STEs. It further describes how STEs use ICTs in the key areas of the business activities. By analysing the key business processes and how ICTs were being used in those processes, this section focuses on exploring how ICTs bring value to STEs. Hence this section presents the

findings related to the first aim of this research: to explore how STEs use ICTs to gain business value.

### **Key business processes.**

As discussed in the conceptual framework of the research described in Chapter 3, the business processes in STEs were investigated in the key operational areas of the business. However, as described in Section 5.3.6, during the pilot study it was identified that the STEs in Sri Lanka have a simple set of business activities in order to run the business. Therefore, out of the main business processes considered in the research model, the data confirmed three processes as key in business operations of STEs in this research. These are:

1. Distribution and sales
2. Service delivery
3. Management

Under each of the main area of business operation, key sub-business processes were also identified. Figure 6.8 depicts the key business processes of STEs in this study.

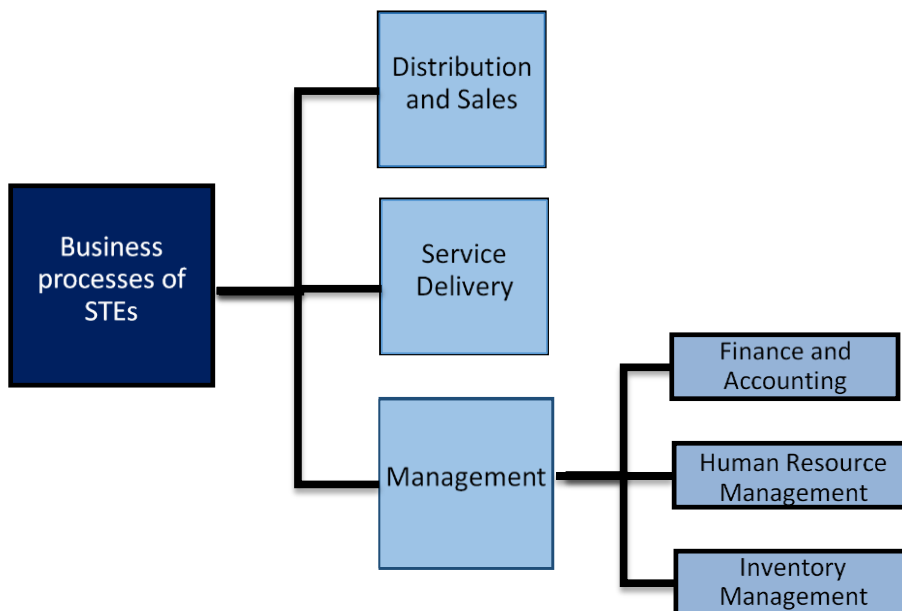


Figure 6.8: Key business processes of STEs

Each of the key business processes and its functionality in STEs is described in the following section.

### 6.3.1 Distribution and sales

Distribution and sales was identified by the owner-managers of STEs in Sri Lanka as one of the most important activities in their business. Under this functional area, there were three sub-processes: reservations, booking administration, and marketing & promotion. Although the purposes of each of these sub-processes were different from each other, it was evident from the findings that these three are highly interconnected and use a common set of ICT tools. Figure 6.9 illustrates the most commonly used ICT tools in the distribution and sales functions of the STEs.

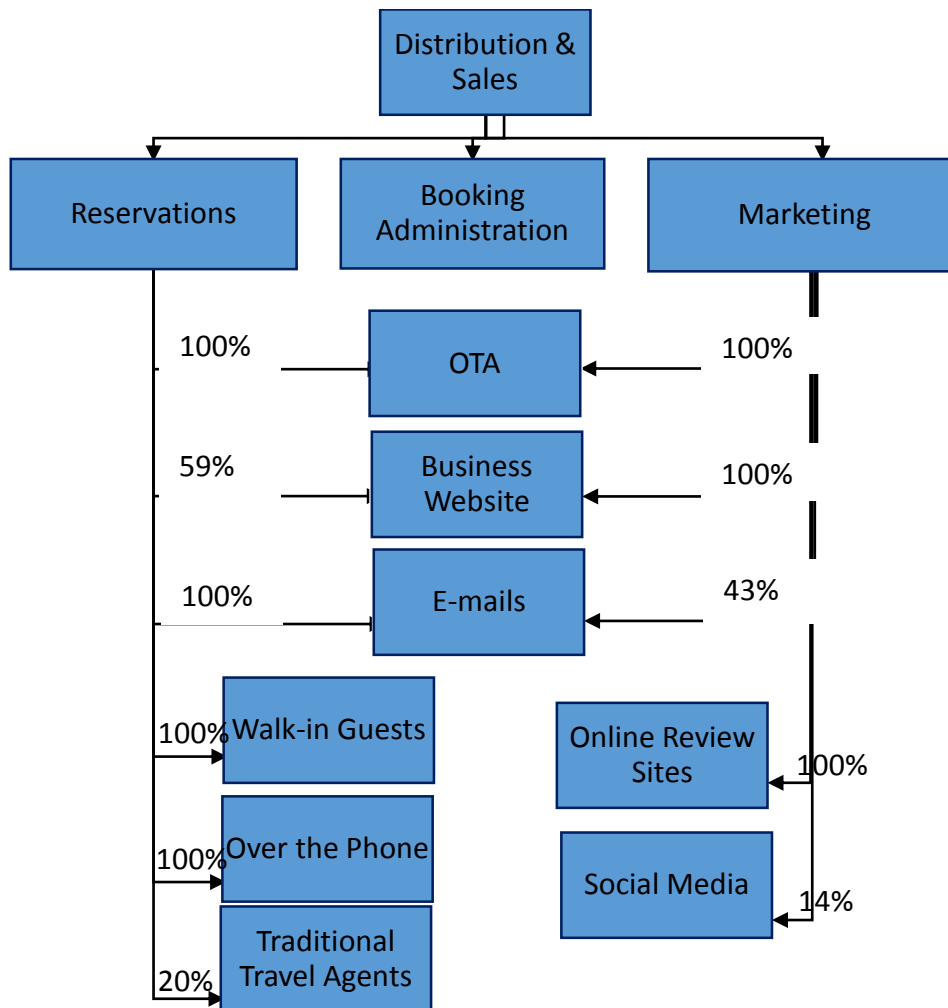


Figure 6.9: Rooms reservation methods used by STEs in Sri Lanka

\* Numbers indicate the percentage of STEs using these methods

As the major tools used in reservation and marketing are common to both functions, these two processes are combined in the rest of the discussion.

### ***Reservation, marketing and promotion***

As Figure 6.9 illustrates, the main methods used for reservations and marketing are the OTAs, business website and email. In addition to these common tools, room reservations were made through other methods such as traditional travel agents, over the phone and by walk-in guests. Online review sites and social media were the two other methods used in marketing processes. How each of these tools were used in reservation and marketing is described next.

### ***Reservation and marketing through OTAs***

Reservation through OTAs is the most commonly used method by all STEs in Sri Lanka. Every STE considered in this study was registered with at least one OTA while the majority are registered with two. According to owner-managers, over 70% of reservations were made through STEs get their name listed on an OTA's site by registering with them. OTAs provide a platform for guests to check availability of rooms on specific dates by maintaining the STE's reservation records. This reservation method was recognised as one of the main areas where ICTs play a major role in improving business performance. In many cases, optimum use of ICTs in this key business process could yield benefits by means of improving the operational efficiency and reducing the cost.

OTAs are used not only for reservations but also for advertising. As they can make all the necessary information available to potential guests through OTAs, owner-managers perceive that OTAs are the best place to promote their businesses on the web. OTAs also provide other tools to make businesses competitive such as star ratings and rankings for customers based on verified reviews on their sites. The significant role played by OTAs in performing the distribution and sales function for STEs is discussed in detail in Section 6.4.2.

### ***Direct booking and marketing through the business website***

As described earlier, 97% of the businesses have a website and 57% of them use it as a method of attracting direct bookings. Although it is mentioned that the facility for direct booking is available on the website, none of the websites provide a payment gateway; in reality however they provide only the necessary information for customers to directly contact the hotel and the actual booking is made through other means such as by emailing or over the phone. Some websites do allow reservation requests to be made through the website along with dates of stay, type of rooms and other required facilities etc.

According to the managers, it is very costly to have and maintain a payment gateway in the website. Further, they explained that even if they have one, it is not worth the investment as direct booking through the website is rare. As tourists have security concerns and are not very willing to provide their credit card details to a non-recognised website of a small business, they are more likely to book through recognised online agents who provide guaranteed security for their online transactions.

One manager explained that this was the reason they removed the payment gateway which they had previously had on their website. These findings provide some indications that even when the STEs are capable of using technologies, there are external factors that affect the effective level of usage of these technologies in their business processes. The relative cost of financial transactions, the willingness of customers, business reputation and providing online security for payments could be identified as some examples. These external factors that affect the use of the website and other ICTs in STEs are further discussed in Section 8.5.

While the website was used as a medium for attracting direct bookings, the main objective for maintaining a website was to have a global presence to promote their business. According to owner-managers, though registration with an OTA was essential for reservations, a website was also an essential advertising tool. Although not every STE could keep it up to date, the fact that 97% of STEs have a website for their business shows the importance accorded to it by these small businesses.

The website is the main tool they could use to show off the amenities they have to offer for their guests such as architecturally designed buildings. More than 80% of managers mentioned that having a website to display their specialities helps to differentiate them

from their competitors. In that way ICT helps them to promote their businesses by providing the means for customers to virtually experience the tourism product. As one manager explained,

*'We mostly use our website to give our customers a message that who we are and to see how others experience it. So I always keep it up to date with photos and we even make video and presentations available on our web.... Sometimes when guests are here they specifically request for something they have seen in the site ...'*

SC5

The websites were also used to provide necessary and important information for potential guests such as contact details, room availability, and rates. Web content analysis showed that 98% of these businesses provide this necessary information on their website. Some businesses provided further information on their websites to attract customers. For example, accommodation establishments with certified Ayurveda treatments had files linked to the website to promote the businesses. Interested customers could access these files, in which they could find case studies on various topics and specific treatments. Although these services operated at a very initial stage using basic ICTs, it was evident that such tools helped them to be more attractive to customers in their market niche.

In addition to OTAs and business website, the next most common tool used for reservation and promotion is email.

#### ***Reservation and marketing through email***

Email was the most commonly used method for reservations other than booking through OTAs. Apart from being the communication medium for OTAs and direct booking through website, STEs use email itself as a direct reservation method. According to the managers, this use of emails as a direct reservation method helps to build relationships with customers.

*'When someone enquires about our place through emails we always make our best effort to develop a good communication with them. We send them as much information without overloading but will be useful and attractive to them. This way they reply back and in most cases we can get the reservations confirmed as well'.*

SC5

80% of the managers commented that email is a method commonly used by them for reservations and promotions. Hence email itself does not create additional value for the business. However, they acknowledged that, by strategically customising the content of email messages, they can make them more effective and increase the possibility of reservation confirmations. A comprehensive email message can reduce the amount of search effort for a potential guest, and will encourage them to confirm reservations.

Another reason for using email was that it offers a lower cost tool for businesses to keep in touch with their customers. However, one factor emphasised was that the success of this method mainly depends on responsiveness to the emails. Prompt responses to email inquiries helped to increase confirmation of reservations. Furthermore, 90% of the managers mentioned in the interviews that being active and regular in responding to emails greatly helped in enhancing the customer loyalty. The high use of smartphone by owner-managers appeared to be helping to make this task more efficient for them.

*'In today's business being quick in replying matters very much. As much as the phone calls are very quick we promptly answer the email queries as well. It is really important to be the first to give enough information in one message. It is the first step of showing a good customer service'.*

AC9

As a way of speeding up the responses, it was found that about 60% of the STEs use template answers for specific topics. However, the managers emphasised that templates were personalised for each email.

Further, managers have experienced that a delay in responding to emails creates a negative impression of the business as well as loss of potential customers. According to their experience, the responses to emails are important to ensure confirmation of reservations. The replies should be direct and informative, answering queries and including further information that will be useful for guests. Sometimes customers send

copies of the same email queries to several places. In that case, by responding quickly, businesses can overcome the competition.

In addition to performing effective communication through emails, 57% of businesses use emails as a direct promotional tool. Promotions are mainly used with the existing contacts to increase the rate of retuning customers and promote the business among their friends and relatives. A personalised discounted rate was given to customers who posted positive reviews about their business. By keeping the offer transferable, customers were motivated to recommend such businesses to their friends and relatives.

As one manager explained,

*‘Soon when I get the notification of a review I read it and send an email to the customer thanking them for reviewing us with a discounted rate for their next visit. Not all of them can come back, but they use it for their friends. Recently I got a group of 10 guests in this way’.*

SC4

Apart from promoting through discounted rates, emails are used by managers to promote holidays in festive seasons and special events specific to regions or seasons. Emails are sent together with special accommodation packages to promote the business. Therefore, it was evident that by using templates and targeting their customers, these small businesses were able to add extra value to their businesses through this commonly available ICT resource.

In addition to the jointly used ICT tools for reservations and promotions, as Figure 6.9 illustrates, there are three other methods used for reservations in STEs, namely, over the phone, through traditional travel agents and walk-in guests.

### ***Reservations over the phone***

Over the phone reservations is another method used for reservations by STEs. However, this method is mostly used by domestic tourists and returning international tourists. Domestic guests use this method for its convenience in obtaining prompt responses and confirmations. According to managers, domestic customers who search for information on websites also prefer to communicate with the businesses over the phone as this is a more interactive method and they can get a quick response. Due to the cost of international calling as well as the time difference in different regions, this method is



less popular with international tourists. However, over the phone reservations from international customers also occur when the business is pre-known to the guest. Most of the international tourists who make reservations over the phone were returning customers. In other cases international tourists already in the country also use over the phone reservations. However, it was not very common as most of the tourists arrive in the country having already booked accommodation.

### ***Reservations through traditional travel agents***

Out of all the 35 cases considered in this study only a few businesses (11%) were registered with local travel agencies as a reservations tool. Owner-managers had varied views on local travel agents. Some owner-managers mentioned that the travel agents have very high standards and criteria that they cannot meet. Others perceived these agents as not much use in attracting customers. The majority were very confident of their selling capabilities online, and did not see the need for traditional travel agents anymore. As one owner-manager mentioned,

*'Lots of travel agents contact us. We gave them our details but do not have any expectations for sales. For your information I am telling this they were not capable of sending me a single guest. Only one day they contacted me for a reservation but this place was fully booked by then. We sell in advance and we do very well with online reservations'.*

AC4

Evidence from the research showed that these intermediaries have been replaced by OTAs. The few businesses who were still working with local travel agents had been working with them for many years and continued to do so because of the long term business relationship. It was found that the STEs connections with traditional travel agents were very low throughout the country. The number of travel agencies was also decreasing. The local travel agents who were well established were focused on high end and luxury hotels rather than the small accommodation. This provided further evidence of the growing importance of ICTs in STEs.

### ***Reservations by walk-in guests***

According to owner-managers, walk-in guests are a rare occurrence in room reservations though all the businesses accept walk-in guests if rooms are available. However, with the widespread availability of information and communication methods, travellers usually pre-arrange accommodation before visiting a place. However, sometimes last minute issues occur with pre-arranged accommodation, leading to walk-in reservations. For example one manager mentioned that he recently got two guests who walked in because they were unsatisfied with a small hotel they had already booked nearby.

Though it was mentioned that a variety of reservation methods were available, the findings provided evidence of the dominance of ICTs in the reservation processes. While traditional travel agents and walk-in guests were still used to a minimal extent, all other means of reservations occurred through ICTs. As traditional travel agents have faded away as intermediaries, the re-intermediation of OTAs could be clearly observed. The payment of commissions for reservations is unavoidable in both cases. However, compared to traditional travel agents, OTAs did play an important role in increasing the business value of small businesses by providing them with a global presence. How STEs utilise these technologies to gain business advantage through online selling and marketing strategies is further discussed in Section 7.5.1.

As Figure 6.9 illustrates, apart from the common tools used along with reservation processing, there were two other methods used by STEs for marketing and promotions, namely online reviews and social media.

### ***Marketing through online reviews***

Online reviews by guests were considered the most effective marketing tool by all the owner-managers. Even the very small hoteliers in rural areas in the High Country region recognised that the best marketing method was to have positive reviews on TripAdvisor. Some managers who did not have a clear idea about the concept of online reviews as a marketing tool still valued the services gained through the guest review sites.

*'You know, there is a site called TripAdvisor, if I ask from any of my international guest they say that they got to know about this place from TripAdvisor. I did not even do registering or anything with this site like I did with the Agoda but I see they are doing a great job in marketing this place. Thanks to them I don't want to do any other promotion by myself'.*

HC4

Although positive reviews help to promote the business, owner-managers had only a little awareness of potential negative effects. Although they get to know from guests about positive reviews, they were unaware of any negative comments and how badly they affected business image unless they check themselves. Therefore, allowing promotion to occur automatically through an unknown website should not be considered a wise method of promoting the business. Businesses need to learn to be interactive with online review sites and provide their feedback where necessary.

Other than the promotion of the business through positive online feedbacks, managers appreciated the genuine opinions given by guests that helped them to improve their overall services. According to them, though at first some reviews are critical, on further consideration they can be seen to be helpful in developing their services. It helps the managers to appreciate the customers' perspective:

*'When I read some of our reviews on TripAdvisor, I thought, I gave the best service I could but why these people still complain about it? But later I realised that we are dealing with international tourists so it should not be provided only on the way that how we feel is good. But while maintaining our Sri Lankan style we can still accommodate their requirements in our services. Not all of them but some reviews are really helpful in improving our own services to them'.*

SC4

Therefore it was evident in the findings that, despite the challenges that online reviews can bring to businesses, they provide managers with an opportunity to use this feedback for product development and to engage with a larger number of prospective customers. Some owner-managers were very concerned about the reviews given by their guests and make a special effort to maintain high quality services to attract more positive reviews from their guests. It was evident that the idea of improving customer service and using the external forces (online review sites and online travel agent sites) to

advertise their services was a leading strategy used by the STEs. These online promotional strategies are further discussed in Section 7.5.2.

### ***Marketing through social media***

As an emerging online marketing tool some STEs have commenced using social media by maintaining a brand page on Facebook. Out of the available social media applications Facebook and YouTube were the tools used most widely by these STEs. The businesses who used the latest technologies and had skilled human resources were the ones who had started using social media for marketing. They were early adopters of social media as a marketing tool and were currently at a stage of experimenting to see how useful it would be for their businesses. However, although they had developed a Facebook page and initiated the strategy, it was not utilised to its full potential. This is due to lack of knowledge regarding the application, and associated analytical tools in order to measure page performance. Though they were not sure if it contributed to improved room bookings or not, they were satisfied that their Facebook page enabled them to improve communication with their guests. However, when questioned about getting customers' insights and opinions about the services they provide, managers unanimously agreed on the importance of online word of mouth through online guest reviews provided by sites such as TripAdvisor.

### ***Booking administration***

Booking administration is an essential business activity that has to be performed by the STEs as a result of the previously described multiple reservation methods. Seventy percent of the STEs were registered with two OTAs. Therefore these STEs have to manage reservations from both online agents as well as direct bookings from other means. OTAs have their own inventories maintained on behalf of the STEs in their websites, but as there is no mechanism to update these inventories with other reservation confirmations owner-managers have to manually update the OTAs inventory records. When a tentative reservation or a reservation confirmation is made, the OTA sends an email to the STE. Owner-managers maintain a separate record of their rooms' inventory together with a detailed record of the reservations, including guest's information. Whenever a cancellation or a modification is made, owner-managers do

the alterations in their own inventory record as well as on the OTAs' inventory records. Some owner-managers identified this as a complex activity that they have to perform, especially when they are registered with two OTAs. In peak periods, even a slight delay in updating different channels of inventories can lead to duplication of reservations. Hence, they were looking for ICT solutions to link the inventory records so they could be updated automatically when a confirmation is made from any channel. However, none of the STEs were aware of the availability of any ICT solution for this issue. Therefore, at the moment they were using Excel application to maintain their inventories and manually update the OTAs' records of room availability.

The key business processes where ICTs can make a contribution to STEs' performance is in distribution and sales, which included reservations, booking administration and marketing and promotions. The current level of use of ICTs in these processes was found to be moderate. However, it was identified that even with the available level of ICT resources these small businesses had the potential to gain more benefits if they used them in more efficient way.

In addition to the distribution and sales processes there were two other key areas in which ICTs were being used by STEs. These business processes are discussed next.

### **6.3.2 Service delivery**

Service delivery is the second main area of business identified, and two sub-processes were identified as customer service and complaint management

#### ***6.3.2.1. Customer service.***

When asked to identify their key business activities managers unanimously agreed that customer service was the most important activity of all, as they believe tourism is a 'people business'. Customer service is important from the point at which a potential guest enquires about reservation information up to the post-stay activities such as requests for feedback. The owner-managers agreed that ICTs help as a tool to improve customer service in many phases of the service process. However, they identify that service provision once the guest actually arrives is the most important phase of customer service. Providing a better customer service leads to an increase in the business performance through positive feedback, which generates returning customers

and potential new customers. Therefore most owner-managers make providing the best possible customer service for their guests a high priority.

Another activity they perform in order to provide better customer service is to maintain a customer database, with guests' profile information such as their likes and dislikes. About 50% of managers do further analysis of these databases to get a general idea of food preferences and room arrangements for guests from different regions and countries. For example, when preparing a room for an Asian guest and a European guest the database helps to give some idea on what temperature the air conditioning should be set up to and levels of spiciness they preferred in food. However, managers recognise that it is hard to satisfy guests all the time. Therefore the managers need to think about how to manage the complaints when things are not up to the expectation of their guests.

#### ***6.3.2.2. Complaint management***

Almost all the owner-managers mentioned that they receive no or very few complaints as they always make an effort to provide the best customer service to every guest. However sometimes they get complaints about the low speed of the internet or other factors beyond their control. In addition some complaints were based on guests who were not satisfied with available facilities. For example, guests who come on the cheapest available rate are sometimes not satisfied with the standard of quality of the room facilities. Whenever there is a complaint, managers themselves attend to the matter to provide proper respect to the guest, as well as to be able to make decisions without keeping the guest on hold. However, the managers identified that it was difficult to manage indirect complaints that appeared as negative feedback on review sites but of which management had not been notified during the guest's stay. Managing such complaints required active participation in responding to online reviews that have the potential to harm the business image. Proper awareness and use of ICTs plays an important role in managing such complaints.

#### **6.3.3 Management (back office functions)**

Under the management processes, owner-managers identified three main general management processes that were crucial to the operation of the business. These are:

- Finance and accounting
- Human resources management
- Inventory management

#### **6.3.3.1 Finance and accounting**

Among the 35 cases considered in the study about 60% were maintaining proper accounting systems. It was evident that these STEs prepare reports that help the owner-managers to control the financial performance of the business. Profit oriented businesses were more likely to use computers for accounting and finance as compared to STEs operating as lifestyle family businesses. The most frequent applications of computers were recording day-to-day business transactions, preparation of accounting reports and cash flow management activities. As described in the availability of software section, the most used application for this function was Excel while a few STEs used commercial accounting software packages for small businesses.

It was evident that about 40% of STEs kept inadequate financial reports, maintained informal accounting records, and did not prepare a comprehensive set of financial reports. The majority prepared financial statements with the intention of meeting day-to-day operating requirements. In such cases they had a lower motivation for utilising ICTs in accounting processes and mostly recorded the transactions manually in a book or using a simple Excel sheet.

#### **6.3.3.2 Human resources management**

As more than half of the businesses considered in this study had fewer than five employees, human resources management was a less complex process. However, as managers viewed tourism as a people business where customer service was a top concern, every business gave a high priority to providing proper training to employees who are dealing with guests. About 50% of the businesses identified the scarcity of trained and skilled employees both in tourism as well as in ICT aspects as a significant issue. In most of the places new employees were given on-the-job training under a senior employee or by the owner-manager. Managers concentrated on main employees who were in direct contact with guests and the employees who were working in the

food and beverage department especially the chefs. Therefore, the role of ICTs in Human resources development was in a minimum level at this context.

### **6.3.3.3 *Inventory management (non-room)***

Apart from room inventories, STEs have to maintain inventories for other items in the business. Basically they used computerised inventory systems for kitchen items, laundry items and stock such as bed linen. Especially for the accommodation providers who provided food and beverage services, the inventory helped to keep the items' availability up to date. While all the businesses maintained room inventories, only a minority of STEs (37%) had systematic inventory records for other stocks. Even among these few businesses 90% used a manual method by updating records in a book or updating data in an Excel sheet, and only two cases used an inventory management system to organise and maintain up-to-date inventories for the business.

Although these back office functions do not directly contribute to growth in revenue, optimising these processes by using ICTs can significantly impact the business. It helps improve the productivity and performance of employees and managers, potentially increasing the revenue. However, it was clear that although the owner-managers were aware of the importance of these functions, they were not motivated to use ICTs in such areas of the business.

### **6.3.4 Summary of the business processes of STEs**

Three functional areas of business operations were identified as key to the improved performance of STEs in Sri Lanka. They were broadly categorised into distribution and sales, service delivery, and management functions. Under the distribution and sales, reservation, booking administration and marketing and promotion were identified as crucial and the processes where ICTs can make significant contributions to increase efficiency and reduce the cost of operating these processes. While service delivery and management functions were identified as important processes in improving the business performance, currently the level of usage of ICTs in these processes appeared minimal. However it was clear in the findings that the businesses who were utilising ICTs in these processes were more competitive than their counterparts, showing the potential of ICTs' contribution to the performance of STEs.



After identifying the elements in the focal firm it is necessary to consider the effects of the external environment on STEs in using ICTs in their businesses. The following section presents the findings on the external environment of STEs.

## **6.4 External environment**

This section presents the findings on the external environment of STEs under three main categories of industry characteristics, government support and trading partner resources and processes. By analysing the external environment, this section focuses on identifying the external factors affecting the use of ICTs in STEs. Hence, this section presents the findings related to the second part of aim 2 of this research: Identify the organisational and external factors that impact on STE's ability to gain business value through ICTs.

The overall characteristics of the tourism industry of Sri Lanka were analysed and presented in the PESTEL analysis. Therefore, the section on the industry characteristics in this chapter concentrates on participants' views of the effects of industry characteristics government initiatives on their businesses.

### **6.4.1 Effects of industry characteristics on STEs**

Characteristics and changes in the tourism industry affect the use of ICTs in the small enterprises within the industry. Participants in the interviews presented their views on recent trends and changes in the industry in two main areas:

- Demands of ICT-intensive customers
- Changes in the industry after the war in Sri Lanka

#### ***6.4.1.1 Demands of ICT-intensive customers***

As discussed in the social factors of the PESTEL analysis, recent developments such as the increased use of technologies like social media and the rise of OTAs created challenges for the tourism industry. While this could be seen as a global trend in tourism increased use of technology even by the domestic travellers has made the use of ICTs an essential feature for these small businesses. Due to the increasing demands from ICT-intensive customers, STEs had to give priority to improving the use of ICTs in their businesses. All the participants emphasised that because of the growing use of ICT in the

tourism industry, especially among customers, they have no choice but to incorporate technology into their businesses. As one manager highlighted,

*'Actually we need ICTs even to make one business. We cannot just stay isolated because from searching to confirmation of booking people do everything on the Internet. So we should be there, it is not a luxury but something essential to be in the business'.*

CC6

Regarding customer requirements related to technology, the participants were most concerned about two things. It is now a must to be visible on the internet in order to be listed in search results of customers. The second was the providing of technology services to their guests in terms of broadband and WiFi services. Participants commented on the changes that have occurred during the past few years:

*'Before we always gave our best priority to provide the comfort of their accommodation and providing a delicious breakfast. But recently I realised as much as the comfort of the room the speed of the WiFi also matters to them. Even while having breakfast they upload photos and search the internet. No matter how good the breakfast, even if the connection is not good it's counted as a bad experience'.*

SC5

Because of these customer demands most businesses invest in these basic ICT facilities regardless of the cost. As competing businesses are also providing these facilities this also affects the decision to adopt ICTs.

#### **6.4.1.2 Changes in the industry after the war in Sri Lanka**

The year 2009 marked a special milestone in the tourism industry of Sri Lanka with the ending of the civil war that had continued for more than two decades. With the establishment of peace, Sri Lanka was named as a safe destination to visit. As discussed in Chapter 4 these changes affected the tourism industry greatly in areas such as an increase in the numbers of tourist arrivals, and an increase in new entrants to the tourism businesses.

### ***Increase in the numbers of tourist arrivals***

As unanimously agreed by managers and supported in Chapter 4 with statistics (see Figure 4.2), tourist arrivals rapidly increased in the year 2010 immediately after peace was re-established in the country. As one manager answered,

*'Of course, No questions about that, after 2009 we had increased number of guests. Normally we had quite a long off season before that, but now we don't have any off season at all'.*

AC9

Other than India, European countries are the major source markets of the Sri Lankan tourism industry (Section 4.3.3). However, due to the economic crisis that started during the same period in European countries, the increase in the number of arrivals from this segment was comparatively lower than from Asia and other regions. As managers commented,

*'Most are from China. Then some are from Russia. European clients are less. There are some Indian and Maldivian clients as well'.*

HC1

The available statistics (Table 4.4) also confirm these views of the participants. The percentage change of arrivals from different tourist market regions shows that Asian countries had the highest percentage change while Europe had a fluctuating growth. China and Russia emerged as major new markets, and travellers from India also increased in great numbers after the war.

As the managers further recognised, rather than high spending travellers the increase was mainly from budget travellers. The owner-managers of well-established STEs who have the experience of having high spending European guests identified this as a period of increasing arrivals but not as a time of prosperity in the industry. The majority (64%) of the managers mentioned that although the numbers increased it did not make much difference in their revenue, as their guests were under a tight budget. Some participants commented on the frustrating behaviour of their customers.

*'Actually I have been in this industry for 25 years, the guests who are coming now are very cost conscious. They only come here on bed and breakfast basis; they skip lunch and have a snack or something in the evening. Sometimes for dinner also they are now going out'.*

AC4

Since the businesses could not sell many additional services to budget travellers, one of the ways they could increase their revenue was by increasing occupancy. This was identified as a reason for many STEs to register with two OTAs (Agoda and Booking.com), which are mostly used by budget travellers from Asian countries and Russia. According to the participants, free Internet was the service most demanded by this category of travellers. As all the STEs provide WiFi services for free it could not be used as a strategy to attract more customers, but as some managers pointed out, it was common for many budget travellers to comment on the reliability and the speed of the Internet services in their reviews. Therefore, to maintain a high quality and uninterrupted Internet services some businesses purchased extra data bundles in the peak periods and rather than depending on one supplier they purchased services from two ISPs.

While the number of international tourist arrivals after the war significantly increased, so too did the numbers of domestic tourists. Domestic travellers who did not have access to the Northern and Eastern parts of the country previously increasingly visited such places as large groups or families. Once the war ended, people were very interested to visiting these areas both to see the region as well as to see the ruins and remains of the war related incidents. According to the interview participants, domestic travellers were very keen to travel to the north and were even willing to pay a higher price for the available limited accommodations.

*'After 2009 of course there was a rapid increase in local tourism. For three decades the northern part of the country was closed and people started to move there rapidly. Even when the room rent has no difference from international rates we could sell them to locals, especially during the school vacation'.*

AC4

Though local travellers wanted to visit the areas that had been closed for them for many years, these areas were not developed enough to provide adequate accommodation, food, transport and other facilities for travellers. This increase in tourist arrivals led to the expansion of current businesses as well as to the opening of many new tourism establishments throughout the country.

### ***Increasing new entrants to the tourism businesses***

After the war, existing accommodation facilities were not adequate to cater to the increased demand. The government identified the importance of this industry and was interested in investing in new businesses and expanding the capacity of the current ones. In order to capture the benefits of a developing industry along with the government support, people were keen to invest in the tourism accommodation sector. Findings showed that 51% of the small businesses considered in this study had started their business after the war.

*‘Yes after the war ended tourism is developing in Sri Lanka. Government also promoted the industry so we thought it is a good time to enter into this business’.*

CC3

The statistics (Table 4.8) also show that the accommodation sector saw an increase in its graded establishments after the year 2009. As the two regions with the highest number of tourist attractions, the South Coast and Ancient Cities regions had the highest growth of new entrants to the industry. All other regions also have a considerable increase in accommodation as non-accommodation tourism businesses.

This increase in new entrants was a threat to similar businesses already competing in that market. The new entrants had basic IT facilities from the beginning and were more interested in obtaining the current and latest technologies. This led existing businesses to follow this trends. As some managers commented,

*‘Actually before I was not very interested in providing things like free WiFi and online booking and all. But these new people who started a few miles away are offering all these things and we lost some of our customers to them. So I had to do the same to secure my place’.*

AC4

With the changes of the industry after the war government played a major role in uplifting the tourism industry and supporting the tourism businesses, which is discussed in the next section.

#### **6.4.2 Effects of government support on STEs**

Another main factor emphasised by the participants in this study was the government's supportive policies and promotional programmes. Although the comments of owner-managers were affected by their personal political views, regardless of their political preferences the majority of the participants (80%) mentioned that the government was playing a major role in developing the industry. The rest had complaints about the less efficient service of the SLTDA as the major government institution dealing with tourism matters. As discussed in the PESTEL analysis, the government support were identified in areas such as;

- Investment support
- Tax reductions
- Promoting the country's tourism internationally
- Promoting businesses through SLTDA
- Facilitating human resources development
- Developing general infrastructure

Among several investment promotions launched by the government, the homestay project was the most appealing one for small tourism businesses. Among the organisations who participated in the interviews, about 10% had started under this project and another 30% had benefited from the project to expand their businesses. Such participants responded very positively in terms of governments support for their investments;

*'Yes that's how we started the business. There was a paper advertisement by the SLTDA asking for homestay tourists and.... Tourism was getting very popular and then hotels were not ready. We thought this is a good opportunity to enter into the business with a lot of government support'.*

CC6

Tax reductions also helped small businesses to reduce the financial risks and to maintain the businesses in the off peak periods.

While the government's programmes to promote the country as a tourism destination was helpful for the industry as a whole, establishment of SLTDA provided promotion and recognition for STEs as standard international accommodation establishments. All the participants mentioned that registering at SLTDA gave them recognition as it provided a certification of standard services. However none of them emphasised it as a promotional method for their businesses.

The Sri Lankan government's promotion of its tourism received both positive and negative reactions from the small business owners-managers. More than 60% of the participants agreed that the government is doing very well in promoting the industry. As one participant replied,

*'Very good honestly, government is doing a good job for that, one thing is trademarking Sri Lanka as 'The wonder of Asia'. It's a big thing ...'.*

SC3

Managers believe that while the government promotes the country as a destination they still need to carry out their own promotions. Participants from Colombo City and the High Country region specially praised the SLTDA for their staff training programmes. These programmes were mostly focused on developing human resources for providing customers service, improving communication skills and the use of ICTs. However it was evident that the programmes were not properly implemented in every tourist region.

Although tourism was not the only focus, general infrastructure developments in the country also positively affected the STEs as well. Development of highways from Katunayake (from the international airport) to many other major cities with improved transport services greatly helped the STEs located in rural regions. Development of ICT infrastructure and skills training programmes was another positive result of the governmental support to STEs.

The findings provided evidence that in order to meet the requirements of a changing market-place, STEs use OTAs along with their own IT resources. By allowing small businesses to utilise their advanced technological resources and processes these trading

partners played a major role in improving the business value of STEs. The findings on the effects of these trading partners on STEs are presented in the following section.

### **6.4.3 Effects of trading partner resources and processes on STEs**

In addition to the characteristics and changes in the industry, the other main element of the external environment under investigation was trading partner resources and their business process. In the interviews, two main entities were identified as having the most influence on the external environment for the STEs in Sri Lanka. These two entities play an important role in the operation of STEs in its external environment. These are the OTAs and online review sites. However online review sites were not a direct trading partner of STEs. Although the review sites (TripAdvisor in this study) provide businesses to be registered with them and process reservations, due to the nature of this sites as described in Section 2.3.3 regardless of STEs being registered or not they get listed in these sites through the user reviews. Therefore due to the reasons of high influence they make on STEs and as the option is available to be partnered with them, in this study online review sites are discussed under the online trading partners of STEs. The findings on the effects of each of these trading partners on STEs is presented in this section.

#### **6.4.3.1 Online travel agents (OTAs)**

As discussed in the literature review OTAs are a third party business that dominates the tourism industry for reservation of travel products. While it is evident in practice that the services provided by OTAs (see the literature review, Section 2.6.3) are often used by both travellers and businesses alike, this study identified the specific advantages gained and the issues faced by the STEs in Sri Lanka by collaborating with OTAs in their business operations.

#### ***OTAs in the context of Sri Lankan STEs***

According to the findings of this study, the most established online travel websites among the STEs in Sri Lanka were Agoda.com and Booking.com. While the majority (70%) of STEs were registered with both of these OTAs, all the STEs considered in this study were registered with at least one OTA for their reservation services. Figure 6.10 presents the percentage of STEs registered with specific OTAs in this study.



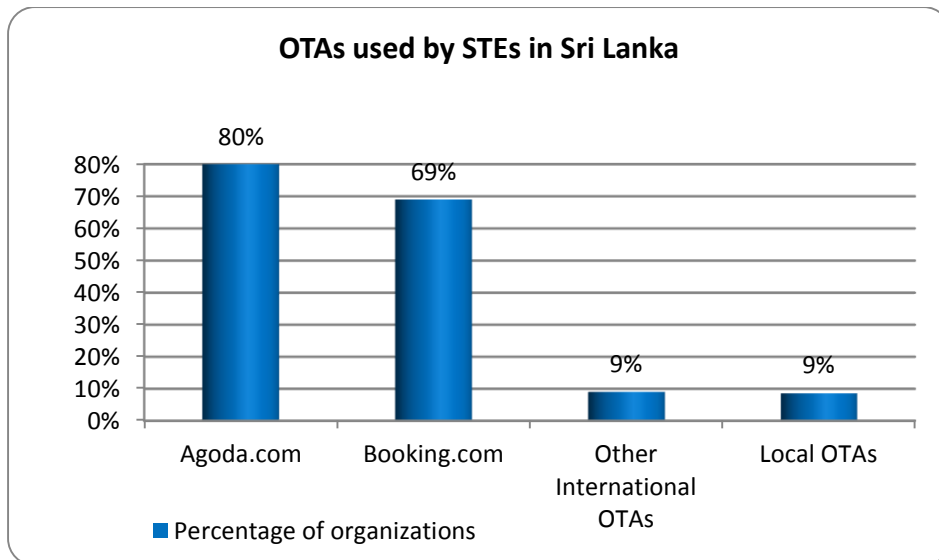


Figure 6.10: Use of OTAs by STEs.

As Figure 6.10 shows, it is very clear that Agoda and Booking.com were found to be the most established OTAs among the STEs considered in this study. Expedia, Hostelworld and i-escape were the other international OTAs used by STEs, though by less than 10%. The same percentage of STEs use local OTAs namely Lankaholidays.com, Shanti travel.com and John Keels travels. However, except for one STE, all other businesses made use of either Agoda or Booking.com for their reservations. The reason for this was because it was the best way to attract international customers.

Being based on Singapore, with a major focus on the Asian market, Agoda.com claims to have the highest inventory for Asia. As the company website mentions, its hotel management system gives properties autonomy to control rates and availability, or to create tailored promotions according to season and occupancy. Further, Agoda.com is known for collecting upfront payments for room nights booked on the company's website or mobile app. This is considered a very useful feature that facilitates the processing of financial transactions related to reservations. On the other hand, Booking.com is well-known among travellers for its no cancellation, no booking fees policy. It is based in Europe and considered as important by STEs that focus on the European market. Therefore, while Agoda was the choice for the majority of the STEs, many of them use both of these OTAs in order to obtain travellers from both Asia and the European regions.

By registering with an OTA these small businesses expect to fulfil two main business activities partially or in full through the OTA. These are reservation of rooms; and marketing and promotion.

### ***Reservation of rooms***

As described in Section 6.3, the key business processes where ICTs were being used by STEs were reservation of rooms and booking administration. All the STEs considered in this study were depend significantly on OTAs for their room reservations. As discussed in reservation methods, OTAs were the dominant method and accounted for over 60% of reservations for all STEs. Because of this, OTAs were considered to be the most valuable partners by STE owner-managers. Comments from the managers about the online agents' shows the high perceived value given to them. They consider that online agents are crucial for their survival in the industry.

*'...the two online agents are our only source of reservation. Without them it would be very difficult to attract customers to the small businesses like us'.*

AC3

*'Only recently we got registered with the Agoda and Booking.com. Until then we had a bad time getting room bookings. But now most of the time throughout the year we have guests in our place. If not for them we would even have close down the business by now'.*

SC5

Their responses revealed that OTAs are not only important in attracting international tourists but also domestic travellers. While domestic travellers were more likely to make reservations over the phone, they also use OTAs to find out which places are highly rated and have positive feedback from other customers. In some cases for reasons such as more flexibility in payment methods and free cancellations domestic travellers also choose to use OTAs to make reservations.

Although business owners valued having a website, they considered it to be crucial to be registered with at least one of the well-known online booking agents. Most of the websites maintained by these businesses were used for informational purposes only.

Having a payment gateway and allowing direct booking through the website is unusual and seems difficult for these businesses.

Some managers said that they encourage customers to book through Agoda and Booking.com, rather than making a direct booking, because they have reliable booking systems and payment methods. As small places they do not want to invest in systems such as payment gateways and deal with processing payments through credit cards.

*'We actually don't encourage these other kinds of payments. We like to direct them to Agoda because we small companies need not to have all these complex payment methods and all but we can use these reliable booking engines for that like Agoda or Booking.com. To be honest we don't want to struggle with all these payment gateways and take a risk. We are happy to get that service from booking agents. And I think even for the customers it is easy'.*

AC6

Maintaining a payment gateway on the website involves high investment costs and the risk of handling confidential customer information. Small business owners like to avoid these risks and perceive that they get a better service from the online booking agents.

In addition to payment processing, maintenance of rooms' inventory service is also provided by the online agent. Owner-managers say it is convenient for them because everything related to reservations is performed by online agents.

*'From booking.com and Agoda we get statements including all the details such as payments, cancellations, date changes and everything so what we do is updating our records with that information. Everything is conducted by them and if there is any change in reservations they inform us'.*

AC5

According to the owners-managers, online agents provide a platform to record and maintain their room inventory in a form linked to the travel agent. When a reservation is confirmed by the agent itself inventories are automatically updated. If the hotel makes reservations through any other means they need to update the agents' inventory manually. Most businesses keep reservation records manually in a book and update the agents' inventory online.

While some managers saw this as a convenient business process, other managers, particularly the ones registered with two or more OTAs, mentioned that they faced duplicating reservations if they did not act promptly to confirm reservations from each

travel agent. They had no automated means of updating multiple inventories, and as a result each time they get a reservation confirmed they have to update all relevant inventories to show the right availabilities. They would like to use technology to overcome this issue to avoid duplication.

*'We like if somebody can give us a solution like when a room is booked with booking.com and if Agoda gets automatically blocked for those days without our involvement. Like when there is a booking for room 1 with Agoda, my wife has to log in to booking.com and block that room for them. That has to be done every time. Sometimes when we have some urgent correspondence and by the time we try to update the other site they have also booked the same room. But if there is any ICT solution and someone can come up with a system that can automatically make the updating that will be very helpful'.*

CC6

It was interesting that these business managers were thinking of such IT solutions and how they could make their business processes more effective. This shows their motivation to use ICTs in minimising inefficiencies in manual business operations. In cases like this, by using automated systems for inventory updating, businesses can improve operational efficiency by reducing repetitive routine tasks. Further it could help to eliminate miscommunications regarding the availability of rooms to potential guests, thereby achieving higher customer satisfaction. However, as discussed in the previous section (booking administration), low awareness of available ICT solutions and cost issues hinder effective use of ICTs in these small businesses.

More than 50% of STEs considered in the study depend solely on online agents for their reservations. As these places have few rooms available they say it is only necessary to focus on obtaining reservations through online agents. Some organisations use online agents only in the off season, as in the peak international tourist season they are fully booked. Therefore, it is not necessary to pay a high commission to these agents, they only use OTAs when it is difficult to get bookings.

*'Agoda and Booking.com. Booking.com is the best, because guests don't have to pay for the booking, so they book without a fear because they can cancel until the last moment, so we get lot of cancellations for booking.com. So lots of bookings get cancelled but most of our bookings comes from them as well'.*

## SC2

This high dependence on online agents for their reservations sometimes has negative effects on the STE. According to a manager of an STE with a comparatively high number of rooms to offer, sometimes it is necessary to negotiate with the online agents about their pricing of 'specials' and 'discounts'. Only STEs who agree to the terms and conditions of the agent will appear on the top and on the first search page for the customers. Therefore, even if the hotels are registered with the online agents, they still need to have their own strategies to appear near the top of a potential search result. Apart from participating in these 'specials' organised by OTAs, obtaining a higher number of positive guest reviews and high star ratings assigned by OTAs were some of the tools that help STEs to raise their place on the listings.

While registering with online agents seems beneficial for many businesses, some managers said that the commission charged by these agents is very high (17%-21%). Some managers commented that due to the high commission they had to pay to OTAs they tried to avoid using OTAs but failed as it considerably reduced their revenues.

*'I don't like booking sites. They take a big cut from my income. But when I tested stopping using them, my sales dropped hugely. So I had to go back to them'.*

## AC10

In the context of STEs in Sri Lanka, it was evident that the use of OTAs has become a necessary evil. While it was clear for the businesses that the use of OTAs reduces their income through commissions, it was a better option than losing revenues completely by not having the online presence through the OTAs.

Besides the issue of commissions, there were also communication issues when dealing with these agents. Only at the very end of the process do they receive details such as customer names and contact details, making it difficult to have any personal communication with customers. This makes it difficult for managers to provide a good customer service. For example, when customer requests are not directed properly to the

business by the agent before their arrival, it can lead to negative reviews by the customers.

Large hotels use OTAs as a supplemental revenue driver and adopt a balanced approach to maintaining high occupancy by attracting more customers to their website and gaining direct bookings. However, due to the inability of STEs to maintain advanced websites with payment gateways, STEs have to depend more on OTAs for their reservations. The findings of this study provided evidence for both the benefits and negative effects STEs face in collaborating with OTAs.

### ***Marketing and promotion***

Marketing and promotion is another main area where OTAs play a major role on behalf of STEs. Just as STEs believe that registration with an OTA is enough to ensure reservations, most of them also depend on OTAs for the promotion of their business. Owner-managers' comments provide evidence for how far they depend on OTAs for these two key business processes.

*'We just have to register in these online travel agents and they do the reservations, marketing and promotions for us'.*

CC6

While they use the company website as their main promotion tool, they use OTAs as a gateway for directing the customers to their own websites.

*'We have all the information with pictures of rooms and describing all the facilities and services we provide to our customers in our website. But as we are not very famous and we don't have an established name it is difficult to appear directly on the search pages of the customers. But when we are in the list of these online agents they put a link to the website for further details. So we can reach a large pool of customers and promote our place using Agoda and Booking.com'.*

AC5

Businesses use OTAs listings as a guide to bring potential customers to their websites. By providing more information and promotional offers in their websites they attract more customers and build communication with potential customers.

Apart from providing general information to promote accommodation, these OTAs have their own rating methods by giving star ratings and review scores mainly based on customer reviews and their own reviews of hotel facilities and services. For

accommodations listed on OTAs, information is also available on transport services, distance from the airport, and recommended activities and maps. This is very helpful especially for businesses that do not have a dynamic website of their own.

To make searching easier for customers they provide different categories of review scores, from above average (5+) to superb (9+) scores and also group reviews by categories such as families, solo travellers or group travellers. They guarantee that all reviews have been verified by them (Booking.com), which helps both customers and businesses to ensure reviews are genuine.

In conclusion, the findings of this study provided evidence for the dominance of OTAs in STEs' operations of both reservation and marketing. Although the high dependence on OTAs for the reservation of STEs seemed a risk for these small businesses, the findings further emphasised the important role played by the OTAs in increasing the use of ICTs in STEs. By collaborating with OTAs, STEs overcome the barriers to investments on large scale ICTs yet receive the services from OTAs at an affordable cost so they can spend their own resources on providing a better customer service to their guests. However, their inability to link OTAs to other multiple booking systems of the business create issues such as duplication of reservations.

#### **6.4.3.2 Online guest review sites**

Apart from the OTAs, the other important external entity found was online review sites. While the reservation of STEs is affected by OTAs, marketing and promotion of STEs is highly influenced by the reviews posted in these online review sites. Similar to the ways in which Agoda and Booking.com dominate the online reservation of STEs in Sri Lanka, marketing and promotion is significantly affected by the TripAdvisor online review site.

##### *The effects of online review sites (TripAdvisor) on STEs.*

Online hotel reviews on TripAdvisor were found to be an important source of marketing and promotion for all the STEs considered in this study. More than 70% of owner-managers agreed that the main source of promotion for them is eWOM. TripAdvisor was the main place where they got publicity for their accommodation and other services. Further they emphasised that whether they like it or not they cannot ignore it because it has become the most trusted source of information for potential guests.

*'for advertising, rather than providing our service properly it is very less that we can do something more. Everyone believes the reviews and goes to TripAdvisor for information, So featuring on TripAdvisor is crucial, otherwise the world will not know of our existence'.*

#### SC1

It was evident that most of the owner-managers understand that interpersonal communication is highly influential in the tourism industry. They appreciate the risks of negative feedback that can become a serious barrier to attracting new guests. Some managers give special attention to this and set aside considerable time to review what has been written about them on these online review sites, and for giving feedback and responding to customers.

When asked about customer complaint handling, owner-managers mentioned that they often do not get complaints at the time of a guests' visit but later they write negative reviews. In one case it was mentioned that when they see these types of negative reviews they try to contact the visitor personally, which ideally leads to revision of their negative reviews on the sites. According to managers this was a better way to handle negative reviews rather than responding to the review on the site itself.

*'If it is a review we write to them, sometimes we go back and find their telephone numbers and call them, not to find out what, because it's already being told. No, we apologise and basically for every bad complaint either we write a response review or if we can reach them we call them. My boss the owner handles it. He likes to talk to the person and sometimes after that call they even remove or changed their review'.*

#### CC1

According to owner-managers, it is very important to respond to negative reviews posted on the online review sites. Customers pay special attention to these negative comments and look for information on how the hoteliers handle such situations. It was evident in findings that working proactively to avoid a negative reviews is a good idea.

On the other hand it is also accepted that sometimes one receives guests who are difficult to satisfy regardless of the service provided for them. It was felt by the managers that travellers who often read the reviews on online sites can identify this type of customer and tend to ignore their reviews. Online review sites also use mechanisms to verify the customers' information on the specific stay at an accommodation before publishing the reviews on their sites. Therefore it is a tool for



both the customers who read the reviews and for the accommodation providers who receive customer comments.

*'the sites like TripAdvisor are more powerful and useful. The client comments are important to the guests. And the site gives the assurance those reviews are verified. So the travellers are empowered to make the right choice'.*

HC1

OTAs also publish hotel reviews on their websites. The owner-managers of STEs believe that these outside organisations provide them with a better platform to promote their businesses while they focus on providing the best possible customer service for their guests. The following comment from the owner of one STE shows this.

*'Guests themselves write reviews on TripAdvisor and in websites so there is a separate system of ICTs externally so we have to provide our own service better so the other system will automatically do the rest for us'.*

CC6

Therefore it is evident that the STEs use the resources of these online trading partners to their own advantage and use them as their main marketing strategy. Online reviews can help STEs develop a better reputation for their businesses. In the case of negative reviews managers can use other ICT tools such as emailing to interact with the guests.

## **6.5 Drawbacks and Barriers to Implementing ICT Strategies**

While ICTs were being used by STEs in various ways and with diversified strategies, there were some clearly visible barriers to effectively implementing ICTs in these small businesses. Identifying the barriers to ICTs was not the focus of this study as it was considered that this topic is already well researched. However, the analysis of findings related to the focal firm and its external environment of this study revealed some difficulties faced by these small businesses in implementing ICTs in their business processes. It was evident that these barriers were contextual to this study's setting and hindered the STEs' ability to gain business value from ICTs. These barriers were identified in four main areas:

- Lack of qualified and trained ICT human resources
- Lack of awareness about potential ICTs for tourism and for small businesses
- Limited financial budget in general and for ICTs
- Limited ICT and general infrastructure in rural areas

How each of these drawbacks prevailed in the country and how far they affected the level of the use of ICTs in these businesses is discussed next.

### **6.5.1 Lack of qualified and trained ICT personnel**

Lack of ICT-skilled personnel was the major issue faced by the majority of the STEs. Even when the businesses did have enough physical ICT resources, they were being underutilised due to the lack of suitable human resources to work on them. In cases where owner-managers were willing to invest more in ICTs, they often became demotivated as they could not exploit their ICT investments without skilled employees.

*'We always go for the latest technologies and we like to be up to date with technologies which our guests are looking for. But when we get these new applications and stuff I am the only one who should handle those.. So I stopped buying ICTs anymore because they are going to be just idle..'*

AC5

Similar comments were made by more than 60% of owner-managers about how crucial this issue is in their businesses. It was clear that the businesses were increasingly facing the challenge of how to deal with new technologies without skilled employees. Businesses were having issues such as undeveloped marketing strategies, poor use of modern communication mediums, underutilisation of devices such as smartphones etc. Ultimately, due to the lack of skilled ICT human resources they were unable to reap maximum returns from their expensive ICT investments.

As has already been discussed in the availability of ICT human resources Section (6.2.1.2) more than 70% of employees in these businesses have gained ICT skills through practice. In such cases, even when employees build a moderate level of skills in using applications, it was difficult for them to develop it further due to their limited technological skills. As they were not skilled enough to handle even basic technical computer failures, they had to rely on outside people. This made the use of ICTs in business activities less efficient. Something of this sort was described in the software section with regard to cases where there were no virus protections installed, which means employees often end up losing their data.

*'I had an accountant who did all the administration work in the business. Before he left (for another job) he taught me how to maintain the records and keep them up to date. Somehow while I was working all my files were*

*deleted. Even the person who came to repair it could not find a copy. I had to redo everything. I gave up on working on the computer after that'.*

AC5

About 50% of the owner-managers who claimed that they were confident in working with application software for business purposes mentioned the problem with hardware failures. It was evident that even when the employees were careful in their work they often faced hardware failures. These were caused by several reasons such as old devices, interrupted power supply and natural hazards such as lightning.

The lack of ICT human resource was not an issue faced only by the businesses in rural regions. Apart from Colombo, in all other regions paid technical services from skilled IT personnel were not widely available and were expensive. As discussed in detail before, recruiting such skilled employees was also not practical as they demand higher salaries. Providing training was expensive, coupled with the risk of losing to large scale tourism enterprises once they had been trained.

While this issue was common throughout the country, the severity of the issue was much greater in the rural regions. This is discussed further in the next chapter, which provides the cross-case analysis.

### **6.5.2 Lack of awareness about available ICTs**

Apart from the lack of skilled ICT human resources, there was also a lack of awareness of available ICTs for tourism businesses. It was clearly evident that the majority of their ICTs were underutilised because owner-managers were unaware of the available features and services. For example, more than 70% of owner-managers owned and used smartphones in their business activities, but only 9% used at least a few mobile apps to support business activities. The majority used computers as a replacement for a typewriter and applications were mainly used to record data by manually feeding them into a computer.

Even STEs who used advanced technologies such as social media marketing, multiple online channels for reservations and partially automated administration functions were found to be unaware of their full potential or what other facilities may be available. For example, about 30% of managers mentioned the issue of reservation duplication when

using multiple channels, but none of them had any awareness about the commercial channel management software that is available.

However, there were a few cases where managers were well aware of available and affordable technologies for their businesses. There were also businesses that had a keen interest in exploring new opportunities and tried to adopt them in their business activities. However, the majority of the STEs had a low level of awareness of useful business applications that were available using ICTs.

### **6.5.3 Limited financial budget for ICTs**

Limited financial resources was another general issue for more than 70% of the STEs in this study. This meant there was an inadequate financial budget for ICTs that acted as a barrier to implementing new ICTs as well as for the overall growth of these businesses. This issue could be seen throughout the country and it was consistently agreed by the owner-managers of all the regions to be one of the major barriers to implementing ICTs in their businesses.

*'Yes we are keen to get these new IT stuff to our business but our finance is limited. We need to carry on the business operations during the off peak times when we get very few guests, and to pay salaries. So we have to think twice when spending money on anything ...'*

AC4

For about 80% of the STEs, ICT budget was limited to the monthly bill for the internet package they purchased. In some cases, employees were restricted in their use of the internet due to the limited data package, and only guests were issued a password to access the WiFi network. However, some businesses (about 20%) were willing to spend more in order to get high-speed internet services from multiple suppliers and larger data packs for guests to use in peak periods.

The limitations were not only applicable to data usage but also affected the purchase of other software as well. 74% of the STE owner-managers who used only the Office application suite emphasised two reasons for not using specially developed applications such as accounting software and inventory management systems. One was the fact that special software were costly to purchase, and the second reason was that training employees to use these software was also expensive. Another issue with the use of computers was the maintenance cost of these devices. One reason that maintenance

costs were high was virus infections, but most STEs did not have any virus guard installed. The cost of purchasing a virus guard and renewing the licence annually, and the issue of virus guards making their computer performance low, were mentioned as the reasons for not installing them.

The perception of the high purchasing, maintenance and training costs involved with ICT investments made owner-managers reluctant to invest in ICT that may need expensive maintenance services in the long run. The majority of the businesses were content to invest only in broadband internet and WiFi connections, which were considered essential business tools to survive in the industry. Even the smallest businesses were willing to make this initial investment in ICTs.

However it was further revealed that, while financial limitations act as a barrier to implementing ICTs, it was not the only factor that hindered the investments in ICTs. About 30% of managers mentioned that they prioritise other investments over ICTs. Owner-managers believed it was better to invest in other businesses improvements rather than ICTs, from which they could not see direct financial benefits.

*'At this stage, I am happy with the IT facilities we have in the business. In case I can increase investments on this business, I would prefer to expand the business with few more rooms and improve other facilities in the existing ones rather than going for advanced technologies'.*

SC5

Owner-managers of STEs believed that having a basic ICT infrastructure is adequate to make their business operations successful. The best way to improve business value may be to invest in resources to effectively use the basic ICTs that are already available in these businesses. These types of investments mainly included acquiring ICT knowledge and skills. However, it was also evident that this is expensive for organisations with limited financial capacities. Therefore, it was clear that due to the scarce financial resources, STEs were unable to obtain the full potential even from their investments on basic ICTs.

#### **6.5.4 Limited infrastructure in rural areas**

Although this was not a common issue for all the STEs, the lack of infrastructure was also a barrier to implementing ICTs. 25% of STEs in this study were located in rural regions of the country. In these areas businesses were sometimes unable to get a continuous

electricity supply during certain periods of the year. In periods of no rain the electricity power supply was restricted, and when it is the high rainy season power supply is disrupted by incidents such as trees falling on power supply cables etc. Without electricity or with frequent disruptions to the electricity supply, using a computer is risky. Even when computers are working, because of these fragile power supply issues their devices often get technical issues, and the limited availability of support services for repairs in such regions hence puts them in a difficult situation. Therefore, the owner-managers who initially showed an interest in using ICTs became discouraged due to the continuous issues faced with inadequate infrastructure.

## **6.6 Chapter Summary**

Using the framework of the conceptual model, this chapter discussed the findings related to the focal firm and its external environment.

The focal firm for this study was the STEs in Sri Lanka selected from four different tourist regions. Findings related to STEs on the availability of ICT resources, complementary resources, and business processes were presented in this section.

A laptop together with a smartphone was the most common combination of devices used by STEs. The high use of smartphones by managers in their business activities was clearly evident in the findings. However, these devices were not fully utilised due to lack of awareness and cost issues. Mostly, ICT devices were used as a replacement for manual records and file maintenance. Rather than using specific functional software, the use of the Microsoft Office Suite for multiple tasks was a common feature in businesses throughout the country. The dominance of Microsoft in the ICT industry in Sri Lanka in terms of availability, easy access, and training facilities has led to this widespread use of office applications in small tourism businesses. Apart from office applications, there were businesses who used social media for marketing and promotional activities.

Three key business processes of STEs were identified, namely, distribution and sales, service delivery, and management. In these areas, ICTs were used mainly in the reservation, marketing and promotion, and accounting processes. Apart from that, they recognised customer service as the key to the success of their businesses as they believed tourism to be a people business. However, all the owner-managers acknowledged the importance of adopting ICTs in their business processes.

Under the external environment of the STEs, the effects of industry characteristics, government support for STEs and trading partner's resources and processes were identified. Changes that occurred after the end of the civil war in the country were a major event in the environment that affected all tourism businesses throughout the country. The result was increased numbers of both international and domestic tourists, as well as increased entrants of new businesses. Government promotional programmes positively affected STEs, encouraging them to develop their business, including expanding their use of ICTs. Global trends such as the increasing use of information technology by both domestic and international tourists also affected STEs as the use of ICTs became a must in tourism businesses.

OTAs and online review sites were identified as the most significant trading partners of STEs. OTAs were the dominant method of reservations for all the small businesses. Similarly, the online review site TripAdvisor was their main source of marketing. OTAs provided a platform for these small businesses, making them visible in the global tourist market and handling financial transactions on their behalf. TripAdvisor was also used by all the STEs to promote their businesses. OTAs and TripAdvisor provided a means for STEs to overcome barriers to using advanced technologies themselves.

When analysing the factors related to the focal firm (STEs) and its external environment, barriers that hindered the firm's ability to gain business value from ICTs were also identified. While the lack of ICT human resources was the most critical barrier with all the STEs, lack of awareness of available ICTs, lack of financial resources and limited infrastructure facilities also negatively affected these businesses. However, unique cases were also found that were able to overcome these barriers and achieve a significant level of success in their ICT implementations.

In conclusion, for STEs the three main important points were: having ICT devices to connect to the internet, getting listed in a OTAs' website and providing free Wi-Fi for their customers. As small businesses in the accommodation sector with few rooms to rent, they believe that these ICTs are sufficient for them to perform well. However, there were variations and different perspectives among different businesses and different regions of the country. Therefore, the next chapter presents an analysis across cases.

## **Chapter 7: Cross-Case Analysis**

### **7.1. Chapter Introduction**

This chapter discusses the findings across cases. Cross-case analysis is a research method that facilitates the comparison of commonalities and differences in the events, activities and processes that are the units of analysis in case studies (Denzin, 2001). Cross-case analysis enables the mobilisation of knowledge from individual case studies by accumulating case knowledge, comparing and contrasting cases, and thereby producing new knowledge (Khan & VanWynsberghe, 2008). The two basic approaches to cross-case analysis are the variable-oriented approach and case-oriented approach (Miles et al., 2013). As discussed in the section 5.6.3, this study follows an integrated approach of the two in analysing the data across cases. Eisenhardt (1989, pp. 548-549) noted that a case study is 'particularly well suited to new research areas or research areas for which existing theory seems inadequate' and is recommended for incremental theory building. Therefore, in alignment with the post-positivist paradigm used in this study, cross-case analysis was employed in order to achieve the aim of expanding existing theory on business value of ICTs for small businesses.

According to Miles and Huberman (1994), a cross-case comparison can be approached by categorising the cases into types or families. This is done by inspecting the cases in a set to see whether they fall into clusters or groups that share certain patterns or configurations. In order to categorise the cases into such clusters of groups, this chapter starts with an exploration of the potential basis for clustering the STEs considered in the study. After clustering the cases, they are compared and contrasted using the concepts of the focal firm – from the theoretical model of the study. This includes the cross analysis of their ICT resources, complementary resources, and use of ICTs in key business processes. In addition to the concepts in the model, the identified drawbacks and barriers to implementing the strategies are also discussed.

### **7.2. Clustering the Cases**

As described in the research methodology chapter, 35 cases were systematically selected and studied in this research. Analysing individually across 35 cases was not felt



to be practicable and worthwhile, as many cases had similar patterns of using ICTs in their business processes. Therefore, cases were clustered into manageable groups in order to compare and contrast the findings related to each cluster.

Based on the findings of the overall analysis of the use of ICTs in STEs and related literature on tourism business categorisations, three main possibilities were identified that could potentially be used as the basis for clustering the cases. These were:

1. Market focus: International vs Domestic tourists
2. Business motives: Lifestyle vs Profit oriented
3. Tourist regions: The four tourist resort regions

***Market focus: International vs domestic tourists focus.***

A strategy in which a business concentrates its resources on entering or expanding in a narrow market or industry segment is called the market focus (Porter, 1985). In the tourism industry businesses can choose to focus on either one of the two main segments, international tourists or domestic tourists, or serve both the segments.

As described in the case profiles in Chapter 6, 43% of the STEs of this study were solely focused on international tourists, 54% on both categories and only 3% focused solely on domestic tourists as their target market focus.

Among the STEs who focused on international tourists, they had their own market niches such as international high end tourists and international budget tourists. Out of the businesses in this category, more than 50% targeted only the international high end tourists. When all the STEs were considered, these businesses had the highest level of usage of ICTs in their business operations. According to the managers they expect high end customers and they maintain the highest quality of services for their guests, which included the use of advanced technologies. They were well aware of current technology trends in the tourism industry and were actively involved in analysing and responding to customer reviews.

On the other hand, there were a significant number of STEs who focused on international budget tourists. According to them, with the limited resources they have it was convenient to cater to this market segment with standard accommodation facilities and internet services. Although these businesses use a limited level of ICT and other resources, it was seen that they are utilising these resources effectively. They keep their

websites up-to-date and communicate promptly with potential customers. The STEs who focused on both market segments also had a similar level of usage of ICTs with the other categories. As described in the PESTEL analysis, domestic tourists also increasingly use ICTs to search for information online: even if the businesses are more focused on domestic tourists, the use of ICTs was necessary for the business's success.

It was evident that the market focus of the STEs had some effect on the level of use of ICTs in their business processes. However, due to the information intensive nature of the industry, tourists have become IT literate, regardless of whether they are international or domestic. STEs did not vary much in their use of ICTs according to their market focus.

***Business motives: Lifestyle vs profit oriented.***

Reasons for running a business are considered business motives. While the most important objective associated with virtually all private sector enterprises is the desire to make a profit, there are people who run a business for personal satisfaction or as a family tradition. Business motives affect whether the businesses are operated for growth and development or merely for survival. When personal and lifestyle reasons are the dominant motives for operating a business, such businesses are called lifestyle businesses (Lashley & Rowson, 2010).

When exploring the characteristics of STEs in this study, it was found that while the majority were profit oriented, about 20% of them were operating as lifestyle tourism businesses.

These businesses were not as driven by profit or as growth oriented as those operated for entrepreneurial motives. Their key motives in running the business were more associated with improving their way of life, continuation of family traditions or as a leisure activity that brought some financial and social benefits along the way. All of them had other income sources, such as one family member working for full time or receiving a retirement benefit or pension. Therefore it was obvious that these types of lifestyle businesses are not primarily concerned with commercial objectives that prioritise the use of technologies to enhance the customer service as a way of generating profit or improving business value. As one owner-manager commented,

*'I actually run this business out of respect to my family and to maintain this place when my children are coming back from abroad to holidays. I provide facilities and make a decent business but not to run behind money and competition..'*

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These firms are mostly managed and operated by the owner-manager with family members or employ one or two other people. Mostly they are unskilled labourers who perform the routine operational activities of the businesses. Therefore, the use of ICTs in key business processes is minimal in most businesses of this type.

The business motives of these STEs are important because they impact on the awareness and perception of their own development needs (Goulding, Baum, & Morrison, 2004). Through their motives, profit oriented businesses find opportunities in their own business environment to expand and develop the business operations, hence improving the business value. Lifestyle business owners on the other hand tend to give their business development needs lower priority. In most cases they tend to go for technologies and follow other trends in the business environments for the sake of the survival of the business when in crisis or when potential failures of the business become visible.

Overall analysis also provided some justification for a differentiation related to the use of ICTs between the lifestyle businesses and profit oriented businesses. However, when all the cases were considered, there were major limitations in this categorisation as a basis for clustering the cases for cross-case analysis. The businesses categorised under the category of lifestyle oriented businesses were mainly focused on the survival of the business and were not interested in making an effort to use ICTs to improve their business value. Therefore, comparing those with their counterparts who are profit oriented and keen on using technologies did not seem insightful. Further, as lifestyle businesses made up only 20% of the total cases studied, it was not considered worthwhile to compare them with the majority of profit oriented businesses.

***Tourist regions: The four tourist resort regions.***

Based on the geographical location and available tourist attractions, SLTDA has identified seven major tourist resort regions in the country (refer to Section 4.3.4). Based on the accessibility and availability of the accommodation establishments, four

tourist regions were selected for this study (refer to Section 5.3.3). Thirty-five cases were selected proportionately from the seven regions representing the accommodation capacity in the region.

When considering the geographic location, three main factors were identified that differentiate the regions in terms of both tourism and in relation to the use of ICTs. These factors were:

- Availability of infrastructure
- Availability of skilled human resources
- Access to other supplementary services

Infrastructure is a necessary element for tourism development and for attracting visitors to a destination. The literature claims the infrastructure base of a country is a potential determinant of the attractiveness of a tourism destination (Inskeep, 1991; Poimiroo, 2015; Seetana et al., 2011). As a developing country, despite the government's continuous infrastructure development programmes Sri Lanka still experiences a high disparity in the distribution of resources between different regions of the country (Uduporuwa, 2010; Wijerathna, Bandara, Smith, & Naranpanawa, 2014). As discussed in the PESTEL analysis most of the developed infrastructures are mainly established around the capital city of Colombo and a few other urban areas of the country. Statistics also provide further evidence for this. Table 7.1 shows the disparities in infrastructure by provinces in Sri Lanka.

Table 7.1: Disparities in Infrastructure by Provinces in Sri Lanka 2007

Provinces	Tourist region	Ranking out of the 9 provinces (Based on the quality and availability of infrastructure)				
		Communication	Electricity	Safe water	Sanitation	Aggregate
Western	Colombo City	1	1	1	1	1
Central	Ancient Cities	2	3	2	4	2
Southern	South Coast	3	2	5	2	3
Northern		9	9	-	-	-
Eastern		8	8	-	-	-
North-Western	Ancient Cities	7	4	4	5	5
North Central	Ancient Cities	6	5	7	6	7
Uva	High Country	4	6	6	7	6
Sabaragamuwa	High Country	5	7	3	3	4

Source: Regional Dimensions of Development of Sri Lanka (Uduporuwa, 2010)

The figures show that the Colombo City region has the most developed infrastructures compared to the other regions, while the South Coast also has a higher ranking for its availability of infrastructures. The Ancient Cities region consists of a mix of areas with high and low infrastructure facilities. As the data illustrates, the High Country region has the lowest range of infrastructures among the four tourist regions considered in the study.

In addition to general and technological infrastructure, one of the critical resources for the STEs is human resources. Many of the organisations are challenged by inadequate numbers of skilled personnel. While the issue prevails in the STEs throughout the country it is exacerbated in the rural areas such as High Country.

Location does matter to new young employees, as the majority of them would prefer to move to Colombo and urban regions to obtain the opportunities available for training and their own career development. As a result, the managerial positions of the majority of the Ancient Cities region and the High Country region were mainly held by mature and elderly people. Due to the low level of awareness of the elderly managers regarding the adoption of new technologies, these businesses could be seen to be somewhat backward in their business developments compared to other regions. However, there were a few aged managers who were as aware of and enthusiastic about ICTs as many as their younger counterparts.

For small tourism businesses, in addition to ICT infrastructure it is necessary to have a rich set of accessible supplementary commercial services. These include the services of financial institutions, easy access to government authorities to deal with legal matters, and especially technical support services. Availability of these supplementary services varied greatly among the four regions. It was identified in the overall analysis as a strong influencing factor for the continuous use of ICTs in key business activities of the businesses.

It was evident that the level of facilities and resources available for the STEs in these tourist regions determines the use of ICTs in their routine and strategic business activities. The overall case analysis also showed that the location of the business emerged as a main factor that affected the use of ICTs in STEs. Although there were some major differences related to tourism within the four tourist regions, such as the tourism attractions and their market focuses, the factors that affected the use of ICTs –

such as the ICT infrastructure, skilled human resources and the supplementary services – were unique to each region. Therefore, there were commonalities among the STEs of each region in patterns of use of ICTs in their business processes.

After considering these three potential criteria to consider their suitability as the basis for clustering the cases, the regional approach was chosen as the basis for the case clustering. Although this option had some limitations, such as Colombo City region having an exceptionally high level of resources compared to rural regions, it provided the most meaningful way of looking at the factors that affect the use of ICTs in the STEs within each cluster. In alignment with the guidelines for case clustering by Miles and Huberman (1994), by sharing some unique features within each region, the geographic location or the tourists regions provided a strong base for grouping the cases and for analysing the data across cases. The classification of the cases into four clusters based on location is depicted in Figure 7.1. The following section presents the analysis of the cross-cases based on the four tourist regions.

#### Case Classification

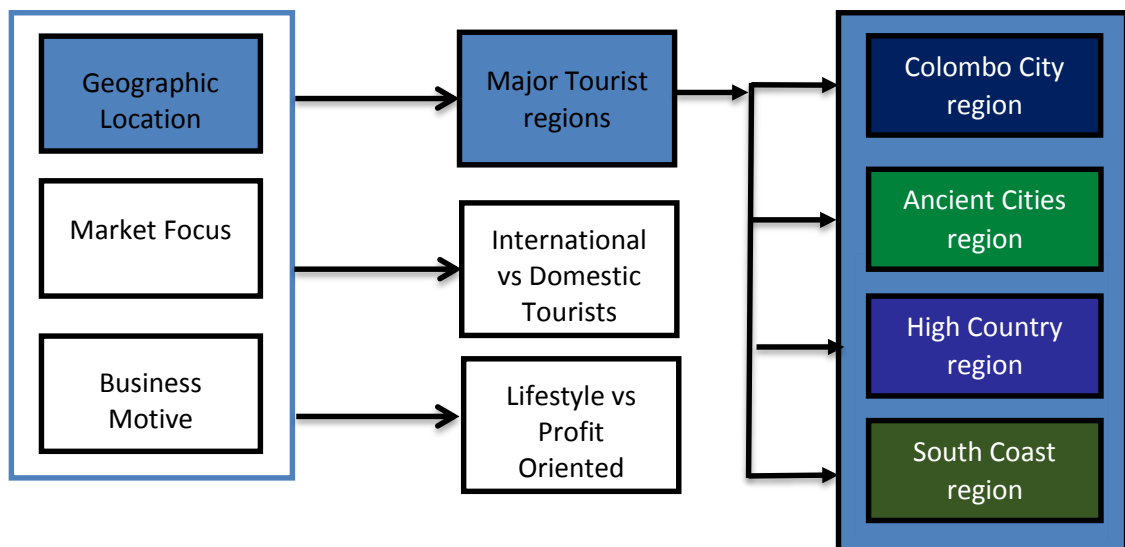


Figure 7.1: Classification of businesses for analysis across cases

One tactic suggested by Eisenhardt (1989) for searching for patterns within cross-case studies is identifying dimensions or constructs from the literature, and then looking for within-group similarities and inter-group differences. Further, McGuiggan and Lee (2008), suggest that a cross tabular presentation can be used to compare several categories and allow graphing of continuous measurement scales and iterative

comparison of theory to data to provide construct validity. Having four clusters to compare and contrast, this study mostly used data in cross tabular form.

In this study, the cross-case analysis is presented following the theory of the resource based view of the firm (Barney, 1991) and the conceptual framework developed by integrating the business value of IT by Melville et al. (2004) and the tourism production system by Poon (1993) and Alford (2005). Considering the elements in the conceptual model, cross-case analysis is mainly focused on following major factors that affect the business value of STEs in Sri Lanka.

- The level of ICT resources availability
- Availability of complementary resources
- ICT strategies used by the STEs
- Drawbacks and barriers to implementing the ICT strategies

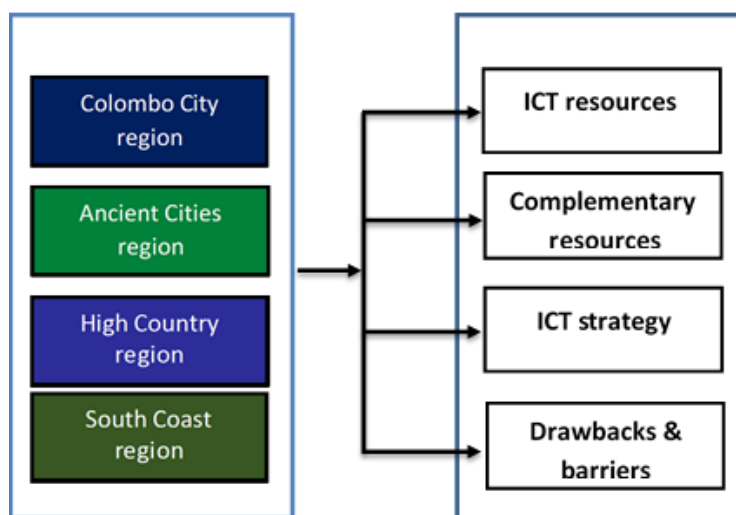


Figure 7.2: Factors considered in cross-case analysis of this study.

These factors are analysed across cases and discussed in detail in the following section. This section mainly focuses on achieving the third aim of this research: Evaluate why the contribution of ICTs to business value varies from one STE to another.

### 7.3. Availability of ICT Resources in STEs across the Four Regions

Availability of ICTs among the STEs at the regional level was discussed in Chapter 6, which provided the overall case analysis. Findings revealed that the availability of resources affects business performance. Therefore, the availability of technological ICT

resources and human IT resources were taken into consideration for further analysis across cases to identify the variation in availability of resources between the regions and the effects of this on businesses performance.

### 7.3.1. Technological ICT resources

As described in Chapter 6, under the category of technological ICT resources, the availability of resources was presented in the three sub-categories of ICT devices, software and applications, and communication and networking infrastructure. Table 7.2 illustrates the percentage availability of these resources in the STEs of the four regions. (The distribution of the 35 cases among the four regions were: Ancient Cities 10, High Country 5, South Coast 14, and Colombo City 6.)

Table 7.2: Availability of ICT resources among the four regions

ICT Resources		% of Availability (n=35)			
		Ancient Cities	High Country	South Coast	Colombo City
Devices	Personal computer	80%	80%	71%	67%
	Laptop	30%	20%	79%	100%
	Smartphone	60%	60%	79%	100%
	Printer	60%	20%	57%	50%
	Fax	20%	0%	0%	0%
	Scanner	40%	20%	29%	33%
	Multifunction device	10%	0%	43%	50%
Software and Applications	Email	100%	100%	100%	100%
	Excel	80%	60%	71%	83%
	Word	40%	0%	29%	33%
	Google Docs	30%	0%	0%	0%
	Hotel Mgmt. software	0%	0%	7%	0%
	Accounting software	10%	0%	21%	17%
	Inventory Mgmt. software	0%	0%	7%	17%
Infrastructure	Fixed line phone	100%	100%	100%	100%
	Broadband internet	100%	100%	100%	100%
	Wi-Fi Internet	100%	100%	100%	100%
	Website	100%	100%	100%	83%
	Satellite / digital TV	10%	0%	7%	33%
IT Skilled Employees	Graduate level	0%	0%	0%	0%
	Diploma level	10%	0%	21%	33%
	Certificate level	30%	0%	0%	17%
	Practical knowledge	60%	100%	79%	50%



### ICT devices

The overall analysis identified that personal computers (desktops), laptop computers, smartphones, printers, multifunctional devices, fax machines, and scanners are the ICT devices available. However, there were certain differences in rural regions. The percentage availability of these devices in the four regions is illustrated in Figure 7.3.

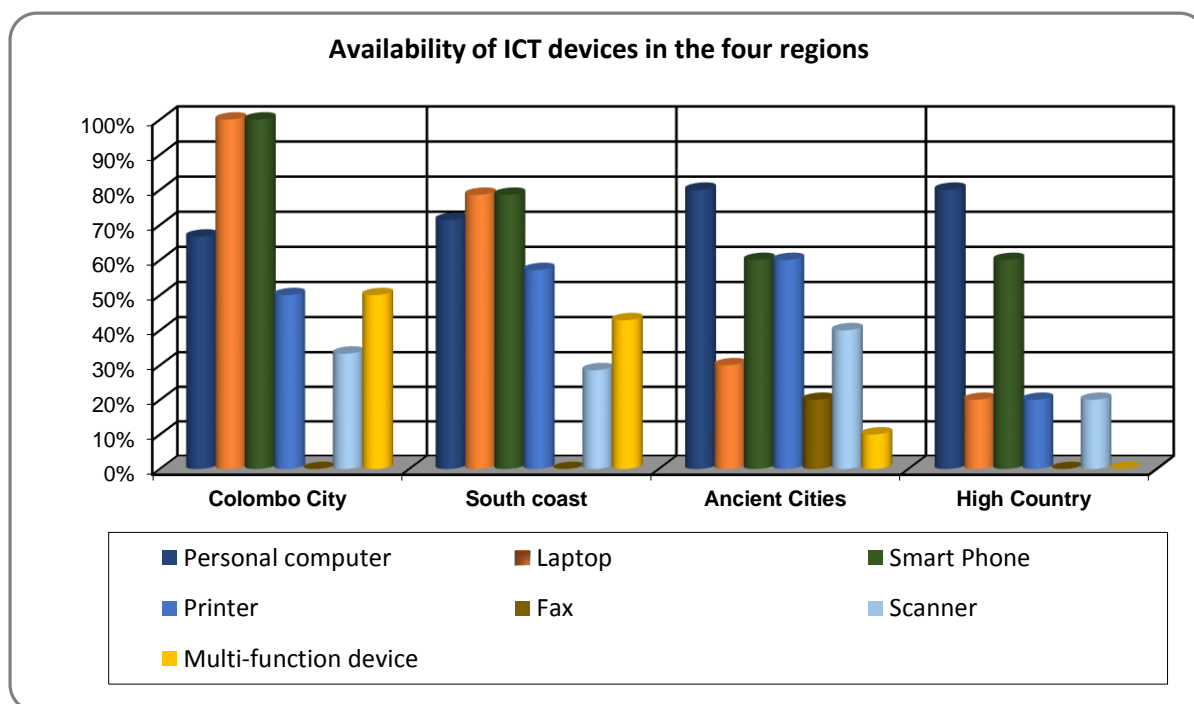


Figure 7.3: Availability of ICT devices in the four regions

It is clear from Figure 7.3 that the most widely available devices regardless of the region are personal computer (desktop) and the smartphone. Laptop computers also had a high percentage of availability in Colombo City and the South Coast region, while the Ancient Cities and the High Country region have a very low percentage compared to the other two regions. When asked about this lower availability of laptops in the two regions, 80% of the participants mentioned that the price of laptops is relatively higher than the price of general desktop computers. This is also connected with the level of skills they have in using these devices as well as the level of usage of ICT devices in their business activities. As they explained, it was not considered worth investing in a laptop when they use it for a minimum number of business activities

*'We have only a desktop computer which I bought long ago. A computer is necessary but laptops are very expensive and it is enough to have this computer to get the few things done for the business'.*

HC5

Based on the extent to which they use ICTs in these processes, they limit their spending on ICTs. Rather than investing in a computer or a laptop, which were considered less portable, it was evident from the overall findings that their recent investments were mostly made on smartphones. This was the device that had the highest percentage of availability in all four regions, recording at or above 60%. When the regions were considered individually this percentage was 100% in Colombo City, while it was about 80% in the South Coast. Ancient Cities and the High Country regions had an average percentage of 60% for availability of smartphones used in the business activities.

As discussed in the overall findings, the motivation for using smartphones was quite similar in all four regions. However, when investigating how long they had been using the smartphones, the data showed a time lag in adoption of technologies between the regions. About 50% of the managers in the Ancient Cities and High Country regions mentioned that it was for not more than 2 years, whereas in Colombo City 60% and in South Coast about 50% of the participants mentioned that they had been using smartphones for more than 4 years in their business activities. This data provided evidence for the disparity of adoption of advanced technologies in the four regions. Because of these limitations, rural regions were in a disadvantageous position in respect of obtaining the full potential of their ICT investments.

In addition to computers and smartphones, STEs have printers or a multifunctional device that they use in their administration activities. Except for the High Country region, a printer is available in more than 50% of STEs in all other regions. Although the availability of these devices with STEs is at or above average level, it was found that the usage of these additional devices was at a minimum level in all four regions.

Among the four regions STEs in Colombo City region have the highest availability of ICT devices, reporting above 60% availability of all important devices. South Coast region and the Ancient Cities region have similar levels of availability of devices, while the South Coast region has slightly more modern devices such as smartphones, laptops and multifunction devices. High Country region has the lowest ICT devices availability among

the four regions. It is not surprising that the two regions that receive the higher number of guests have more of these devices than the regions with low visitor numbers.

When comparing the availability of resources as well as how extensively they are used in businesses processes, it was evident that Colombo City is somewhat ahead of the other three regions regarding the highest availability of the devices and with the latest technologies. As discussed before, the reasons behind this were identified as: the availability of general infrastructure; and access to other services and resources such as human resources for skilled services and for repairs, updating and supportive activities available to them from their environment.

Being essentially urban and well-populated, Ancient Cities and the South Coast regions also have a higher availability and usage of devices than the only rural region considered here, the High Country region. The only significant finding that prevailed throughout the regions was the high rate of use of the smartphone as an important ICT device used in their business activities. As discussed in the overall analysis, regardless of the other limitations that affected various regions, the smartphone has become important for these small business owner-managers because of its usability, wider network coverage by network service providers, and easy access to other supportive services related to the use of smartphones. However, it was evident that though the smartphone replaced some of the business activities that operated from the computer and laptops, it was not used to its full potential. This is discussed further in the next section.

### ***Software and applications.***

From the overall case analysis it was identified that the computers are mainly used as a medium of communication and as a tool in some key business processes. Although the overall use of special software and applications was limited, there were businesses that used software in a way that contributes extensively to their operational performance. Figure 7.4 displays the level of usage of software and applications by the STEs in four tourist regions.

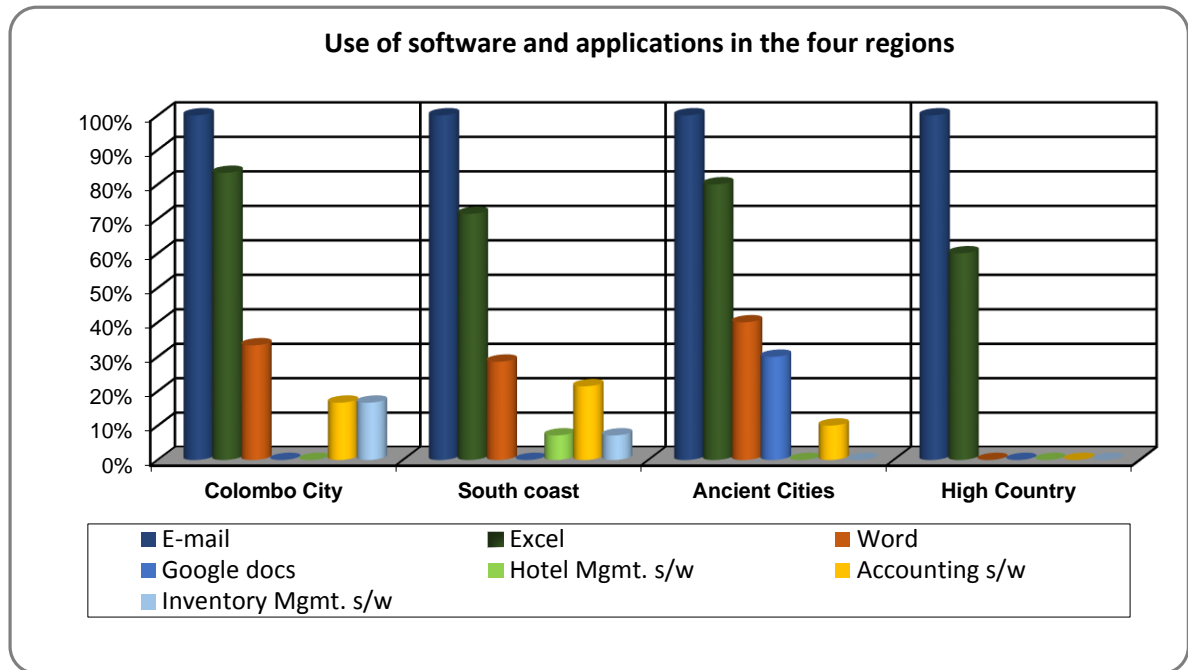


Figure 7.4: Use of ICT software and applications by STEs in the four tourist regions.

As an essential business tool, all the STEs in all four regions use emails in their business communications and as a tool for reservation confirmations.

A popular application in all regions is the Microsoft Office Suite, and Excel is the most widely used application out of the office package. In the Ancient Cities and Colombo City regions, almost 80% of the STEs use this application, while even in the other two regions it is equal to or above 60%. This application is mostly used by the managers and accounts personnel for accounts keeping, database maintenance, creation of invoices or for some form of business operations. No STE in High Country region used any accounting software, and less than 20% of the STEs in the other three regions use accounting software for financial and accounting activities.

Although below 20%, the fact that STEs in Colombo City region and South Coast regions use inventory management software gives some indications that the STEs in these two regions are more advanced in their use of technologies compared to the other two regions. Furthermore, while 7% of STEs in South Coast region were found to be using hotel management software, these businesses have their business activities computerised and well managed internally as well as connecting to the external business partners and other organisations. These two regions were using advanced hardware devices (such as high capacity computers and networking devices) and software as well.

However, a special feature that was visible only in Ancient Cities region was the use of Google Docs to share information with trading partners such as online and local travel agents. According to the managers of these STEs, Google Docs is a very useful tool that they use to maintain and share up to date information with their business partners. Further, as it is a free tool, it does not have any extra cost for the business. However when further investigating about why this could only be seen in the Ancient Cities region it was found that a training and awareness programme conducted by the government to promote the use of ICTs in tourism for small businesses introduced this to the owner-managers in this region. No evidence was found from other regions about such programmes, but it emphasised the importance of training and awareness of available ICTs to improve the efficiency of operations of these small businesses.

Similar to the overall findings at country level, the awareness and use of smartphone apps was minimal in all four regions. There was a certain level of awareness about these apps among the younger managers regardless of the region. However, even these owner-managers were more interested in utilising their smartphones for mainstream activities such as accessing the internet and emails for reservations and other communications rather than the special apps for the tourism industry.

In conclusion, it could be seen that apart from the substantial use of emails and Excel applications in all four regions, there is a diverse use of other applications in various business processes across the four regions. The availability of high capacity devices as well as the financial capabilities of the firms together with the training and awareness received by owner-managers is responsible for these diverse uses of software in these businesses.

Next, the availability of networking and communication infrastructure across the four regions is discussed.

### **Networking and communications ICTs**

As described in the overall findings, basic ICT infrastructure facilities are available throughout the country at an affordable price. Therefore, it is evident that in all four regions these facilities are sufficiently available and all STEs utilise these services as the main ICTs in their businesses. However, capacities deviate slightly from urban to rural regions as is common in many developing countries. Colombo City, South Coast and

many of the cities in the Ancient Cities region have access to high-speed 4G internet, while in the High Country region and some of the cities in the Ancient Cities region STEs still work with the traditional basic broadband packages available from the government telecommunication service provider. Importantly rural areas in the High Country region have issues with the continuous supply of electricity as well. It was evident that in rural regions (especially in the High Country region), although the infrastructure is in place the supply of these services is not very reliable.

Figure 7.5 indicates the availability of networking and communication infrastructure with the STEs in the four regions. The importance given to the availability of these services by the STEs is confirmed by this graph as well.

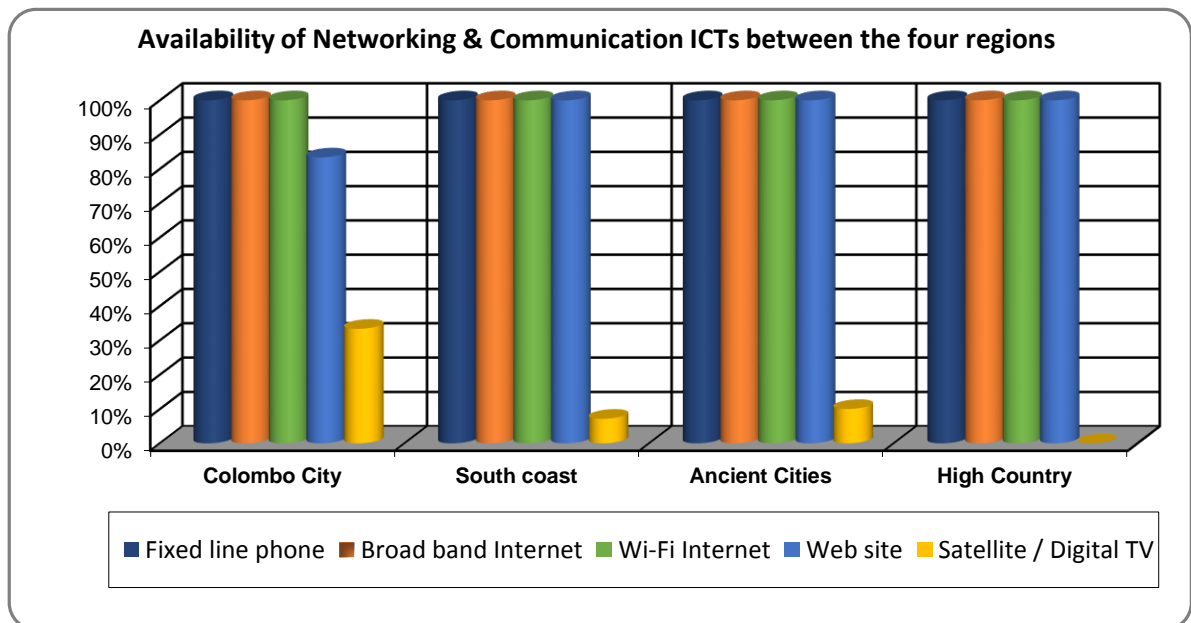


Figure 7.5: Availability of networking and communication facilities in the four regions

Every STE regardless of the region has broadband internet facility and WiFi services for its guests. As described before, although broadband internet is available with all the STEs in the four regions, the usage, capacity and speed varies between regions of the country. Except in the High Country region the majority of the STEs in other regions use two main telecommunications providers to get the advantage of high-speed internet from Dialogue and a wider communications coverage from Sri Lanka Telecom. Though two telecommunication providers leads to higher infrastructure costs, the owners-managers are willing to spend that money on these infrastructure facilities as they are the key ICTs that are essential to their business activities. Further, it was evident that the

businesses are motivated to go for the best internet packages to obtain higher quality services. According to them, rather than depending on one provider, by getting the services from both service providers they can ensure enough capacity of internet services for their guests as well as to covering service outages from one provider. This was seen as an essential, especially given the high usage of internet by guests as well as for the business operations.

Except for one STE in Colombo City, all the STEs have a website for their businesses. As described in the overall findings the majority of the websites of these STEs are functioning well and updated with recent photographs and information useful to their potential guests. Some sites are linked to their reviews in other online review sites as well as having their own reviews on their website itself. The majority (above 75%) of the STEs in Colombo City region and the South Coast region have well maintained websites for their businesses. More than 50% of STEs in the Ancient Cities region also have functioning websites, while the websites of the High Country region STEs are at a minimum level of dynamism and functionality. Most of the STEs in the High Country region developed their websites some time ago, and due to the unavailability of skilled employees to maintain them the websites contain outdated information and some broken links.

In conclusion, it was identified that basic infrastructure facilities are widely available in all four regions at an affordable level of cost to small businesses. However, there were significant differences hindering the use of these facilities in the rural regions such as the High Country. Further, it was evident that in semi-urban areas where infrastructure facilities are available at a standard level, the limitations in skilled human resources mean that they are not able to optimise the use of these facilities.

The next section presents the findings on the available level of skilled ICT human resources with the STEs in the four regions.

### **7.3.2. Human ICT resources**

Overall findings indicated that human IT resource is the least available resource for the small tourism businesses. Further analysis of the availability of this resource shows that this issue is more severe in the rural regions such as the High Country. The existing level

of ICT skills of employees in STEs of the four regions is given in Table 7.3, and further illustrated in Figure 7.6 below.

Table 7.3: Level of ICT skills of the employees of the STEs in the four regions.

Human ICT Resources		% of Availability			
		Ancient Cities	High Country	South Coast	Colombo City
IT Skilled Employees	Graduate Level	0%	0%	0%	0%
	Diploma Level	10%	0%	21%	33%
	Certificate Level	30%	0%	0%	17%
	Practiced knowledge	70%	100%	79%	50%

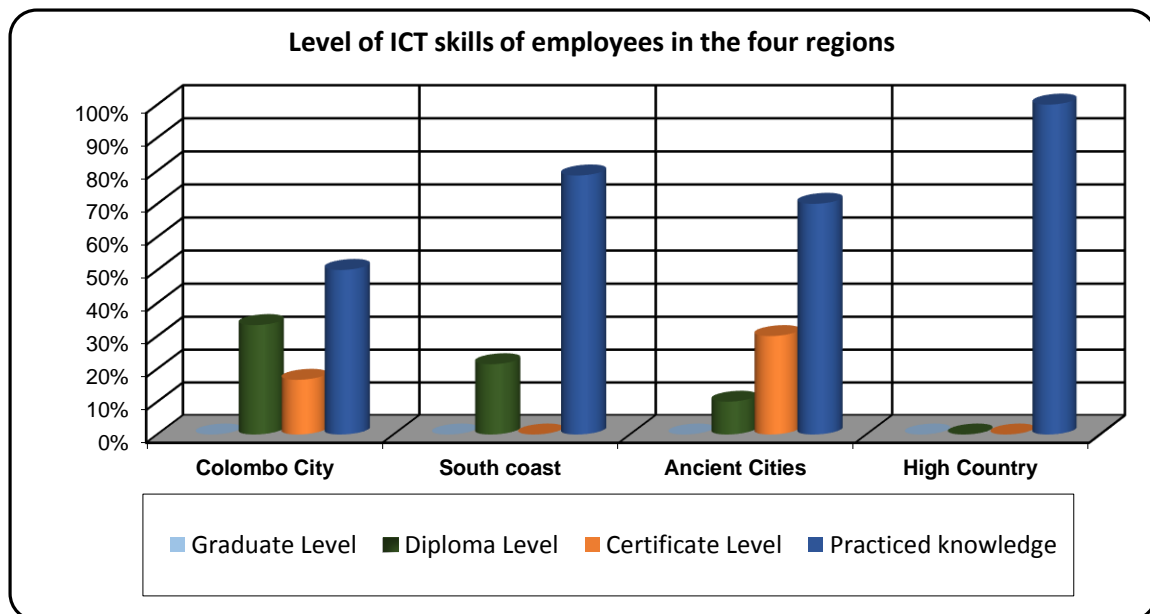


Figure 7.6: ICT skill levels of employees of the STEs in the four regions.

As Figure 7.6 clearly shows, the High Country has no qualified ICT-skilled employees in any of the businesses. Everyone in this region has a very basic level of awareness of the use of ICT devices and applications, gained solely from the experience of using them at initial level operations. Ancient Cities and the South Coast region have an average level of employees with standard qualifications, such as diploma or certificate level, although in these two regions as well the majority have gained their skills through practice. However, a serious issue faced by the STEs outside the Colombo region is not only the lack of IT skills within the business but also externally: it is difficult for them to obtain services from ICT-skilled people. This is due to two main reasons: in the rural regions even externally skilled ICT labour is limited, and even when it is available it is too



expensive for small businesses. Compared with other regions Colombo City has a fair dispersion of qualifications gained through recognised courses that includes ICT education. Most importantly, in Colombo City it is easier to hire cheap labour externally. As explained in Section 4.4, Colombo City is the home to several educational institutes. Therefore, in this region there are students who work as freelancers or part-timers providing technological and other skilled services at very affordable prices. Most of these businesses have the advantage of outsourcing their services such as website maintenance and technological services to these student workers. Moreover, the employees themselves have easy access to educational and training facilities, allowing businesses to get their employees trained according to business requirements. Potentially, the students centred in Colombo City could provide distant services such as website maintenance for businesses in rural regions, but no evidence of this was found apart from a very few businesses who obtain such services from their own children who reside in the city for education. Face-to-face interaction and trust mattered to them, and the students themselves were interested only in short terms tasks that they can complete in one or a few visits at a convenient location.

### **7.3.3. Summary of the ICT resources in the four regions**

The findings across cases related to the availability of ICT resources among the four regions indicated that, except for skilled ICT human resources, other resources are available for most STEs of all four regions. However, there were significant differences in the use of software and applications, capacities and accessibility to advanced technologies and infrastructures from Colombo City and other regions. While Colombo City and urban areas in the Ancient Cities and South Coast enjoy a high level of facilities, rural regions like the High Country lack reliable services and facilities to optimise the use of ICTs. Some noticeable features common to all regions are the significant use of smartphones in business operations by owner-managers and the very limited availability of skilled human resources in these businesses.

While different regions have their own strengths and limitations on the availability of overall technological ICT resources, the findings provided evidence for a standard level of availability of ICT resources with these small businesses to perform their business operations. In situations where firms possess a common set of ICT resources, the

availability of complementary resources becomes crucial to creating competitive advantages (Barney, 2001; Mata et al., 1995; Melville et al., 2004). Therefore, findings regarding the availability of complementary resources with STEs across the four regions is discussed next.

#### **7.4. Availability of Complementary Resources in STEs across the Four Regions**

In the overall findings, complementary resources of STEs were identified under the three categories of: non-ICT physical capital resources; non-ICT human capital resources; and complementary organisational resources. While the third category (complementary organisational resources) was identified as rare or non-existent in many of the STEs, the other two categories had commonalities and differences among the regions in a manner similar to technological ICT resources.

##### **7.4.1. Non-IT physical capital resources**

Special architecturally designed buildings and furniture, vehicles and additional resources such as swimming pools and playgrounds are considered non-ICT physical capital resources available with the STEs. When comparing the availability of specially designed buildings among the four regions it was clear that in the Ancient Cities region more than 40% of the buildings came under this category. The South Coast region also had about 30% of specially designed buildings, whereas none of the STEs from the Colombo City region have specially designed buildings. The reason behind this variance is obvious, as the Ancient Cities region comprises ancient and cultural cities with historical heritage while the STEs in Colombo City are more urbanised and comprise business-type buildings. As already discussed, the Colombo City accommodations are mostly for short stays and work as a gateway to the country. The South Coast and High Country regions have an average percentage of designed buildings, as the main focus for High Country is on nature and adventure, and for South Coast mainly sun, sea and sand. In the places where they are available these specially designed buildings are considered very valuable assets to the tourism businesses.

While none of the STEs considered in the Colombo City region has a swimming pool, in other regions around 20% of STEs have one. As the South Coast mostly promotes natural

beaches, this region has the lowest percentage of businesses maintaining a swimming pool as an additional service.

The Ancient Cities region as well as the High Country region have much to offer guests in terms of site-seeing, so most of the STEs in these two regions provide bicycles and other sporting gear to their guests as a complimentary service. A small percentage of STEs in the South Coast provide surf boards and other sporting gear.

The findings of the non-ICT physical resources across the regions provided evidence of the special features related to the regions, their market focus and the financial capabilities. While the other three regions have different complementary services based on their regional specialties, Colombo City was focused solely on the provision of accommodation services for short staying customers.

As discussed in detail in the overall findings, promoting these complementary resources they have is important to these small businesses. Combining ICT tools in marketing and promoting these resources mostly depends on how effectively they use websites and online reviews to promote them. Due to the lack of ICT-skilled human resources, this was not well achieved in many businesses. However, regardless of the region it was evident that when the awareness and skills are available owner-managers could achieve improved operational efficiencies by using ICTs as a tool to promote their complementary resources.

The next section discusses the findings on non-IT human resources available in the STEs across the four regions.

#### **7.4.2. Non-ICT human capital resources**

As described in detail in the overall findings, non-ICT human resources were recognised as very important in STEs. Such resources were identified in various positions, such as the managers, accountants, administration and reception staff, chefs, cooks and kitchen support staff, and the butlers or general labourers.

Although the ICT human resources were identified as very limited, findings provided evidence of a rich set of non-ICT human resources with most of the cases regardless of the region. However, in a manner similar to non-ICT physical resource dispersion, some differences were observed in the four tourist regions. It was found that more than 50%

of STEs in the three regions outside Colombo had a reception position, while in Colombo this is only about 30%.

Out of all the managers interviewed, more than 80% had more than 5 years' experience of working in the hotel sector, while in the Ancient Cities region 60% had more than 10 years' experience. The owners of these businesses specially recruited them to utilise their vast experience in the industry to uplift these small businesses. In contrast, Colombo City mostly had a younger generation of managers with less experience but some form of recognised business and hotel management qualifications, for example graduates, higher diplomas, and diplomas or certificate level courses in hotel management. These managers were more enthusiastic towards the use of ICTs in their business activities. The High Country and the South Coast had a mix of these two types of managers.

About 80% of the STEs provide a free breakfast to the guests. The STEs in Colombo City did not provide further dining facilities. Most of the STEs (70%) in other regions provide authentic Sri Lankan style dining facilities or other types of meals upon their guests' request, and a similar percentage of businesses had a separate person assigned for the kitchen in a position of chef.

While having a rich set of non-ICT human resources was useful in business operations apart from the managers and administration, other staff did not use ICTs. However, there was evidence to promote these non-ICT human resources. As discussed in the overall findings, receiving positive feedback on good customer service or promoting the food provided was done using websites and communication mediums to improve the business image.

#### **7.4.3. Complementary organisational capital resources**

As was emphasised in the overall findings, complementary organisational capital resources were not identified as unique to different cases but mostly are common throughout the country. However, there were some slight differences in organisational culture, structure and work practices based on their market focus, such as international high end tourists and budget tourists. Other than this feature, there were no significant differences across the regions in terms of complementary organisational capital resources among the STEs considered in this study.

#### **7.4.4. Summary of the complementary resources in the four regions**

This section presents findings regarding the availability of three main categories of complementary resources, which are defined by Barney (1993) as non-ICT physical resources, non-ICT human resources and complementary organisational capital resources, across the four regions. While the first two categories of resources were available with some common features in all four regions, some unique features across the four regions considered were also identified. Findings across the cases revealed that the level of complementary resources varies based on the geographical location, market focus (arranging furniture and other amenities according to the international high end or budget tourists), and the additional services provided by the business such as having a restaurant.

The role played by ICTs related to the complementary resources was common to all the regions. ICTs were used as a tool to promote the complementary resources available with STEs. It was evident that the use of complementary resources also depended on the availability of skilled human resources within the business or the accessibility to such resources externally. The STEs with a certain level of awareness and the skills to promote their business using ICT tools had a better business performance (in terms of occupancy rates and positive user reviews) when compared to businesses with more complementary resources but not enough human resources with skills to promote them. Based on these findings across the regions it is apparent that availability of ICT and complementary resources provide a business advantage, yet the owner-managers need to be aware of how to amalgamate the two resource categories in order to maximise their performance and increase the business value. The next section discusses how ICTs are used by STEs in business processes across the four regions.

#### **7.5. Use of ICTs in Business Processes – ICT Strategies**

The examination of ICT resources and complementary resources has provided a picture of the level of resources available with STEs. It was found that the way STEs use ICTs to gain business advantage has certain patterns related to the level of availability of ICT and complementary resources. Therefore, this section presents the findings of how STEs across the four regions use ICTs in their business processes and what strategies they use to gain business advantages through ICTs.

As discussed in the Section 6.3, STEs' business processes were categorised into three main areas: distribution and sales; service delivery; and management. While service delivery had more to do with human interaction, ICTs are currently used in the other two processes and have the potential to optimise efficiency. Therefore, the use of ICT strategies will be discussed under two processes: distribution and sales strategy, and back office functional strategy.

Distribution and sales consists of two main processes: online selling strategy and online presence strategy. Back office functional strategies are grouped in areas of general management such as accounting, inventory maintenance and customer database. Figure 7.7 presents an overview of these strategies.

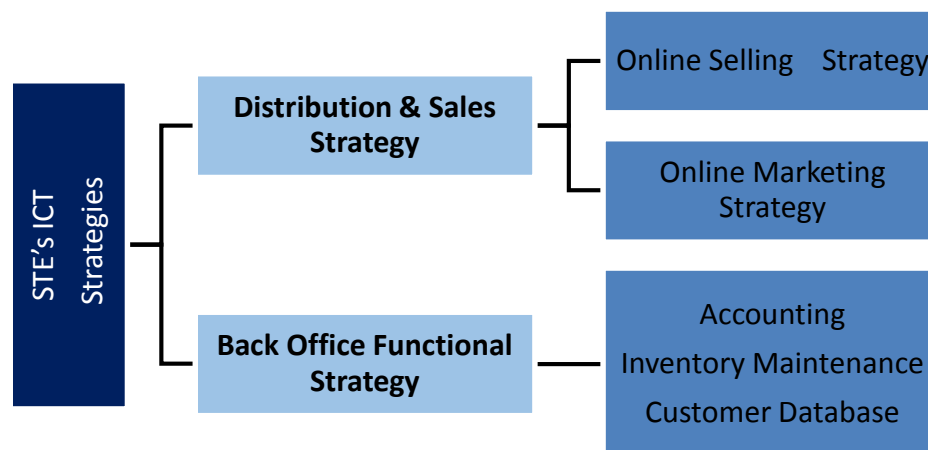


Figure 7.7: Overview of STE's ICT strategies.

### 7.5.1. Online selling strategies

Among the multiple reservation methods used in STEs, apart from walk-in guests all other methods used ICTs in processing reservations. These were:

- Reservation through OTAs
- Direct booking through websites
- Emails
- Over the phone

Table 7.4: The usage level of online selling strategies across the four regions.

Reservation methods used	Level of usage			
	Ancient Cities	High Country	South Coast	Colombo City
Online travel agents	100%	100%	100%	100%
Direct booking through the business website	70%	20%	92%	83%
Through emails	100%	80%	100%	100%
Over the phone (by international tourists)	40%	0%	50%	67%

### ***Online travel agents***

One of the main findings was the STEs high dependence on OTAs for their room reservations. As clearly illustrated in Table 7.4 above OTAs are the dominant method of room reservation for all the STEs regardless of the tourist region. Every STE studied (100%) was registered with at least one OTA and claimed that 60%–100% of their reservations are made through them.

While it was very clear that all the STEs were registered with at least one OTA, it was found that 80% of the STEs in the South Coast region use both Agoda.com and Booking.com as their OTAs. Nearly 70% of the STEs from the Ancient Cities and the Colombo City regions are registered with both the agents and even in the rural High Country region about 50% of STEs are registered with two online agents. The main reason behind this was that they consider this as a crucial activity to attract customers and keep their occupancy rates high. All the STEs who were registered with two main OTAs had more than five rooms to offer. A few STEs (9%) with higher numbers of rooms to offer had registrations with other online agents such as Expedia and some locally maintained online agents such as Lakpura.com. However the most prominent OTAs throughout the four regions were the two international OTAs, Agoda and Booking.com.

When comparing how OTAs were used in the different regions it was found that they were following similar patterns based on the tourist attractions in each region and their target market focus. Having the highest number of well-known international tourist attractions in South Coast and Ancient Cities (refer to Section 4.3.4), STEs who were focused on international high end tourists in these two regions were using the OTAs such as Expedia in addition to the common OTAs used by other STEs in other regions. No

STE from other regions was found to be using Expedia. However, Colombo City was the only region using some other international OTAs such as hostelworld.com, promoting their short-term stays in the capital city. Having many attractions for domestic tourists, Ancient Cities and the High Country had businesses that were using local OTAs such as lankaholidays.com. While most were registered with the commonly recognised OTAs, based on the regional attractions and their market focus the choice of additional OTAs varied.

However, overall the perceived value of OTAs by STE owner-managers was very high and the majority of STEs in all four regions are highly dependent on OTAs for their reservations. Therefore, selling through online agents is considered a survival strategy rather than a competitive strategy.

#### ***Direct booking through website***

As described in the overall findings, direct booking through the business website is another method of reservation. As 97% of STEs have a website, this was an important method of reservation confirmations. As Table 7.4 illustrates, the South Coast region has the highest level of usage of direct booking through the website, with 90% of the STEs providing this facility on their websites. The Colombo City and Ancient Cities regions had above 70% usage of the website, while High Country had the least usage of the website for direct reservations (10%).

Although direct booking using websites mainly redirects the customer to an over the phone or email reservation method, the South Coast region has managed to gain an advantage over other regions using this method. Based on the web content analysis it was evident that the South Coast region has websites that are more dynamic with attractive promotional content that helps increase their direct reservations. About 70% of owner-managers in this region particularly mentioned that they promote direct booking through their website as a less costly method to the customer with no commission. According to them, more than the small direct financial benefit it brings to the business, it promotes their website, which leads to other benefits such as positive reviews and returning customers.

*'Guests who come directly through our website get a discounted rate because they need not pay the commission to an agent. We promote this*



*method so they can get this advantage and they recommend us for their friends and relatives’.*

SC5

In contrast, it was found among the owner-managers in the High Country and Ancient Cities that managers themselves redirect customers to OTAs to avoid the trouble of processing financial transactions related to reservation confirmations. Colombo City businesses used both methods.

Findings across the regions related to direct website reservations showed that this strategy is affected by the other resources and facilities available with the STEs as well as the perception of owner-managers. For example, the difficulties in maintaining a payment gateway, lack of human resources to keep the website up to date and the processing cost of financial transactions make this method a difficult strategy for STEs to fully utilise.

#### ***Email reservations***

Though it is not a specific strategy, it is common for STEs to use emails as a reservation method. However, data showed that 10% of STEs in High Country do not use emails as a direct reservation method; nevertheless, they do use emails to communicate with OTAs and other travel agents related to reservations.

As described in the overall findings, there were STEs who use emails strategically to increase their reservations. Such STEs were mainly found to be located in the Colombo City and the South Coast regions. More than 80% of owner-managers from Colombo City and about 60% from the South Coast region mentioned that they are concerned about being prompt and useful in responding to inquiries by potential guests.

Colombo City participants showed a higher interest in emailing and building relationships with their guests. This is because, as Colombo City was the gateway to the country, returning travellers who have travel plans for different destinations within the country have to pass by Colombo City. Using this to their business advantage, the Colombo City STEs use emails to maintain a good relationship with customers and improve their reservations by means of returning guests. As one manager explained,

*‘Especially tourists from Europe and far away countries stay at least one night in Colombo when they arrive in the country after a long flight journey, when at the end also they return to Colombo for most of the shopping and for other stuff. When we keep in touch with them in emails they mostly come back to us’.*

CC3

While this was the main reason for the Colombo City STEs to use emails in a unique way for their customers, South Coast had their own different reasons. Their main strategy was cross-selling by giving information on a variety of services provided with accommodation. This could be their Ayurveda treatments, surfing packages, or adventure travels. Owner-managers (60%) mentioned in the interviews that they could promote these services with customised emails. Such emails helped the customer to get more value from the business, and help the businesses to gain loyalty from the customer and additional revenue. About 20% of STEs in Ancient Cities also mentioned that they use customised emails to increase their reservations but they were not able to give examples of what they actually did. No participant in High Country mentioned that they use emails to increase reservations. They mostly used emails to connect to the OTAs regarding reservations and to respond if customers inquire about reservations.

It was clear in the cross-case findings that regional differences on available attractions and the purpose of visits to these regions had an effect on how emails were used in the reservation processes. However, it was further evident that the skills and awareness of ICTs by owner-managers of these STEs made a difference to how they use these common facilities to obtain business advantage.

### ***Over the phone reservations***

As discussed in the overall analysis it was found that over the phone reservation takes place mainly for domestic tourists. Table 7.4 gives data related to the use of over the phone method in reservations. The South Coast and Colombo City regions have above 50% of usage of this method in reservations. The reason for their comparatively higher usage of this method was mainly due to returning customers with whom they built relationships or other visitors who came on their recommendation. Participants from the High Country did not receive reservations over the phone for international tourists.

Two managers mentioned that this was due to language barriers, but they were using it frequently with domestic customers. This issue was common with all other cases in the High Country region and about 50% of the cases in the Ancient City and South Coast regions.

In conclusion, it could be seen that reservation is one of the key business processes of STEs, in which the use of ICTs is significant in all three regions except for the High Country. OTAs is the dominant method for all STEs regardless of the region. This has become almost obligatory for every STE in Sri Lanka as a survival strategy in the industry. Email was another common method for reservations. It was found that regional differences provided STEs with a means of using emails in a unique way to promote reservations. Despite some positive examples it was further revealed that the regional differences in the awareness and level of ICT skills had a negative effect on how effectively they use this method for reservations. Financial constraints and the low credibility of the business websites make direct booking through websites less feasible for these STEs. Instead, the website is used as a marketing and promotion tool by most of the STEs. How the business website and other ICT tools are being used by the STEs in the four regions for marketing and promotion is discussed next.

### **7.5.2. Online marketing strategies**

As described in the overall findings in Section 6.3.1, in addition to OTAs and emails that are used along with online selling strategy, ICTs are also used in marketing and promotion (online marketing strategies) and consist of three main tools:

- The business website
- Social media
- Online review sites

#### ***The business website***

As described in the section on the findings regarding ICT resources, all but one of the other businesses in this study have a website. All the owner-managers were proud that they had a website for their business. All of them considered a website an essential element for promoting the business. Even the owner of the only STE that was currently operating without a website mentioned that they do have a website under construction.

However, while understanding the importance of having a website for the business, they were aware that there are negative effects for the business when the website is not maintained well and not kept up to date. Especially in the Ancient Cities and South Coast regions, it was evident to managers that if tourists notice that information is inadequate or inaccurate, they reduce their visits to such websites or even avoid the website completely. When their sites were first developed they used to receive a higher number of visitors, but as managers observed, visits decline if they do not keep the site up to date with useful information to potential visitors.

About 50% of managers understand this and maintain their website according to user requirements. However, it was clearly evident that many business websites were mostly static and have not recently been updated. Even though the owner-managers took the initiative to create a website for the business, due to their limited knowledge about website maintenance, they always had to depend on the service provider for maintenance. This could be seen as a common issue across all the regions except for Colombo City. In most cases, as this was an additional cost to the business, they tended to develop a website that provided only basic information so it would be left as it was for a long time. Therefore, a website analysis was conducted to further investigate the content and the usability of the websites of the STEs across the regions. Table 7.5 shows the different features of websites of the four tourist regions.

Table 7.5: Website analysis of the four regions.

Website features	Availability of the features			
	Ancient Cities	High Country	South Coast	Colombo City
Readable text	100%	80%	92%	100%
Images	90%	60%	100%	100%
Comprehensive contact information	100%	80%	100%	100%
A link for direct booking	70%	20%	92%	67%
A payment gateway	0%	0%	0%	0%
Updated within the last 6 months	50%	20%	57%	83%
Display of guest reviews	50%	20%	71%	67%

A clear disparity was seen in the websites of the STEs from rural regions such as the High Country region and some districts of the Ancient Cities region. Due to limited access to

skilled IT human resources, their websites were mostly stagnant and looked obsolete. In contrast, the websites of the STEs of Colombo City region had relevant information, and 83% (five out of six cases) of the websites provided content that had been updated within the last six months. All the websites in all four regions had a comprehensive set of contact details including email and phone numbers. Except for the website of the STEs in the High Country, the majority of other websites had a link for direct booking for reservation queries. As none of them have a payment gateway on the website, this meant it was necessary to communicate with the STE to confirm reservations via email or over the phone. The South Coast, Colombo City and the majority of the websites of the Ancient Cities region quoted guest reviews or provided links to their reviews on TripAdvisor and other online review sites.

### ***Social media***

Social media is slowly evolving among the STEs as a marketing tool. It is at an initial level of usage by a few STEs in all the regions apart from High Country. Table 7.6 shows the usage of social media in marketing and promotion by the STEs in four regions.

Table 7.6: Use of social media by STEs in the four regions

Social media	Level of usage			
	Ancient Cities	High Country	South Coast	Colombo City
Facebook	10%	0%	21%	17%
YouTube	0%	0%	7%	17%

Only in the South Coast and Colombo City regions was use of social media above 10%. These cases were also more advanced generally in their use of ICTs as well as having higher ICT-skilled employees. Even among these early adopters of social media, the only media being used was their Facebook page that they used in promotions. The STEs in the South Coast region seemed to be utilising such tools more successfully than the other regions. They used the Facebook page to get 'likes' to their page linked to their TripAdvisor reviews and even got email reservations through the Facebook contact information. Further, some have created YouTube videos about the location and amenities offered and promoted festivals and local attractions. However, according to the owner-managers, even though they would like to do some further activities on these

media, time constraints are significant as the same skilled employee has to manage the other key business activities as well.

In Colombo City, 17% of cases have similarly started using Facebook and YouTube for their promotional activities. All of them have connected their Facebook page and YouTube channel to their web sites. As these businesses were more concerned with returning customers, having an established connection in Facebook was important for them. Through that they were able to maintain long term customer relationships and respond to their feedback. Loyal customers were updated through the Facebook feeds and they were offered discounts and other offers to promote their return.

Only 10% of STEs from the Ancient Cities region were found to be using Facebook. However, although it was a lower percentage it could be seen that those STEs who were using it were at the same level as the other two regions.

In the High Country region no STE had a Facebook page or a YouTube channel. However, two managers mentioned that they use their personal Facebook accounts for promoting their businesses by spreading the word among their personal contacts. For them this seemed more useful than having a separate page for the business. With few employees, time constraints mean that they are unable to allocate time for such an activity, but once in a while when they get some free time it is easy for them to post some promotional feeds to their own Facebook page. While they acknowledged that this only reaches the domestic contacts that they already have in their contact lists, based on their market focus it was useful for them and there was evidence of confirmed reservations that came through these promotions.

When analysing the level of usage of social media in STEs, it was clear that it is still at an undeveloped stage among the STEs in all four regions. However, a positive sign was that STEs have some awareness of the potential of social media and they would be willing to utilise it if not for other barriers such as time constraints and lack of available skilled employees.

### ***Online reviews***

As described in the overall findings, due to the nature of how online review sites work, the role played by the business in this regard is mostly indirect. The provision of a better customer service was crucial to get positive reviews. Further, this strategy was extended

and utilised in a better way by a majority of the STEs, especially in the Ancient Cities and the South Coast region. It was evident that they maintain an active response rate to the guest reviews received via email, on their own website, and from other third party websites. They achieved a better presence on the internet compared to the other non-responsive business establishments. To further investigate how online reviews affected STEs in each region, an analysis of user reviews on TripAdvisor was conducted. Reviews about the businesses were available on those OTA sites as well. However, as STEs were registered with different OTAs and reviews on OTAs could not be responded to by the managers publicly (Booking.com and Agoda .com allow hoteliers to contact the author only privately) these reviews were not taken into consideration when comparing the four regions. Table 7.7 provides findings on STE involvement with the TripAdvisor site.

Table 7.7: The extent of involvement of STEs with TripAdvisor

<b>Involvement with TripAdvisor</b>	<b>Ancient Cities</b>	<b>High Country</b>	<b>South Coast</b>	<b>Colombo City</b>
Reviews about the business available	100%	100%	100%	100%
Registered with the site	70%	20%	71%	67%
Responded to reviews*	71%	0%	80%	75%

\* Only registered businesses can respond to reviews, and the percentage is hence calculated on the basis only of these registered businesses.

As can be seen in Table 6, reviews on all the STEs studied were available on the TripAdvisor online review site. However, not all of them were registered with the site. As one manager from the High Country region commented, even when the business is not registered, TripAdvisor members can review those places on the site. Even the case that mainly focused on domestic tourists could also be found on the TripAdvisor site. Therefore, it was confirmed that regardless of their intention or requirement they are reviewed and visible to other potential visitors through the TripAdvisor site.

At the interviews all the managers talked positively about promoting their web businesses through the online review site. Apart from the High Country region, the majority of the STEs in other regions were registered and actively participated in responding to their reviews on the site. In the Ancient Cities region, while many other areas of ICT use were only at an average level, responding to online reviews was high.

This could be seen as a feature that is particularly important for long term stays. Therefore, it was similarly applicable to the South Coast region as well.

The analysis of TripAdvisor user reviews provided evidence of success in their marketing strategies. For example, as described before, the STEs in Colombo City focused more on short-term stays as well as returning customers. The following review provided evidence of the success of such promotions;

*'We stayed here for three nights at the first time. The rooms are very clean.... I'd say it's the perfect place to begin your trip. We started here and finished here. They are very helpful ...'.*

*A user review on CC2 on TripAdvisor (retrieved 15 March 2016)*

It could be further seen that this place was well placed in the TripAdvisor site and proper responses were provided to the user reviews by the manager of the business. Although the number of reviews the business has received is low relative to the number of years they have been operating, all the reviewers had given a high rank to the business. Investigation into the cases profile showed that this change could be due to a recent change of management in the business. However, this was not the only case found in Colombo City: out of the registered businesses 75% of them were active respondents to user reviews in the TripAdvisor site.

Similarly, the Ancient Cities and South Coast region were promoting their special features, services and amenities through the online reviews. This could be seen as supporting to their promotions focused on market niches. For example, some South Coast STEs were attractively positioned for their beach resources, Ayurveda treatments and special attractions.

About architecturally designed buildings, furniture and other facilities (South Coast):

*'... It lives up to everything it says on the website: wonderful garden setting, beautiful Bawa design ..., excellent furnishings and atmosphere ...'.*

*A user review on SC3 on TripAdvisor (retrieved 15 March 2016)*

About location, food and other facilities (Ancient Cities):



*'this fabulous hotel offers breath-taking views of the city. The gorgeous backdrop of the hills, the chanting emanating from the monasteries put you at ease with the environment instantly. The food was top notch and would highly recommend'.*

*A user review on AC2 on TripAdvisor (retrieved 15 March 2016)*

These STEs properly planned and achieved their promotional targets through evidence from online reviews. Active participation on TripAdvisor was observed by responding to both positive and negative reviews appropriately. The analysis of reviews also revealed that regardless of the age of the business, active participation had increased positive feedback. For example, an STE in the South Coast region that had been in the business for 17 years had only 10 reviews, while an active respondent STE that was only 4 years old had over 350 reviews on the same site. Being active in these online review sites seemed to be a useful tool for promotion and increasing reservations.

Along with thanking customers for giving them positive feedback, there were examples for how they respond to negative feedback as well.

*'We absolutely respect your opinions. But there was a reason for happened such thing. ... at last we apologise from you to happened such thing. It was not happened before and it will not happened again'.*

*SC2 in response to a negative user review about them on TripAdvisor (retrieved on 15 March 2016)*

It was common for all the STEs to have a few negative comments even though 99% of other reviews are very positive (rated at or above average out of the ratings which range through excellent, very good, average, poor, and terrible). By responding quickly to such negative comments, managers can reduce the possible harm to their image. As quoted above, these types of responses could be seen in both Ancient Cities and South Coast regions.

Although 20% of STEs from the High Country were registered on TripAdvisor, none of them had responded to any of their reviews. As mentioned in other areas, the lack of human resources and other infrastructure could be a reason for this limitation to online participation.

In conclusion, it was evident that online marketing strategies used by STEs varied across the four regions. However, Colombo City and the South Coast were ahead of the other two regions in using ICTs to advertise and promote their businesses. Apart from the

overriding reason of the availability level of skilled human resources, it was found that other regional differences also affect the different marketing strategies across regions. For example, their market focus being based on the regional natural resources is one important factor that affects promotional strategies. With a well-established tourism community, the South Coast was found to be providing a supportive environment for STEs to promote their businesses. In contrast, being more established for high end tourists who normally chose large scale hotels and having more cultural heritage attractions, the Ancient Cities and High Country regions could not be seen as providing a conducive environment for small businesses to engage in large scale promotional activities when compared to the South Coast region. Colombo City STEs were seen as more competent in online promotional activities with their large pool of resources as well as the number of tourist arrivals to the region. Therefore, as was consistently seen in all the aspects of ICTs, the Colombo City and South Coast regions could be identified as somewhat leading in online marketing strategies as well.

In addition to online selling and marketing strategies, STEs were also using ICTs in their back office functions. An analysis of how these activities were performed across the regions is presented next.

### **7.5.3. Back office functional strategies**

This was found to be the least used strategy in STEs in this study. The use of ICTs was low in their administration functions when compared to the marketing and selling activities. Among the prevalent back office functional areas, human resources was not considered for the cross analysis as the use of ICTs in this function was at an insignificant level in all four regions. However, the maintenance of customer databases (which was discussed under the category of service delivery processes, Section 6.3.2.1) was found to have variances across the regions, and it is hence included here in the comparison. Therefore, the three main back office strategies for comparison include:

- Accounting & finance
- Inventory maintenance
- Maintenance of customer database

Table 7.8 shows the level of ICT usage in administration functions by STEs in the four regions.

Table 7.8: The usage level of back office functional strategies across regions

Back office functional strategy	Level of usage			
	Ancient Cities	High Country	South Coast	Colombo City
Accounting	80%	50%	86%	83%
Inventory maintenance	30%	0%	43%	67%
Maintenance of customer database	80%	0%	92%	83%

As discussed in the material detailing software and application use in the ICT resources section, it was found that many of the STEs who use computer applications for their accounting purposes use Excel applications to maintain their accounting records, and a minority of STEs used specialised accounting software. Taking Excel and accounting software together, all three regions had an ICT usage above 80%, while the High Country had only 50%. Colombo City had the highest usage in all three functional areas considered. These services helped them to provide more effective customer service when compared to the businesses who still use manual methods such as those in the High Country region.

All the cases who used accounting software were located in the South Coast and the Ancient Cities regions. Although 83% of Colombo City region STEs used applications for accounting, all of them were using Excel. However due to their skilled employees they had developed their spreadsheets system so as to get the maximum functionality out this simple application. Although 50% of the cases from the High Country were also found to be using Excel for accounting, it was mostly a case of entering data into a spreadsheet manually.

All the cases who used ICTs in the accounting function were found to have a well-used customer database as well. However, the High Country was an exception and no STE in this region had a computerised customer database. Among the other three regions the South Coast was found to be the region that utilised their customer database the most. Ninety-two percent of the cases had a computerised customer database and there were several examples of effective use of the database for customer service. They maintained the customer databases with guests' special preferences and requirements, specially focusing on long staying and returning customers. Apart from formal customer details,

they also record general observations of a customer during their stay and respond to their preferences. As one manager explained,

*'When customers are staying here for few days we ask and look for any special preferences for them. We put a note on their record on the database. When employees change their shifts they should read these notes so they can understand what each guest needs ...'*

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It could be seen that such strategies has helped them improving their customer services, as evidenced by the reviews published on the TripAdvisor.

Further, managers described that these databases were useful to learn how to treat customers from the same countries as their basic requirements are fairly similar, such as settings for room temperatures and the level of spiciness for food.

The Ancient Cities region was also found to be using some strategies to attract customers by sending emails to their customer database on special events and offers in the region. Colombo City STEs used their database details to attract guests who had already entered the country, contacting them during their stay and providing offers for their departing night stay and discounted airport drop-off facilities.

While inventory management (non-room) also prevailed in the three main regions at an above average percentage, no specific variations could be found across the regions. While the majority used Excel spreadsheets for this purpose as well, the Ancient Cities and South Coast regions were again found to be using inventory systems developed for them using applications such as Access.

When compared the back office strategies used by STEs across the four regions, the Ancient Cities region was highlighted for its high use of ICTs compared to the other aspects. A higher percentage of STEs utilised several areas of ICTs in their administration processes. However, as described before in the Section7.3.1, it was found that the impact of government conducted ICT training and awareness programmes in this region has helped them improve their use of ICTs in administration functions of their businesses. Overall, this comparison provided evidence that the use of ICTs was affected by the regional differences, such as average duration of stay (based on regional attractions), as was common to all other aspects such as accessibility and the availability of skilled human resources.

#### 7.5.4. Summary of use of ICT strategies

The three main ICT strategies used by the STEs were the online selling strategy, web presence strategy and the back office functional strategy. In all the regions, implementation of these strategies could be identified but levels of implementation varied across the regions. As Table 7.9 indicates, the online selling strategy was the most used ICT strategy by STEs of all four regions. Except for the High Country region, an online marketing strategy was used by the majority of STEs in the other three regions. A back office strategy was used to a moderate to low level by the STEs.

Table 7.9: The level of implementation of ICT strategies within the four regions

ICT strategies	The level of implementation*			
	Ancient Cities	High Country	South Coast	Colombo City
Online selling strategy	High	Moderate	High	High
Online marketing strategy	Moderate	Low	High	High
Back office functional strategy	Moderate	Low	Moderate	Moderate

\*Key to the levels: The number of STEs use this strategy at or above 80% – High, between 60% and 79% – Moderate, Less than 60% – Low.

However, there were cases in different regions that were capable of using these common strategies to differentiate their businesses by using the skills of their human IT resources. Further, it was evident that the STEs who were capable of differentiating themselves by applying some innovative extras were able to gain an added value from their ICTs compared to their competitors. For example, there were cases in the South Coast that used their website to promote their speciality skills of Ayurveda treatments. Using tools such as linking interested guests to a database of treatments and illustrating previous cases of treatments on their website, they were able to effectively address their market niche. Similarly, there were cases that used their location attractions and authentic food culture to attract high end European tourists. Businesses that maintained customer databases were able to customise their services to guest preferences and were able to increase the number of returning customers and positive feedback rates posted on online review sites. Further, it was evident from the cross analysis that apart from the resources available within the cases, regional differences also had an effect on customising online strategies for advertising and promoting their businesses.

## 7.6. Drawbacks and Barriers to Implementing ICT Strategies

During the analysis of findings across the regions, it was evident that there were common features related to both tourism and ICT aspects within each region and some varying features across the regions. Some of these regional features had negative effects on use of ICTs in the STEs. Overall, four main barriers to the implementation of ICTs were identified. While some of those barriers were common to all four regions, some of them had a much more significant effect on STEs in specific regions. Table 7.10 shows the prevalence of the four main barriers in each region and their level of impact on STEs in using ICTs in their business activities.

Table 7.10: The level of impact of barriers to ICT strategies in the four regions

Barriers to ICT Strategies	Level of Impact			
	Ancient Cities	High Country	South Coast	Colombo City
Lack of qualified and trained ICT personnel	High (80%)	High (100%)	High (86%)	Low (33%)
Lack of awareness about potential ICTs for tourism and for small businesses	Moderate (50%)	High (100%)	Moderate (64%)	Moderate (50%)
Limited financial budget in general and for ICTs	High (80%)	High (80%)	High (86%)	High (83%)
Limited infrastructure	Moderate (50%)	High (80%)	Low (50%)	Low (17%)

NOTE: Bracketed figures indicate the percentage of participants who mentioned it as a barrier to implementing ICTs.

### ***Lack of qualified and trained ICT personnel***

Lack of ICT-skilled labour was the major issue faced by the STEs across the regions except in Colombo City. As described in Section 7.3.2, STEs in Colombo City had a large pool of ICT-skilled personnel due to the city being the centre for education in Sri Lanka. Therefore the majority of the STEs in Colombo City had at least one employee with a formal certification of ICT skills. When they need technological and other services beyond their capabilities they had easy access to hire external services cheaply. In contrast, High Country was mostly affected by this barrier by not having human resources within the firm as well as less accessibility to external services. Although the

issue was not dire, Ancient Cities and the South Coast regions also identified this as the major issue when it comes to new ICT implementations.

As a solution for this issue some businesses were using their educated children to get these services done. They were able to get their support on a day-to-day basis from advanced level school children (aged 16-19) who attend the regional schools from home. However, the more skilled university students were mostly based in Colombo City and came home only during the vacations. About 60% of owner-managers from the three regions mentioned that they receive the services of such students from family or relations. Although this was a valuable informal human resource, they could receive it only seasonally or occasionally. Depending on such human resources skills was a risk for these STEs who are operating in a dynamic business environment.

#### ***Lack of awareness about potential ICTs for tourism and for small businesses***

As a result of scarce Human ICT resources, the awareness of potential and useful ICTs was limited among the STEs. Obviously the High Country was most affected by this limitation due to their lower exposure to new technologies. The minority of STEs from this region mainly used it for customers' usage rather than for their own business activities other than processing reservations through emails that come from OTAs. Moreover, they did not show any interest in improving their awareness: even if they were aware of the possibilities of ICTs it would be difficult to implement due to the other barriers such as the limited general infrastructure.

Although Colombo City had a pool of skilled ICT resources, it was evident that awareness among the owner-managers about the useful ICTs for them was at a moderate level similar to the other two regions. Apart from having a negative impact of the lack of ICT human resources, Ancient Cities and South Coast region managers also had a moderate level of awareness about useful ICTs. Moreover, these two regions were home to the few STEs who were innovative by using social media in their online marketing strategies. As discussed in the South Coast regions, they seemed to get more exposure to useful technologies through their own customers. Ancient Cities also provided evidence of using unique ICT applications in their business processes (such as Google Docs for inventory management). As was discussed before (in Section 7.3.1), STEs in this region had gone through some awareness programmes provided by the government that

helped them to identify new avenues for ICTs in their business activities. Taking the Ancient Cities example, it can be seen that the government can play a major role by running awareness programmes. As the majority of owner-managers are interested in new technologies and willing to learn, conducting such awareness programmes could help them to obtain more benefits from their ICT investments.

### ***Limited financial budget for ICTs***

Limited financial resources was another general issue faced by the STEs across the regions to a similar extent in each region. Apart from a few lifestyle businesses, all the owner-managers mentioned this as a major barrier to expanding their investments on ICTs. Because of the shortage in funds for overall business development they had to limit their ICT budget to essential existing services such as paying monthly bills for phone and internet.

An interesting finding across the cases was their unwillingness to invest further in ICTs. While over 70% of managers agreed that the limited finance is a barrier for ICT investments, 50% from the High Country, 35% and 20% from the South Coast and Ancient Cities respectively mentioned that they would give a lower priority to ICT investments. As these three regions have a variety of tourist attractions, they believed that if they had further funds they would make developments in the general business activities such as expanding their number of rooms, or adding some complementary services that they can sell to their existing customers. It was evident that these STEs are satisfied with their level of ICTs in the businesses. Participants from Ancient Cities further mentioned that they would invest in improving the ICT skills rather than adding any physical devices or services to the existing ICT resources. They believed that based on the current room capacities their ICTs are adequate if they can utilise them well. This was further evident from the data on the emphasis given in their strategic plans to ICT development. As discussed in section 7.4.3 in connection with complementary organisational ICT resources, about 25% of the STEs claimed that they have a strategic plan (for five years). Table 7.11 shows the emphasis given to ICTs on their strategic plans (in cases where it was available).



Table 7.11: Emphasis on ICTs where strategic plans were available

Strategic plan	Ancient Cities	High Country	South Coast	Colombo City
Availability of a 5-year strategic plan	30%	0%	40%	30%
Emphasis on ICT developments in the plan	Low	N/A	Low	Moderate

The figures in the table 7.11 show the limited availability of strategic plans among these businesses, with none in the High Country region. Even where a strategic plan was available a moderate level of importance to ICT was given only in the Colombo City region. Only the STEs from Colombo City had plans to purchase new ICT devices and expand the broadband data capacities within the next 5 years. Ancient Cities and the South Coast region participants gave a low priority to ICTs mainly because of their concerns about the long term maintenance cost of such ICT investments as previously described. They had no intention to buy any new devices or software in the next 5 years. However, STEs from the Ancient Cities had plans for computerising their accounting system (where currently it was done manually) and participating in a diploma in Tourism programme that included ICT skills improvement. In the South Coast region, among the STEs who included ICTs on their strategic plans, they only had plans to expand the internet data capacities for customers' usage.

Although there was a low priority for ICT investments, overall lack of finance was the main reason for this. As small businesses they still have their main tourism business goals that they like to achieve. Moreover, their perception of having only a standard set of ICTs (that are registering with OTAs, having broadband and WiFi internet and having a manageable device such as a smartphone and a laptop) to perform business processes and to offer to their guests was also a main reason for their lower allocation of budget for ICTs.

#### ***Limited infrastructure in rural areas***

As discussed in the overall findings, limited infrastructure was an issue in some regions. The High Country region had the lowest level of infrastructure facilities. Although certain ICT facilities such as communication and internet services were available in these regions, there was a lack of complementary infrastructures such as reliable power

sources, a strong labour market, roads transport and other general infrastructures. These barriers from the external environment greatly affected the small businesses in these regions. When analysing the user reviews in TripAdvisor it was also found that some of the negative comments they received were also caused by the limitations of basic infrastructures such as poor electricity supply. Although larger businesses had alternative emergency power supplies in this region, such alternatives were not affordable for these small businesses.

While Colombo City did not have such difficulties, about 10% and 20% of businesses respectively from South Coast and Ancient Cities regions also had such difficulties due to being located far away from the urban areas. However, even in those areas businesses seemed to be more prepared for issues such as interruption for power supplies by using generators. Therefore, overall this barrier could be identified as something unique to the High Country region. It was evident that such barriers make the businesses somewhat backward in their development and greatly reduce the use of ICTs in their business activities.

#### ***Summary of barriers to implementing ICT strategies***

The four main barriers to ICT implementation identified in the overall findings were cross analysed in this section. The High Country was found to be the region most affected by all four barriers. Lack of general infrastructure in this region had led to many other issues for STEs within this region. Colombo City was least affected by infrastructure issues, but even though they had access to more resources, they also suffered from the issue of not being aware of potentially useful ICTs for their businesses. The lack of skilled ICT human resources was the key issue faced by all the STEs in this study. Lacking these skills had led them to underutilise their existing ICT resources. As this underutilisation of resources indicates less value added by the ICTs, it further demotivated the owner-managers' interest in ICTs. Therefore, while financial barriers commonly affected the businesses, even in cases where finances were available they gave less concern to the expansion of ICT investments.

### **7.7. Summary of the Cross-case Analysis**

After analysing the data relating to the overall country context, a cross-case analysis was carried out in order to identify the reasons behind varying degrees of contribution of ICTs towards the business value of STEs in this study. In order to perform the cross analysis, cases were clustered based on tourist regions.

The analysis provided evidence as to why different STEs achieve different levels of business value from ICTs. The three main factors highlighted were: Business motives of the owner-managers, ICT strategies used in business processes, and the regional support and barriers faced by the businesses based on their locations or the type of tourist region.

Apart from the regional variances that lead to different levels of business value from ICTs, some common characteristics throughout the regions were also discovered, such as the limited level of ICT-skilled personnel. Although this was less prevalent in Colombo City and other urban areas, it was still a major barrier to gaining optimal value from ICTs among all the STEs in the country. The key findings of the cross-case analysis along with the overall findings are further discussed with the extant literature in the following chapter in order to answer the research question and to address the research aims.

## Chapter 8: Discussion

### 8.1. Chapter Introduction

This chapter aims to bring together the findings from the overall case and cross case analysis presented in Chapters 6 and 7 to address the main research question and related research aims. To achieve this, the findings are discussed with reference to literature on the business value of ICT in tourism by focusing attention on small firms in the context of developing countries. Integrating the key findings of this study, the initial conceptual framework has been revised to be more appropriate for assessing business value of IT for STEs in developing countries.

Firstly the chapter re-introduces the main research question of this study and the three research aims. Section two recaps the discussion presented in Chapter 6 about how STEs in Sri Lanka use ICTs to obtain business value and extends it to consider both the business and customer directed use of ICTs in STEs. Section three discusses the factors which affect the organisation's ability to gain business value from ICTs, both those derived internally from the focal firm and the external factors from the external environment. Section four summarises the cross case analysis presented in Chapter 7 which evaluated the unique features of STEs which contribute to the varying levels of business value gained from ICTs. Section five reflects on the main findings of the research by revisiting the concept of the business value of ICT and considering how ICTs contribute to the business value of STEs in Sri Lanka. Section six integrates the key insights of this study into the initial conceptual framework. Finally, the modified framework of the business value of IT for STEs is presented with a discussion of the variables in the new framework.

### 8.2. Addressing the Research Question and Aims

The central research question (RQ) of this study is:

***How do ICTs contribute to the business value of Small Tourism Enterprises in Sri Lanka?***

In order to answer this question the following three main research aims (RA) have been set:

(RA1): Explore how small tourism enterprises use ICTs to gain business value.

(RA2): Examine the organisational and external factors that affects the STEs' ability to gain business value from ICTs.

(RA3): Evaluate why the contribution of ICTs to business value varies from one STE to another.

The following sections discuss the findings related to the research aims, and then address the principal research question and present the revised framework of business value of ICTs for STEs in Sri Lanka.

### **8.3. (RA 1) - How STEs use ICTs to gain Business Value**

ICTs have been increasingly recognised as an important contributor to the performance of STEs (Buhalis & Law, 2008; Favre-Bonté & Tran, 2015). A growing need to enhance efficiency and improve customer satisfaction has led STEs to become gradually more reliant on ICT to assist in business processes (Law et al., 2014). The findings of this study are consistent with the literature and provide evidence for the use of ICTs by STEs to increase business process efficiency and customer satisfaction. However, one of the key findings of this study, described in Chapter 6, was that in order to gain business value from ICTs, STEs need to concentrate on both business directed and customer directed processes. Adopting ICTs in key business processes was necessary to increase the operational efficiency; however, due to the powerful external forces such as technologically advanced customers and online review sites STEs have to provide ICTs for customers during their stays. Due to this requirement STE owner-managers have to balance their use of ICTs both as a way of improving productivity and efficiency and also as a way of improving service and customer satisfaction. Hence ICT resources of STEs were utilised in two ways as:

- Using ICT resources in key business processes;
- Offering ICT facilities and services for guests.

The following section describes how each method was operationalised in STEs and how they contributed to the business value.

#### ***8.3.1. Using ICT resources in key business processes***

As identified throughout Chapter 6 and further supported by the cross-case analysis in Chapter 7, distribution and sales was the key business process where ICTs made a

significant contribution to increased business value in STEs. For the majority of STEs, distribution and sales was a comprehensive process which combined all the key business activities. Therefore adopting ICTs in this process led to an improvement in overall performance. This finding is in alignment with the literature which frequently claims that ICT is a business process enabler in tourism (Alford, 2005; Benckendorff, Sheldon, & Fesenmaier, 2014) as well as in information systems in general (Mpofu, Milne, & Watkins-Mathys, 2013). However, it was further evident in the findings that the adoption of ICTs in their business processes was due to the pressure of external forces such as the influence of competitors and customers rather than being a choice of the owner-managers. The literature also provided evidence that due to the information intensive nature of the tourism industry, adopting ICTs in business processes has become essential for both large firms (Law et al., 2014) and smaller organisations (Ardjouman, 2014). To keep up with the industry trends and deal with competition from other businesses, the use of ICTs is becoming compulsory. However, regardless of their reasons for adopting ICTs all the owner-managers in this study accepted that integrating ICTs in business processes helped them increase the value of their businesses.

The main objectives of adoption of ICTs in key business processes of STEs were to increase effectiveness, reduce costs and become more competitive in the industry. While the majority of the cases in this study were found to be successful in achieving these objectives, prior research (Alford, 2005; Buhalis, 2003) further suggested that before the implementation of ICTs it is essential to identify key business processes and the nature of the costs; otherwise ICTs can actually increase the cost of these processes. Accordingly, this study provided evidence that the STE owner-managers understood the pressure points of their business processes where they could adopt ICTs to reduce costs (e.g. the payment stage of online reservation process). As suggested by Alford (2005) in his study of mapping and evaluating business processes in the tourism industry supply chain, the STEs in Sri Lanka were found to be using ICTs in three key business processes: distribution and sales, service delivery, and management. The OTAs and online review sites, the business website, software and applications, and devices were the ICT resources which were utilised in these processes. It was further evident that use of ICT resources was mostly integrated with the resources of their online trading partners.

Therefore in this section, ICT resources refer to the STE's own resources and the shared technology services from OTAs.

As suggested by the literature (Anwar, Carmody, Surborg, & Corcoran, 2014 & Corcoran, 2014) and as understood by the owner-managers of this study reservations was identified as a key process where ICTs should be adopted to facilitate online reservations. However, the final step of this process (performing financial transactions online) required advanced technologies and was costly for the STEs. Therefore as a way of avoiding such costs, STEs collaborated with OTAs to carry out this process for them. This not only reduced costs but also made the reservation process more efficient through the OTAs' advanced technology services. This finding is supported by recent literature that claims that third-party online travel services have become extremely popular largely due to their ability to facilitate low-cost reservation processes for both the businesses and customers alike (Tan & Dwyer, 2014). In contrast the literature provides evidence that larger tourism businesses provide comprehensive online reservations through their websites while keeping OTAs as a supplementary service (H. A. Lee et al., 2013). Further, by using OTAs for advertising, businesses were able to reduce the cost of implementing separate advertising campaigns as well.

As one of the major ICT resources used by 97% of the STEs, the business website was mainly utilised in the marketing processes. By maintaining a dynamic website with a rich array of information, images, videos and links to useful resources, a few STEs were able to use this resource to compete with similar businesses in the industry. The website not only promoted the business but also provided direct booking facilities (without the payment option) and reduced the cost of business processes by merging marketing and reservations into one. The literature also emphasises the importance of websites in promoting the tourism businesses as a way of facilitating a direct online presence (Favre-Bonté & Tran, 2015). However when compared with the performance of the comprehensive websites of branded large scale hotels which provide a broad range of services to their customers (Bilgihan & Bujisic, 2015) and are easily accessible via an online search query (S. Burgess, 2015) small firms received relatively less advantage from their websites.

As was evident from over two thirds of the cases, the use of smartphones in their key business process has greatly helped in increasing efficiency by letting the owner-

managers perform functions instantly, connecting to their stakeholders from almost anywhere. A study by Harris and Patten (2014) also suggested that smartphones help to increase the mobility of small businesses by allowing owners the freedom to collaborate and transact business outside traditional workplaces and times. Passerini, El Tarabishy, and Patten (2012) suggest that effective use of smartphones not only increases efficiency but also improves the SMEs' competitiveness with regard to larger organisations in terms of prompt real time communications. As was shown by this study, due to good coverage of services, smartphones were particularly useful in STEs in rural regions as the devices were more reliable than computers. This is in agreement with the findings of Constantinescu et al. (2014) who suggest that smartphones are particularly important in regions with underdeveloped infrastructure for other Internet services. Payton, Morais, Heath, and Martin (2011) also identified smartphones as an important tool in improving tourism entrepreneurship in rural South Africa.

The reduced costs of business processes and improved efficiency due to the adoption of ICT is supported by several studies conducted in very different contexts in both developed (Brynjolfsson & Hitt, 2003; Buhalis, 2003; J. Lee & Runge, 2001; Marvel, 2001) and developing countries (Ashurst, Cragg, & Herring, 2012; Prasad & Heales, 2010). In addition to reducing costs and improving efficiency, it was evident in this study that adopting ICTs in business processes allowed STEs in Sri Lanka to improve their image in the tourism industry. As discussed in Section 7.5.2, the use of social media and the interactive use of online review sites enabled businesses to better present themselves. Therefore it is clear that in order to obtain the optimal contribution from ICTs, businesses have to identify the key points of the business processes and how best to utilise ICTs in them in order to reduce costs and improve efficiency which in turn helps to improve reputation. Moreover, enhanced competition and customer expectations lead hotels to look for ways and means to achieve competitive advantage, making the adoption of technology in business processes essential to cope with rapidly changing environments (Sirawit, Islam, & Do Ba, 2011).

However, it was identified from the findings that using ICTs only in business directed processes is not enough in the tourism industry. While ICTs can improve operational productivity and performance, customer satisfaction is seen as a key determinant of survival and success in the long term (Melián-González & Bulchand-Gidumal, 2016). Due



to the global trend of increasingly technologically advanced customers, it was necessary to provide Internet access for them to achieve customer satisfaction (Amaro & Duarte, 2013; Kwok & Yu, 2013; Standing et al., 2014). This was an unavoidable cost for these small businesses; however, these STEs consider the provision of ICTs (by means of free Wi-Fi) as an investment in guest satisfaction.

### ***8.3.2. Offering ICT facilities and services for guests***

When analysing the ICT resources of the STEs one of the key findings was that these businesses maintain certain ICT resources that are dedicated to their customers. It was an unexpected finding that due to strong customer demand STEs had to make investments in these services while restricting their own use of ICT resources. For example it was evident from the cases that they purchase higher capacities of broadband and Wi-Fi Internet connections to offer their customers even though they think that purchasing antivirus software and safeguarding their own ICT devices is too expensive. Although previous literature in tourism provided some indication of the use of ICTs to achieve customer satisfaction (Zelenka, 2009) no evidence was found which emphasised the allocation of ICT resources for customers' use.

Rather than being a unique facility that attracts customers, this was identified by the managers as an essential part of their tourism product. As the majority of these businesses were focusing on budget travellers it was vital to provide free Wi-Fi. While only limited evidence was found in the literature to support the use of ICT as an enhancer of customer experience, this finding is in agreement with some recent studies conducted in the field of hotel management (Wolfe & Venegas, 2013) claiming that satisfying the technological expectations of guests is very important as staying connected is a top priority for hotel guests. For example a survey conducted by the University of Houston in the United States to explore customers' technological expectations of their hotels found that the three most important criteria while seeking a hotel were free Wi-Fi (82.2%), free breakfast (62%) and in-room technology (such as a portable IT device with connectivity). However as people tend to personalise their devices and have them loaded with content that the hotel cannot offer, the key is to provide guests with the ability to use their personal devices in their room by providing high-quality Wi-Fi and the ability to connect to amenities which enhance their

experience (Wolfe & Venegas, 2013). In a study (Jacques, Melián-González, & Beatriz González, 2011) which analysed whether offering free Wi-Fi improved hotels' online ratings, it was found that it helps hotels to improve their ratings by up to 8%, while business centres and room service are irrelevant to customers. In their study of current and future technology use in the hospitality industry, Brewer, Kim, Schrier, and Farrish (2008) found that Wi-Fi is the IT system guests care most about; it was named by 82% of survey respondents which is consistent with the finding of this study.

In contrast, the literature provides evidence that in large scale tourism businesses guests are more willing to accept charges for in-room Wi-Fi services (Bulchand-Gidumal & Melián-González, 2015). Wi-Fi is charged for in larger hotels as an add-on to the room rates which is not a concern for business and affluent leisure travellers, while the customers of budget and small tourism firms are more price-sensitive and STEs have to make free Wi-Fi a perk to attract customers, and to stay competitive (McCartney, 2015). As owner-managers of this study explained and consistent with the literature, budget travellers expect such services to be complimentary (Hanson, 2012; Jacques et al., 2011). This was evident in all STEs studied as their focus was mostly on budget tourists. As Melián-González and Bulchand-Gidumal (2016) explain, a day without Internet access can harm a business as an IT failure can negatively influence a client's stay. Therefore provision of IT for guest satisfaction is cited as essential for improving the tangible client experience which in turn improves service quality and business reputation.

Further, some STEs made available a device (usually a desktop computer) with Internet connection and printing facilities for guests' use. Although those were not as significant as the free Wi-Fi, provision of such services allowed the businesses to fulfil the technology requirements of their guests in situations where their devices failed or they needed to print maps and other documents for when they did not have the mobile data during the time they spent outside the hotels. Although there was no direct evidence of negative reviews if such services were not provided, this study provides strong evidence (refer to Section 7.5.2) that such services led to the receipt of more positive reviews. Therefore the availability of these essential ICT services for customers was considered by the owner-managers as using resources in a way that contributed to business value. This finding was different from the literature on larger tourism organisations who received an additional financial contribution through the ICTs provided as in-room facilities and

business centres (Bulchand-Gidumal & Melián-González, 2011, 2015). Therefore it is evident that small hotels which mostly cater for the budget travellers need different ICT strategies from their larger counterparts. STEs need to focus on fulfilling the expectations of their target market which is price sensitive, when allocating their ICT resources.

In conclusion, it has been identified that ICTs are being used in two major ways in both the business directed and the customer directed processes. The business directed processes were focused towards the improvement of operational efficiency, reduction of costs and being competitive in the industry. The customer directed process focused on achieving higher guest satisfaction through the provision of ICTs. Achieving the objectives of both domains was expected to increase business value. When the two directions were not aligned, priority was placed on customers over business needs. Figure 8.1 illustrates how STEs in Sri Lanka use their ICT resources in order to gain business value.

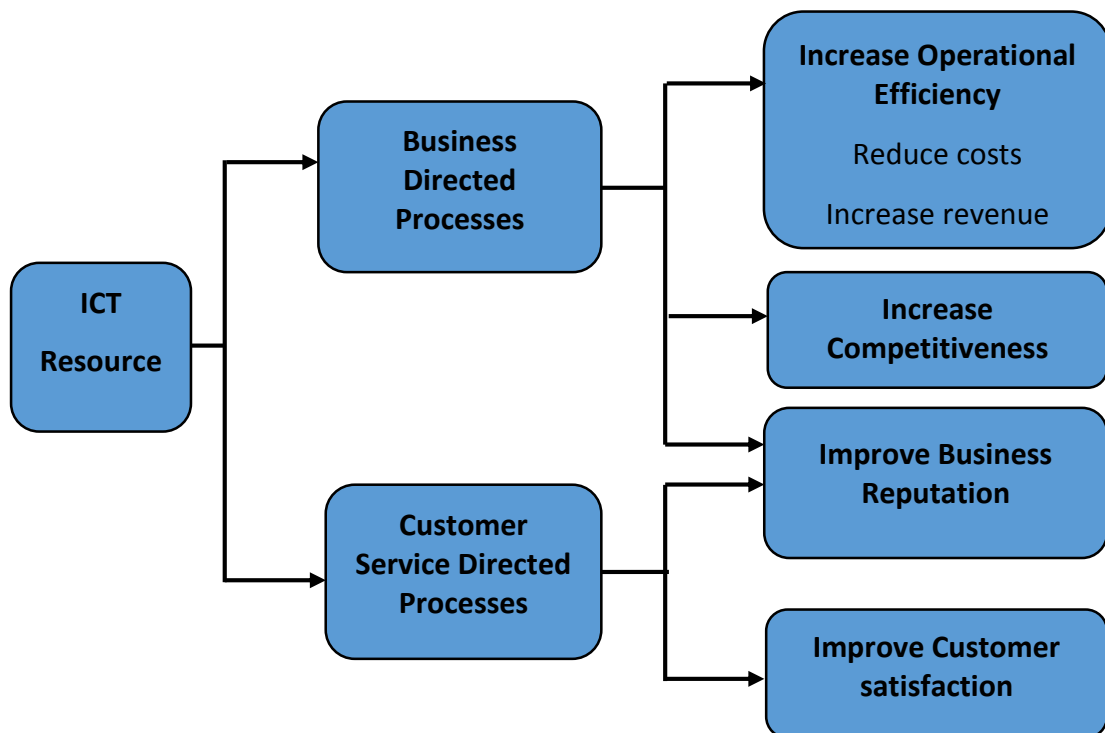


Figure 8.1: How STEs in Sri Lanka use ICTs to gain business value

While the study identified how ICTs contribute to the business value of STEs, not all STEs are able to obtain all these contributions from ICTs to increase their business value. Several factors that affect the STEs' ability to gain business value from ICTs were identified and presented in Chapter 6 alongside the PESTEL analysis. Therefore, the

following section discusses the factors affecting the contribution of ICTs which addresses the second aim of this research.

#### **8.4. (RA 2) - Factors affecting the STEs' ability to gain business value through ICTs**

The literature provides evidence of internal and external factors affecting the ability of small businesses to gain advantage from ICTs in general (Wang, Liu, Dai, & Lin, 2013; Idisemi, Latham, & Moreton, 2011) and particularly in the tourism sector (A. Ali & Çağlar, 2011; Ardjouman, 2014). In alignment with the literature, the findings provided evidence for how these factors operated in Sri Lankan STEs. Based on the findings presented in Chapter 6, the key explanatory factors that affect the STEs' ability to utilise ICTs to their full potential were the resources and capabilities of the firm and pressures from the external environment. Therefore, these factors are discussed under the categories of firm specific (organisational) and industry specific (external) features which advance or hinder the STEs' ability to gain business value from ICTs. These are the:

- Organisational factors
- External factors

Factors found under each category will now be discussed in detail.

##### **8.4.1. Organisational Factors**

Organisational factors were derived from the analysis of the focal firm and are mainly based on the resources and capabilities of the STEs considered in this study. The main organisational factors are:

1. The level of technological ICT resources availability;
2. The level of skilled IT human resources availability;
3. The level of complementary resources availability;
4. The level of financial resources availability;
5. The willingness and awareness of STE managers to adopt ICTs in the business.

#### ***8.4.1.1. The level of technological ICT resources availability***

The current level of availability of technological ICT resources in STEs was presented in Chapter 6 and 7. The analysis revealed the importance of technological ICT resources which mainly included hardware devices, software applications and the networking and communication infrastructure of the organisation. In the cases studied, it was evident that when businesses do not have essential ICT resources, it has an adverse effect on the firm's ability to gain full potential from the other available resources. For example, this study provided evidence that even when devices are available for the businesses, they are only of limited value if appropriate software is not available. For example, 70% of STEs owned a smartphone but only about 9% used apps, limiting the usefulness of such devices in business performance. Evidence of the importance of these resources was provided by the STEs which did have sufficient ICT resources achieving better performance in terms of increased occupancy rates and positive customer feedback (refer to Section 7.3). This finding is in agreement with El-Gohary and Osman (2010) who found that the accessibility and availability of sufficient resources was one of the most important factors in small tourism businesses' adoption of e-marketing in a developing country context (Egypt). This feature was not found in the literature related to the large tourism organisations as most of them do possess sufficient resources, rather they are more concerned with being up-to-date with latest advances in technology (Leung & Law, 2013).

In some cases businesses did have technological ICT resources, but they were unable to obtain the necessary infrastructure such as continuous supply of electricity or a reliable connection to the Internet which ultimately reduced the use of ICTs in the business activities. The literature provides evidence on the effect of the availability of basic infrastructure for SMEs especially in the context of developing countries (Apulu et al., 2011). However for the STEs in rural regions it was further evident that it was difficult for them to obtain alternative resources. This was found to be common in countries with similar contexts like the Maldives (V. Ali, 2015) and some South African countries (Rantšo, 2016). Therefore it was clearly evident that insufficient availability of all or some of the essential infrastructure affected the organisations' ability to fully utilise ICT resources.

The importance of availability of resources in determining the organisations' ability to gain business value is also in line with the resource-based view. The theory prescribes that firm resources are the main driver of firm performance (Barney, 1991; Ravichandran & Lertwongsatien, 2005). These authors further suggest that resources are the raw materials which build capabilities; hence the availability of resources determines a firm's ability to develop capabilities.

However a noteworthy finding of this study was that although the availability of technological resources was a significant factor that affected their ability to gain business value from ICTs, the required level of ICTs was not very high. Due to the small capacity of the businesses, simplicity of the business processes and the dominance of OTAs in their key business process, a small set of ICTs were adequate. This fact was repeatedly emphasised by the owner-managers who mentioned that they maintained a standard set of ICTs (such as a laptop, smartphone, Internet connectivity and a website) and this was enough to enable smooth collaboration with OTAs.

#### ***8.4.1.2 The level of skilled IT human resources availability***

Employees are widely considered the best asset in tourism businesses (Nieves & Haller, 2014). The literature provided evidence that for small tourism businesses it is not the number of services provided to the visitors that increases the profitability of the business; rather it is mainly dependent on the human capital of the firm (Lerner & Haber, 2001; Standing et al., 2014).

In agreement with the literature (Bednarska, 2013; Cohen & Olsen, 2013) that suggests IT skilled human resources are a source of competitive advantage in the tourism industry, this study also found that the availability of ICT skilled human resources is the key contributing factor for increasing the STEs' ability to utilise ICTs in their businesses. Even when other ICT resources are adequately available, the availability of skilled human resources was a significant factor that affected how much those resources could be used in business processes. The literature suggests that possession of knowledge resources gives a firm the basic foundation which enables the renewal and reconfiguration of its resources and builds dynamic capabilities (Nieves & Haller, 2014). It was evident from the findings that without skilled labour the STEs were not able to utilise hardware and software resources to an optimum level. There was evidence from the cases of ICT

resources being underutilised due to the unavailability of IT skilled personnel. In contrast, when highly skilled human resources were available, STEs could gain a high level of business advantage even with the limited resources available to them. Examples discussed in Section 6.2.1.1 included using simple office applications for advanced administration processes, developing websites, and promoting the business using social media. Furthermore they were able to use devices such as smartphones for online reservations 24/7 which allowed them to overcome time differences and delays in replying to messages and also facilitated portability when the owner-managers could not spend the time in their office. Gaining advantage through such affordable devices using skilled ICT personnel had a big impact on STEs' ability to gain business value from their limited ICT resources.

This finding also aligns with the literature related to large scale tourism organisations which suggests that in order to realise value from technology investments managers should ensure the availability of both technological and managerial IT skills and implement IT management practices in the hospitality industry (Cohen & Olsen, 2013). While the availability of skilled IT human resources is crucial for both the large as well as small tourism firms, it is considered more significant in the context of small firms in order to bridge the gap of limited technological ICT resources in STEs (Latzer, 2013).

#### ***8.4.1.3 The level of complementary resources available***

According to Barney's (1993) classification of firm resources, complementary organisational resources may include non-IT physical capital resources, non-IT human capital resources, and organisational capital resources including organisational structure, policies and rules, workplace practices, culture, etc. Thus, in the context of tourism businesses the firm's physical assets such as the hotel itself, and intangible assets such as a hotel brand are considered complementary resources (Piccoli, 2008).

As per the managers interviewed in this study, some of the major complementary resources for them were the architecturally designed buildings and non-IT human resources such as culinary experts plus intangible tourism resources such as location and natural resources. Having specially designed buildings added value to their businesses in terms of attracting valuable guests to their accommodation sites. Neuhofer, Buhalis, and Ladkin (2013a) suggest that by combining ICTs with tourism resources, organisations are

able to create enhanced experiences for tourists which ultimately improve business value.

For businesses providing food and beverages as an additional service, having a skilful chef was an added benefit as many of the international tourists were said to value culinary experiences. As discussed in the cross case analysis such complementary resources acted as the main attraction of tourists to their businesses. The literature also supports this factor, claiming that dining on locally produced foods increases the enjoyment of the travellers' holiday experience and acts as a unique attraction (Mgijima & Flowerday, 2012; Ren, Zhang, & Ye, 2015).

Although it was not specifically mentioned by the owner-managers the findings revealed that having a strategic plan and clear policies (complementary organisational capital resource – see Section 7.4) also had an effect on their ability to gain better advantage from ICTs. Although ICTs were not given a high priority even when the strategic plans were available, it ensured the businesses were clearer about the existing effective use of their resources. A study conducted by the researcher in 2010 found that lacking a business strategy prior to adoption was the main barrier that hinders e-commerce adoption in STEs in Sri Lanka (Abeysekara, 2010). This was further affirmed by this recent study which confirmed that successful adoption of ICTs was more likely where there was a strategic plan.

However, a more important factor was that the use of ICTs in combination with these complementary resources brings some special advantages to these businesses. As discussed in detail in Section 7.4, ICTs were being used by some businesses to provide a virtual experience using imagery and videos in business websites and social networks. Managers provided specific evidence for the increase in their reservations and higher rates of returning customers by the promotion of their complementary resources through online media.

In agreement with this finding Bilgihan and Bujisic (2015) stress the importance of visualisation of products and services through tools such as room pictures, virtual tours, video clips, product information, customer reviews etc. as customers base their judgments on service/product information presented on the websites. Chiu, Wang, Fang, and Huang (2014) also confirm this finding even in a non-tourism online context, claiming that consumer purchasing decisions are usually based on the appearance and



website design elements as it reduces the perceived risk of intangible products prior to purchase. This becomes more significant when focusing on international tourists as they like to have prior knowledge of foreign countries. Further general literature on complementary resources confirms that these resources have synergistic effects, enhancing each other so that their joint value is greater than the sum of their individual values (Tanriverdi & Venkatraman, 2005).

As discussed in the literature review (Barua et al., 2010; Brynjolfsson & Hitt, 1996; 2000; Hitt & Brynjolfsson, 1996; Kohli & Grover, 2008; Melville et al., 2004), it is thoroughly confirmed that ICT alone cannot generate business value but it should be combined with other complementary assets of the organisation. Therefore the availability of such resources stands out as a significant organisational factor affecting the ability of STEs to gain business value from ICTs.

#### ***8.4.1.4 The availability of financial resources***

Regardless of the industry or region one of the almost inevitable constraints for small businesses is limited access to financial capital (Abor & Quartey, 2010). Various literature provides evidence for the lack of financial resources being a barrier to the adoption and effective use of ICTs in small tourism businesses in a variety of contexts including both developed (Akbaba, 2012; Brown, Spillman, Lee, & Lu, 2014) and developing countries (A. Ali & Çağlar, 2011; El-Gohary, 2012).

In agreement with the literature, this study also confirmed the significance of financial resources as a factor that affects the organisations' ability to gain value from ICTs. The availability of financial resources for initial ICT implementation as well as for their proper maintenance was very important for achieving continuous and smooth operation of business activities. Although initial ICT implementation was costly, it was evident that those STEs who managed to find the resources for full initial implementation obtained the necessary standard set of ICTs essential to the business. However a distinctive feature of this study was the owner-managers' reluctance to utilise their financial resources on a regular basis for maintaining the resources they purchased at a high initial cost. They frequently encountered operational problems with technology exacerbating their maintenance costs which they had to spend on external vendors or consultants. There was evidence of some managers giving up on use of computers due

to the cost of maintaining the devices and some businesses were using the Internet without security software or were using outdated versions of software. Therefore it was evident in the findings that for the majority of STEs, compared to the expensive initial investments (which all of the STEs in this study were able to make) what was more difficult for them was the issue of continuous maintenance and keeping the technologies up to date. This result is different from that of Apulu et al. (2011) who claim that the major issue with small businesses in tourism was the financial constraints of high initial investments on ICTs, but is consistent with the findings of Harindranath, Dyerson, and Barnes (2008) that, in the cash-poor context of small businesses in developing countries, the real concern in funding is updating technologies and on-going maintenance.

Therefore it is evident that availability of sufficient financial resources for the continuous operation and maintenance of ICTs is a significant organisational factor that affects the ability of the small businesses to gain business value through their ICT investments. Their inability and unwillingness to invest in maintenance and upgrading the ICT resources could have negative implications for these small businesses in the long run.

#### ***8.4.1.5 The willingness/awareness of owner-managers regarding adopting ICTs in the business***

The literature suggests that the positive attitude of managers is one of the most significant factors associated with business performance (Lerner & Haber, 2001). Further some studies suggest that managerial skills are especially important for small tourism business success where the owner or the manager is involved in all areas of activities in the business (Y. Chen, 2011).

In most cases as managers or owners are the sole decision makers in STEs, their awareness of the benefits of ICTs and willingness to invest in these resources determines to what extent the businesses can achieve business value through ICTs. As presented in the findings in Section 6.5.3 the cases in this study provide evidence that those managers who were willing to spend on new technology and new skills training gained higher value from their ICTs as compared to managers who were unwilling or unable to make further ICT investments in their business. In some cases this unwillingness was due to their older age and limited awareness of ICTs and in other cases it was due to their doubts about the ability of ICTs to bring more value to their

businesses. This finding is in agreement with El-Gohary (2012) and Fink and Sukenik (2011) who stressed the importance of the manager's role in achieving success in small businesses in the tourism industry in both the context of a developing and a developed country respectively. In larger tourism organisations where they have a set of expert employees assigned to manage the technology and investments, the owner-manager's awareness is not so significant. However it was evident that in larger organisations the perception of the management about the importance of adopting and investing in ICTs has a similar effect on business success (Law, Leung, Lo, Leung, & Fong, 2015).

However, the cross case analysis provided varying evidence as some of older managers did have a higher awareness and willingness to invest in ICTs. Although it was not the only reason, it was found that government initiated awareness and training programmes aided them in understanding the value of adopting ICTs in their businesses. The literature supports this finding and government support for developing skills in and awareness of ICTs was recognised as a critical success factor in the adoption of ICTs in small tourism firms particularly in the context of developing countries (Uwamariya, Cremer, & Loebbecke, 2015a).

#### **8.4.2. External Factors**

External factors which affect the organisation's ability to gain business value from ICTs were derived from the external environment. The key areas considered under the external environment were the industry characteristics, government support and the trading partner resources and business processes. The analysis of findings related to the external environment found three powerful sources of pressure that affected the STEs' ability to gain business value from their ICTs. These are:

1. Increasing influence of online trading partners (OTAs and online review sites);
2. Technologically advanced customers;
3. Government initiatives.

Each of these factors will now be discussed.

#### **8.4.2.1 Increasing influence of online trading partners**

The most influential external factor for STEs in Sri Lanka was their online trading partners. Two major online partners recognised in the findings were the OTAs and online review sites. The influence of these two partners will now be discussed.

##### **OTAs**

The level of influence of these travel agents is so significant that without them the ability of the STEs to gain business value from their own resources becomes very limited. All the STEs considered in this study depended on OTAs for their reservations and 90% of them claimed that all their reservations come through OTAs. In alignment with this finding a recent study on information technology and hotel performance suggests that IT must provide hotels with a presence in suitable electronic distribution channels, and stresses the importance of appearing in OTA websites (Melián-González & Bulchand-Gidumal, 2016). Literature on the influence of OTAs on small hotels was found to be very limited. However the literature that was available on large hotels is in alignment with this finding, claiming that even the larger hotels are influenced by OTAs in determining their distribution channels (Gazzoli, Kim, & Palakurthi, 2008; Guillet & Law, 2013). This study provided evidence that the use of OTAs has become mandatory for small tourism firms who are technologically and financially less capable of providing advanced online reservation services themselves.

There was evidence of owner-managers referring customers to online agents even after the customers contacted them directly for reservations. The reason given was the inability of STEs to use and implement payment gateways which is a complex and expensive business process for these small businesses. With rapidly changing industry demands to sell online but having no capability to do so, the STEs are left with no choice but to register with OTAs to provide secure online transactions for their customers. Although not specifically focused on small hotels, in alignment with the findings of this study, L. Zhang, Guillet, and Kucukusta (2015) also found that in China, hoteliers are struggling to promote their establishments, and OTAs have gained increasing power and come to dominate hotel reservations in China.

Despite their inability to provide direct online reservations, owner-managers reported that the customers' concerns about online security and trust also influence the use of

OTAs. By providing guaranteed secure payment methods, established OTAs win customers' trust and encourage them to book through their websites. Regardless of whether they are in a developing or developed country it is evident that OTAs have this influence on travellers particularly when they book accommodation in small tourism establishments (Law et al., 2015). In contrast larger tourism firms with established brands face less issues with trust as they are just as capable as OTAs of providing secure online transactions (Masiero & Law, 2015).

This dominance of OTAs in the online selling of hotel rooms was one of the key findings of this study. As discussed in Section 6.4.2 even if the owner-managers did not want to register with them they had to use OTAs to maintain their sales. As some managers explained even when the exact hotel name is searched for in Google the first results to appear are the OTAs they are registered with. Tooke-Marchant (2015) also reports that OTAs dominate 73% of the search results on the first page of Google UK for a range of popular hotel terms. However, although OTAs charge a high commission, the majority of STEs were happy to work with them as the majority of their reservations came through OTAs. L. Zhang et al. (2015) also found that particularly for small hotels their perception is that even with a higher commission working with OTAs is still worthwhile.

### ***Online Review Sites***

The other trading partner that affects STEs' ability to gain business advantages from existing ICTs are the online guest review sites. It is evident in the literature that they have become a dominant factor affecting the marketing of small tourism businesses worldwide (Zhao, Wang, Guo, & Law, 2015). As was discussed in Section 6.4.2.2 getting involved with these online review sites was mandatory for STEs as they offer potential guests the ability to research information on accommodation establishments through customer reviews. Ren et al. (2015) argued that eWOM is more powerful than the traditional word of mouth as it can reach thousands of people within a very short time. Their influence forces the businesses to use these services in terms of receiving reviews whether they want them or not. However owner-managers' engagement varied from only reading reviews to interacting with reviewers by responding and encouraging customers to review their services. Once they understood the importance of reviews from their own customers it attracted the attention of owner- managers and motivated

them to fully utilise this platform to promote their establishments. Researchers who have examined indicators that consumers used to evaluate online reviews suggest that consumers are more willing to choose hoteliers who respond to customer reviews (Melián-González, Bulchand-Gidumal, & López-Valcárcel, 2013; Zhao et al., 2015). This pressure to interact with guest reviews means STEs have to use ICTs frequently to build a positive image and ensure that they provide better customer service. Owner-managers believed that by maintaining a higher customer rating they could increase online sales. Similarly, Ye, Law, Gu, and Chen (2011) found that hotels with higher “star ratings” receive more online bookings.

These findings about the role of external pressure from the online trading partners are in agreement with even the large scale tourism businesses regardless of the tourist type as all travellers are concerned about the quality of services and rely more on information provided by fellow customers (Phillips et al., 2015). However in most cases, through having a separate marketing division with dedicated employees for promotional activities, larger organisations have the capability to deal with these trends while it becomes a challenge for owner-managers of STEs who perform the majority of activities by themselves.

#### ***8.4.2.2 The pressure from technologically advanced customers***

Several studies provide evidence that travellers are becoming increasingly technologically advanced and the use of Internet is growing in their travel searches (Amaro & Duarte, 2013; Kwok & Yu, 2013; Standing et al., 2014). Both the use of technology in the business operations itself and offering information technology services as a complementary product is driven by customers. These services directly affect the buying decisions of potential travellers and also influence customer satisfaction (Matzler, Pechlaner, Abfalter, & Wolf, 2005). Thus, it affects how the businesses use ICTs in their operations.

As discussed in the findings (Section 6.4.1) there were several instances from the cases which showed how much customer demand affects the ICT investment decisions of STEs. Sometimes due to these powerful customer demands, owner-managers had to make investments in these services while restricting their own use of ICT resources. For example it was evident that they purchase higher capacities of broadband and Wi-Fi

Internet connections to offer for their customers even when they think that purchasing antivirus software and safeguarding of their own ICT devices is too expensive. Although there was no evidence found in the literature that supported the situation of offering ICTs to guests by compromising their own business needs, Primorac, Smoljić, and Bogomolec (2012) suggest that the Internet should be used as a part of business strategy in small tourism firms by providing connectivity as a service for guests.

Further, as customers increasingly rely on online comments to make decisions on where to stay, managers needed to pay special attention to responding to and managing the online reviews posted about them on OTAs or online review sites. As comments on the capacity and the speed of Wi-Fi services formed a major part of the customer reviews, STEs had to provide a better quality service for their customers to maintain a good image. It was evident from the South Coast and High Country regions that in some cases managers had to restrict the Internet use by the staff in order to reduce the traffic and provide a better service for their customers. According to owner-managers they have to do it in order to avoid negative reviews on Wi-Fi service provided to guests. In support of this finding Melián-González and Bulchand-Gidumal (2016) also found that one of the main reasons for hospitality firms to turn to IT was to meet rising guest expectations. Further, recent research suggests that technology should be used for co-creation of value through an enhanced tourism experience (Neuhofer et al., 2013a; Neuhofer, Buhalis, & Ladkin, 2014).

Being active online and having a global presence via the business website and OTAs was crucial not only to attract international tourists but also for domestic customers who also frequently use such services to search for information on available accommodation even if they make their booking over the phone. Therefore allocating ICTs for such services was essential for the tourism businesses. The majority of the STEs reacted to these pressures by allocating most of their resources to customer use rather than to their internal administration activities.

This finding about the pressure from customers as an external factor which affects the businesses is in line with the results of a study conducted by Ruffling (2012) who concluded that due to high customer demands many small businesses in Africa were unable to utilise Internet and other ICTs in their internal business processes. It is also in agreement with the findings of Grandon and Pearson (2003) and Moon and Kim (2001)

who found customer demand has a stronger effect on Internet usage and e-commerce adoption in small tourism businesses in developing countries. Therefore it is evident from the study that the influence from the technologically advanced customers makes STEs prioritise the provision of their limited ICT resources to customer needs rather than their operational needs. However it was found to have a positive effect on STEs as it increased the interaction with technologies and helped to build a good reputation in the long run.

#### **8.4.2.3 Government Initiatives**

Due to the limited resources of small businesses, government assistance is considered to be crucial for their success (Rantšo, 2016). The findings of this study provided evidence that government tourism promotional programmes and especially ICT awareness programmes had a significant effect on the ability of these small businesses to obtain the optimal benefits from their available resources.

As described in the PESTEL analysis (Section 4.4.1), government initiatives in developing general infrastructure such as transport, power and the legal system have largely affected the tourism industry in a positive manner. In addition to such general development initiatives in promoting investments, the tourism entrepreneurs were encouraged to expand their businesses and use ICTs effectively in business operations. Government initiatives such as the Homestay project and other tax relief programmes provided owner-managers with the means of funding their technology investments. As was evident from the Ancient Cities region there were unique cases that benefitted from the training and awareness programmes conducted by the government in this region. In support of this finding, studies conducted in the context of developing countries have emphasised the role of government regarding the development of technology infrastructure, human resource development as well as financial support (Apulu et al., 2011; Ardjouman, 2014; El-Gohary, 2012).

The rural High Country region also benefitted from a promotional project implemented along with an NGO to initiate broadband Internet services in their businesses. In contrast in areas where it was difficult to get government support it was evident that owners faced difficulties in obtaining training on the potential use of ICTs in the business processes. Owner-managers in such areas had a negative attitude towards government



agents for not providing assistance with technology or financial services. Similar findings on the influence of government initiatives were found in Taiwan confirming that government involvement by means of support and incentives affects the level of adoption of ICTs and e-commerce by small businesses (Hung et al., 2011). This study found that because of the government regulation to collect details from all tourists staying in hotels, owner-managers had to create databases which ultimately helped in their own business processes. Ardjouman (2014) also observed that the role of government is a very important factor in the integration of technology by SMEs.

Although the government of Sri Lanka is working on improving ICT education through several projects (refer to Section 4.4.1) the findings indicated the need for more initiatives to improve skills and awareness of ICT business applications in order to achieve the objectives of the Tourism Strategy (Ministry of Economic Development, 2010). Evaluation of government initiatives related to ICTs to improve business value was not a focus of this study, but this has emerged as an aspect that warrants investigation.

This section discussed the organisational and external factors affecting STEs' ability to gain business value from ICTs. Figure 8.2 illustrates these factors.

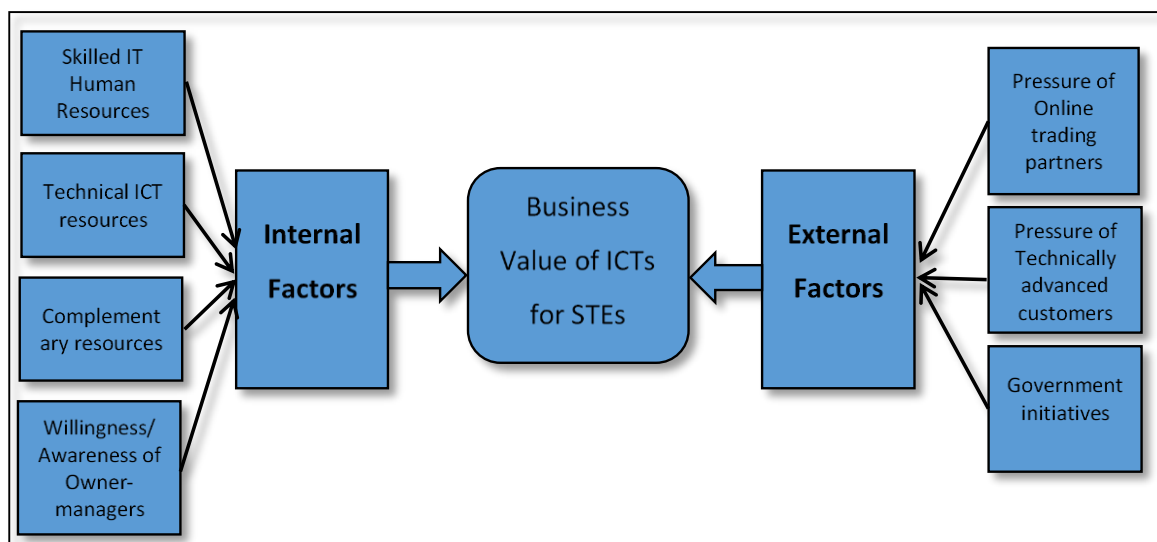


Figure 8.2: Factors affecting the STEs' ability to gain business value from ICTs

The next section evaluates why different STEs gain different levels of business value from ICTs.

## **8.5. (RA 3) – Determinants of varied contribution of ICTs to the business value of STEs**

The third research aim of this study was to evaluate why the contribution of ICTs to business value varies from one STE to another. As discussed in the previous section the factors affecting the STEs' ability to gain business value from ICTs were classified as organisational and external factors. Overall, these two main areas and the factors that come under them were mostly common to all the businesses studied as they are of the same scale and have the same level of resources and are operating in the same industry. However, even with this commonality, there was still a wide variation in the level of business value gained by different STEs from their available ICTs.

The cross case analysis revealed three main reasons for the varied levels of business value obtained by different businesses from their ICTs. These are the:

1. Business motives of the owners;
2. ICT strategies used;
3. The tourist region they are located in.

### **8.5.1. Business motives of the owners**

Two differing types of business motives of the STE owners were classified as lifestyle and profit oriented and have been discussed in section 7.2. It was found that business motives have a major effect on how ICTs are being used in the business. Owners of lifestyle businesses who were running them mainly for objectives such as leisure, family heritage, and retirement did not have an interest in using ICTs strategically. Rather they were happy to provide basic and essential ICTs which are needed to survive in the business and to keep their customers satisfied. They did not show interest in the use of ICTs to increase business value.

About 70% of lifestyle businesses (five out of seven) gave prominence to non-economic motives. In the interviews they often used similar language and demonstrated similar attitudes towards the use of technology and gaining business value through it. This finding was corroborated by A. M. Morrison, Taylor, Morrison, and Morrison (1999) and more recently by Peters and Schuckert (2014) who pointed out the importance of lifestyle motives over economic and strategic motives in this category of tourism businesses.

However even the lifestyle business owners recognised the importance of technology in providing a good customer service. Their approach to using ICTs was to provide free Wi-Fi for their customers and have an online presence by registering with OTAs and having a basic website. They believed that maintaining that level of resources was sufficient for their survival in the business. All of them had another main source of income such as one family member still working full time or receiving a pension. This also seemed to be the case with lifestyle businesses in a study by I. Ateljevic and Doorne (2000) who examined lifestyle entrepreneurs in the New Zealand tourism industry which identified their desire to stay 'within the fence'. Consistent to the findings, a more recent study conducted in Ireland by Marchant and Mottiar (2011) also found that lifestyle businesses are more about interacting with people and having a pleasant lifestyle rather than profit and business growth.

In this study it was further revealed that while other businesses try to attract domestic travellers during the off peak times for international tourists, the majority of the lifestyle business owners closed down and went on their own trips during this period to get more experience of travelling around the world. This feature of the lifestyle owner-managers in Sri Lanka is in agreement with Marchant and Mottiar (2011) who found travelling before and while running their businesses is a common characteristic for lifestyle tourism entrepreneurs. Because of their travel experience some lifestyle business owners had more understanding about their customers' technological needs. However this was only seen in two cases and generally this group was characterised by ageing owners or retirees with a lack of business and technology experience. This finding is common in lifestyle tourism businesses in developed countries (C. M. Hall & Rusher, 2013; Peters & Schuckert, 2014) and surprisingly all the related literature regarding lifestyle tourism was found in the context of developed countries (C. M. Hall & Rusher, 2013; Marchant & Mottiar, 2011; Peters & Schuckert, 2014). Walker and Brown (2004) also reported that small lifestyle businesses have no explicit financial objectives and have no intention of expanding. This was echoed in an Australian study (B. E. King, Breen, & Whitelaw, 2014) which found that while profit oriented small tourism businesses are embracing new technologies, 'lifestylers' are rather slow in adopting these technologies. Therefore lifestyle business motives were identified as one of the

main reasons for STEs obtaining a different level of contribution from the ICT resources they use in their businesses.

Among the profit oriented businesses, the two main determinants identified for the varied level of value gained through ICTs were the different ICT strategies and the different levels of assistance and barriers faced by the businesses in different tourist regions. These two main determinants will now be discussed in the following section.

### **8.5.2. ICT strategies used**

Different ICT strategies used by the profit oriented STEs were analysed in detail in Section 7.5 under three major themes of online selling, online marketing, and back office functional strategies. The findings showed that STEs used these strategies to different extents. This was one of the main reasons why some STEs acquired greater levels of business value from a similar level of investments in ICTs. Under the three main strategies some unique elements were identified in some STEs which differentiated them from others. These strategic features were the:

- Use of skilled human resources to get the optimal benefit out of the available resources;
- Integration of OTA resources in sales and reservation processes;
- Use of the business website for promotion, reservations and communication;
- Use of social media for promotion and reservation;
- Optimising the use of hardware and software for office administration and other business processes.

The following section discusses how these differences affected the level of contribution of ICTs in profit-oriented businesses in their order of significance.

#### **Use of skilled human resources to get the maximum benefit out of the available resources**

Having skilled labour was the most significant factor that affected different levels of achievement in obtaining business value from ICT. Throughout the study this feature was prevalent in all aspects as the main barrier to gaining full potential from ICTs. This factor has been well reported in the literature (Ardjouman, 2014; Buhalis & Main, 1998;

Lai, 1994). This finding also confirms the claims of Melville et al. (2004) and Barney (1991) who propose that when technological ICT resources are paired with human IT expertise it causes performance differences among firms which may create temporary competitive advantages.

As the findings of this study suggest, having hardware and software alone without a person to use them effectively was a cost as well as a loss of potential for the business. In contrast, having a skilful person who could utilise ICT resources to their full potential made a significant difference to how much value was gained. However the lack of accessibility to such skilled people was a major barrier in terms of both cost and the availability. As discussed in the cross case analysis it was clear that the STEs who had (even if it was rare) skilled human resources obtained a greater level of benefit over the STEs who operated without such resources. However the managers were hesitant to train employees due to the risk of employees leaving the businesses. This finding is supported by Apulu et al. (2011) who suggest that there is reluctance amongst SME managers in Nigeria to invest in training of employees, as managers are afraid of losing their employees to better job offers after training. Similar findings were reported in the context of the Maldivian tourism industry by V. Ali, Cullen, and Toland (2015).

A more prevalent feature of the businesses studied in Sri Lanka was the cases where skilled ICT human resource was available as an informal resource from their families. When a business received support from educated children, it helped them to optimise the use of ICTs in business processes and more importantly it avoided the unaffordable high cost of skilled ICT labour. The literature partly supports this finding and claims most small businesses receive support from family members in business operations (Getz & Carlsen, 2000) but not specifically in the adoption of ICTs in tourism businesses. All four regions had businesses which mainly depended on their well-educated children for the effective use of technologies in the business. However this had limitations as this resource was not continuously available to support in routine operations. However, a pattern could be found where they obtain during college and university vacations which were mostly compatible with the highest peak travel time for the international tourists.

### **Integration of OTA resources in sales and reservation processes**

Within the Sri Lankan STEs, registering a business with an OTA was considered as an essential survival strategy rather than a way of being competitive in the industry. As it was used by every STE, mere registration with them did not provide any special advantage to a business. As Barney (1991) explains, a resource has to be unique to make it a competitive resource. Therefore this ubiquitous resource can only be competitive by using it in a unique way. As was evident in the findings, about 9% of STEs used special discounts and promotions to make sure they appear on top of search results in OTA sites. This was especially evident in the South Coast region. The businesses who offered promotional deals organised by OTAs were able to appear on the first page of the search results of the potential travellers which increased the probability of receiving a confirmed reservation. As discussed in the literature review this is considered an effective strategy as 90% of the travellers choose a hotel from the names appearing in the first page of the search results (Toh, Raven, & DeKay, 2011). The dominance of OTAs in search engine results is further confirmed in a study conducted by Tooke-Marchant (2015) emphasising the significance of differentiating the hotel presence in OTA websites by participating in promotional deals and other offers organised by OTAs.

The other strategy used was to register with more than one online travel agent as different websites are more established in different global regions. There was evidence from cases in this study who strategically managed this commonly available resource by using it in a unique way. One business from the South Coast region has different types of rooms and focused more on international high end tourists for their luxury rooms and budget tourists for their standard rooms. The business registered with both Agoda and Booking.com expecting to increase occupancy of all rooms, but their strategy worked only for their standard rooms, not the deluxe suites. By analysing their customer information and searching through travel website rankings the manager decided to expand its registration with Expedia which focused more on high end tourists from the European region. According to the manager this strategy worked well for them. They reached the high end tourists through Expedia and were able to achieve 100% occupancy throughout the tourism peak period. Later they analysed the two budget tourist agents and stopped using one of them to lessen the complexity of reservations during the peak times. Similar examples were found in the Ancient Cities region where

one STE used a local travel agent to attract domestic travellers based on their location which had a high religious value for domestic travellers. Colombo City region also provided evidence of businesses using Hostelworld.com as their additional OTA to reach budget travellers (mainly student backpackers). All these businesses chose supplementary OTAs based on their market focus while remaining registered with at least at one of the mainstream OTAs (Agoda or Booking.com). In agreement with this finding, a study conducted in Sweden (Beritelli, Schegg, Okumus, & Okumus, 2016) found that a multiple online channel strategy, particularly for smaller hotels, pays off in a higher percentage of online bookings. L. Zhang et al. (2015) also found use of multiple OTAs to be effective as not every OTA reached all the regions in China. This evidence further suggests that STEs need to be aware of OTAs' regional specialisations and choose multiple OTAs based on their establishment in different market regions and segments. While it was not evident in any of the cases in this study, the researcher identified that as an alternative to multiple traditional OTAs, STEs can also use services such as Airbnb which provides similar services with more flexibility to directly communicate with potential customers at a lower commission base. Airbnb describe themselves as "a trusted community marketplace for people to list, discover, and book unique accommodations around the world" (Airbnb, 2015). The company was recently established, but it has grown extremely rapidly and particularly assists small businesses in tourism accommodation (Guttentag, 2015) but this study indicated that it is not yet well established among the STEs in Sri Lanka.

However one risk of a multiple OTAs strategy was the duplication of reservations that arose because of the lack of linkage between multiple OTAs and other reservation methods. None of the owner-managers had a solution for this issue, despite the fact that there are several tourism channel management software packages available to purchase which provide facilities such as keeping inventory automatically up to date on all channels and avoiding booking duplications. Further, there is some software especially focused on small tourism businesses (e.g. Beds24) that have few rooms but use multiple reservation channels. This software provides channel management of reservations from the business website and OTAs. They even provide integration of Google or Outlook calendars for small firms who use them in managing inventories. This software needs to be purchased or rented monthly based on use such as the number of

rooms, and number of channels to be managed. However as discussed in Chapter 7, owner-managers' awareness of such solutions were very limited and they resorted to manually updating multiple systems. This issue of channel conflicts has been identified in other recent studies (Law et al., 2015; Tan & Dwyer, 2014; Thakran & Verma, 2013) which emphasise the need for proper channel management in order to reduce complexity and customer dissatisfaction due to the loss of bookings. Tan and Dwyer (2014) further found that these conflicts occur mainly in small businesses with less control and more channels to manage. However the findings of this study provided evidence for improved online sales through the multiple OTAs when STEs were able to effectively manage room inventories.

Therefore it was evident that although the use of OTAs was a common and readily available resource within the industry, by using a mix of specialised regional OTAs to fit the market focus of the business, this resource could be used strategically to increase occupancy which in turn provides a unique way to increase the contribution of ICTs to their business value. Further, these strategies could be identified as being specific to small firms as larger hotel chains are more focused on increasing direct bookings through their own websites over OTAs (H. A. Lee et al., 2013).

### **The effective use of business websites for promotion, reservations and communication**

While 97% of STEs had a website, the cross case analysis provided evidence for a varying level of business advantage gained by the STEs from them. When websites were compared with occupancy rates, it was observed that STEs who had a dynamic up-to-date website (refer to Table 7.5) obtained higher occupancy rates.

As discussed in detail in the cross case analysis (Section 7.5.2), some businesses used more dynamic web pages to improve the awareness of the accommodation facilities and other amenities available for potential guests. Videos and high quality images of the location, food, and other facilities, illustrations of how other guests enjoy these facilities, maps to find the way to the hotel, things to do in the area and external links to their websites were some of these value adding features in the websites of successful businesses. According to managers, their websites made a significant contribution to increased occupancy. Moreover they acknowledged that it greatly increased the customer satisfaction by improving confidence when confirming their reservations and



facilitating a rich set of information for their holiday plans. Use of this strategy was found mainly in the South Coast and Ancient Cities regions where they had a variety of tourism attractions to offer. A few cases from the Colombo City area also benefitted from this strategy by being highly informative for backpacker tourists. This finding is aligned with the findings of Sellitto and Burgess (2007) who found informative websites added extra value to small tourism businesses in Australia and also Law et al. (2010) who claim that maintaining an effective website is vital for small tourism businesses to strengthen customer relationships and gain a larger market share.

Providing an efficient direct booking system through the website (even without a payment gateway) was another feature that made the website more effective. While some businesses from the Ancient Cities redirect their customers to OTAs for reservations, there were businesses in the South Coast and Colombo regions who encouraged direct booking through their websites. They provided a discounted rate for direct booking thus avoiding the commission which goes to the OTA. According to managers there was no direct impact on revenues, but as it provided some savings to customers, availability of this facility had a positive effect on the businesses through improved customer satisfaction. This result is also in line with various studies (S. Burgess, 2015; Favre-Bonté & Tran, 2015; Sellitto & Burgess, 2007) who confirm that even without the transaction phase, provision of direct booking through a website provides a strategic advantage to small businesses in the tourism industry. Moreover the literature suggests that due to the trust issues with online payments, customers prefer to choose hotels where they provide a direct booking facility from the web but make the payment physically at the premises (Madlberger & Matook, 2012). This study also provided evidence of STEs who provided this facility and gained advantage over other businesses, however in some cases it created problems when the guests cancelled without notification.

Further evidence was obtained from businesses that focus on tourists from non-English speaking regions. Some managers from the South Coast and Ancient Cities regions mentioned that language is a barrier to accessing information they provide in their websites. Therefore they initiated the translation of websites into several major languages (German, Russian and French) of their customer base. The two managers acknowledged that this initiative resulted in an increase of direct bookings of about 40%.

Further they realised that the change increased customer satisfaction and generated more positive feedback. An analysis of TripAdvisor reviews also provided further evidence for this. This finding is closely aligned with Favre-Bonté and Tran (2015) recent study of small businesses in the tourism industry in France which confirmed the significance of a well-managed interactive website translated into several languages. However as some owner-managers pointed out, although arrivals of Chinese tourists have greatly increased in recent years which is also confirmed by tourism statistics (SLTDA, 2014), there was no evidence of STEs translating their websites into Chinese. The researcher identified this as a drawback of STEs' not being able to respond to industry trends.

Overall this study provided clear evidence that a website offers STEs not only a platform to promote products and services but also a strategic means to create revenue by attracting more customers. However, it further proved that only websites which provide unique facilities customised to their market segments contribute to increased business value.

### **The effective use of social media for advertising and promotion**

Among the STEs considered in this study the use of social media for business purposes was rare and even in the places where it was being used, it was in the very early stages of development. In general social media is well known among large hotel businesses as a prominent advertising and promotion method (Dijkmans, Kerkhof, & Beukeboom, 2015), but is not very prevalent among small businesses in developing countries as well as in many developed countries (Inversini & Masiero, 2014). Therefore small businesses that do use social media could be considered early adopters. At this stage it can be considered a unique feature of these few businesses. Although currently it is used at a minimal level, by being the first to use such tools in their promotions, it was evident that these businesses were able to acquire some added value over their competitors. STEs that used social media in business activities utilised it in two main ways to improve business value.

Firstly, it provides a means of advertising and promoting the business among a group of people with similar interests which in turn could lead to higher occupancy. STEs that used this strategy were from the South Coast region: one specialised in Ayurveda

treatments along with accommodation and the other business was well known for their surfing facilities. Both the businesses had their Facebook pages linked to their website and they used the Facebook group to promote their facilities such as extended Ayurveda treatments, offers and events in the surf season. Both the owner-managers acknowledged that social media (through Facebook) brought them a number of customers as well as improving their reputation through this highly satisfied group of customers. Unsurprisingly this finding is in agreement with literature on the growing significance of social media in marketing and promotion in the hotel sector regardless of size and context (Hsu, 2012; Kwok & Yu, 2013; Mangold & Faulds, 2009).

The second main way in which social media contributed to improving business value was the customer reviews and comments they received through the social groups which greatly helped to improve the quality of service they provided. Social media is more personalised and addresses groups of people with similar interests. Therefore rather than the public comments which appear in online reviews or in OTA sites, the comments posted on Facebook pages were more personalised. The owner-managers considered these as individualised consultations on how to improve their services in their chosen market segments. This helped STEs to maintain the high quality of current services, and allocate resources to services which needed further improvements. This finding is closely aligned with that of (Su, John Mariadoss, & Reynolds, 2015) who proposed that through, opinions, emotions and friendship formation social media contributes to building hotels' brand image.

However it is noteworthy that the use of social media for business advantage was mostly based on the awareness of the owner-managers, hence it was not common to all STEs. In support of this finding, recent literature also provided evidence that there is less use of social media by small tourism businesses not only in the developing countries but also in the developed countries (Dijkmans et al., 2015; Mizrachi, 2014).

### **Optimising the use of hardware and software in business processes**

As was discussed earlier regarding the internal factors (Section 8.4.1), the level of availability of hardware and software resources affects the ability of STEs to gain business value through ICTs. As well as availability, how effectively these resources are used in business processes is a significant factor which explains why different STEs

achieve different levels of business value although they have similar levels of resources. However as far as hardware devices are concerned it has already been identified in the cross case analysis that an emerging hardware trend is the increasing use of smartphones in business activities. This brings some unique advantages by heavily reducing the costs which otherwise would be spent on purchasing and maintaining a laptop or a desktop computer. Therefore by reducing the cost and other resources spent on expensive devices and their repairs, STEs that work with smartphones obtain an advantage over their counterparts. Passerini et al. (2012) also found that the smartphones allow SME managers to leapfrog technology advancements and reduce the costs of purchasing expensive ICT devices.

Surprisingly only very few businesses used smartphone apps to increase the efficiency of their business processes. Integrating the available ICT resources of the business such as the business website with employees' and customers' smartphones would allow STEs to collaborate and communicate with staff, other trading partners, and the customers. As tourism is a highly information intensive industry, getting reservations confirmed depends on fast responses and connectivity (Law et al., 2014). With some smartphone apps, owner-managers can get instant alerts on questions, comments and complaints posted on their websites or Facebook profiles regardless of where they are. However, due to the low awareness of these apps the use of such facilities was limited. However, they did improve customer service by using other services available in the smartphones such as reminders for guest arrivals, weather updates and notice of modifications of planned tours and flight changes so they would arrange airport pickup services accordingly. While this was evident in only a few businesses in this study, (No & Kim, 2011) suggest that mobile phones have evolved in the past few years and they now have a variety of capabilities which can be used by small businesses in a cost effective way to adopt the latest technologies, particularly in the context of developing countries.

Apart from smartphones, most of the other hardware devices used by businesses are common to all the STEs. As they were using a standard set of hardware devices what made them unique in terms of gaining business value was the software they had and how they used this software in making the business processes more efficient. While the majority were using office software for very basic functions, there were a few STEs who used software in more significant business activities. For example, in some STEs the

Excel application was used extensively in many areas of the business such as accounting resource inventory management and keeping guest databases. By using these applications they gained benefits such as cost reduction on specific application purchases and increased performance of business processes by efficient use of their internal data with key external parties such as OTAs.

In addition to the use of office software for administration purposes, the use of Google Docs by a few STEs was seen as a unique feature of those businesses which helped them to gain benefits over others. These online tools helped them to communicate effectively with the other parties involved in their business and maintain up-to-date records on reservations and inventory maintenance. Because these files were shared with authorised business partners it reduced the time spent writing e-mails. This led to the STEs having more effective business operation performance which is a main criterion of business value. This was seen as further evidence of leapfrogging by skipping to advanced stages of using ICTs in their business operations.

Other than the common software applications and functionalities used in most of the businesses there were certain STEs who used special software for inventory management, accounting and payroll as well as small scale hotel management software. However when compared to other STEs their investment in ICT was high. According to the owner-managers' comments, they experienced advantages from these investments in expensive ICTs. However the findings of this study provided no solid evidence that these additional investments in ICTs brought them higher business value compared to businesses with average investments. Rather as explained in the cross case analysis it was evident that the businesses who utilise the resources to their optimum levels could achieve better performance. This was applicable for all ICT resources including devices, software and communication infrastructure such as buying extra Internet bandwidth for guests. The significance of optimum utilisation of limited ICT resources in STEs aligns with the findings of several studies conducted in the developing countries context (A. Ali & Çağlar, 2011; Apulu et al., 2011; Hung et al., 2011) that emphasise the importance of using existing ICT resources to their full potential in order to obtain maximum benefits from the ICT investment. While it is equally important for larger organisations as well, the findings indicate that it is more significant for smaller firms due their limited resource base.

### **8.5.3. Variations between different regions**

In their 2009 publication about the digital divide in tourism, Buhalis and Minghetti argued that the domestic or social digital divide is mainly dependent on characteristics of different local communities and regions including the geographical location such as urban vs. rural areas. The cross case analysis of this study provided evidence of the effect of tourist regions the businesses are located in on their effective use of technologies.

The location emerged as a reason for varied levels of business value gained from ICTs in two main ways. One was the regional level of ICT and general infrastructure and the second was whether the different characteristics of regional tourism facilitate or hinder the use of ICTs in businesses.

The level of availability of general infrastructure and accessibility to ICT resources including skilled IT human resources across regions and the significance of their impact on obtaining higher business value from ICTs was discussed in detail in the subsections of the cross case analysis. The findings provided strong evidence that STEs located in tourist regions such as Colombo City and South Coast with higher level of access to resources were able to gain better value from ICTs than the businesses located in the High Country region where there was much less access to resources. As the literature review of this study also suggested (Kuwayama, 2001; Purcell et al., 2004; Rizk, 2006), one of the major barriers to effective use of ICTs was limited infrastructure in rural areas. More importantly it was clear that the strength of most of these barriers was based on the tourist region in which they were located. This finding was also observed in the Maldives which has a similar context to Sri Lanka (V. Ali, 2015). Wamba and Carter (2013) also found that small businesses in urban areas are more likely to adopt technologies than rural SMEs even in the context of developed countries.

Secondly, the study provided evidence for the effect of tourism characteristics in different regions. For example, as described in the research context and further analysed in the cross case analysis, the South Coast region was the most established tourist region in Sri Lanka. The culture and the society in this region are highly affected by large scale tourism activities and were found to be very conducive to STEs in this region adopting ICTs innovatively compared to all the other three regions. This finding is consistent with similar research conducted in a developing country by V. Ali (2015) who found that

social and cultural influences in local regions were a factor that affects the adoption and Integration of ICT and e-business in the tourism organisations of the Maldives.

From the owner-managers' responses it was evident that some of the ICT initiatives were introduced to them by the tourists themselves (such as creating a Facebook page and promoting the business to a specific market segment). Moreover due to the nature (mostly natural resources) of the tourism attractions in this region it was easy for the businesses to use these resources in the form of photographs and videos of customers enjoying these facilities. In contrast to the South Coast environment, regions such as Ancient Cities have some culturally strict limitations for tourists, from what to wear in these locations and limited freedom to take photographs and make videos of these cultural heritage attractions. While no such strong evidence was found for the High Country and Colombo City regions it was clearly shown in the STEs in the South Coast region that the environment itself provided some unique opportunities to obtain more value from ICTs due to their exposure to a large tourism community.

This section identified the reasons for varied levels of business value gained by STEs addressing the third aim of this research. Figure 8.3 illustrates these factors.

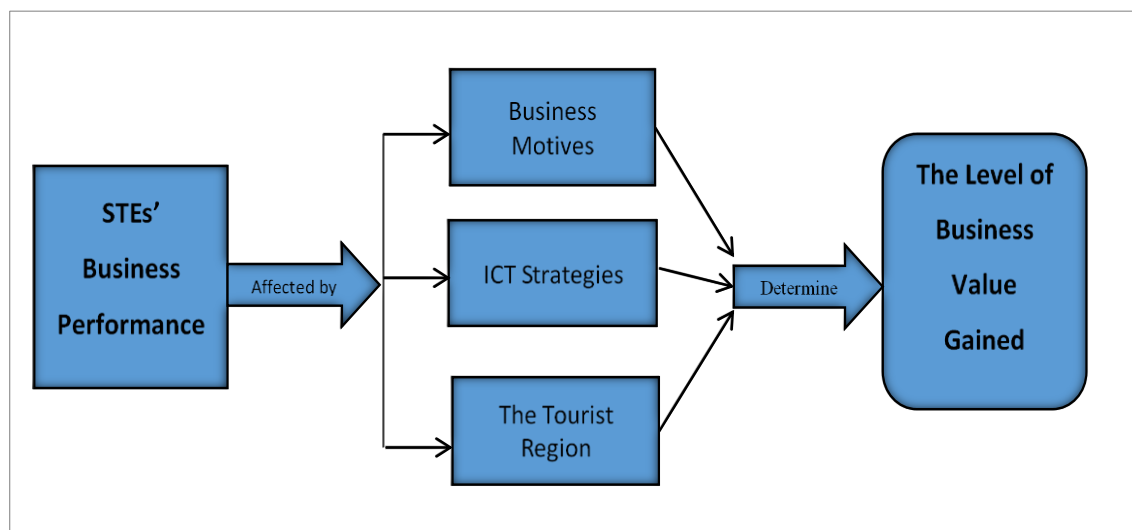


Figure 8.3: Factors affecting the varied level of business value gained by STEs from ICTs

All three aims of the research have been addressed in detail to provide an overall answer to the overarching question of this research: how do ICTs contribute to the business value of STEs in Sri Lanka? Therefore the next section answers the main research question.

## 8.6. (RQ) - How do ICTs contribute to the business value of STEs in Sri Lanka?

After considering the various definitions of IT business value given by key researchers (refer to Table 2.1), for the purpose of this study, IT business value was defined as the “*impact of IT on overall organisational performance*”. Further analysis of the evolution of definitions of business value of IT identified that it is based on three main themes: organisational performance, efficiency and competitiveness, and other intangible benefits.

The findings of this study showed that the owner-managers’ perspectives of business value are aligned with the literature on business value. Their perception of how ICTs contributed to business value was mainly focused on organisational performance through both financial and non-financial benefits. They had different views on the business value of IT. Even among the owner-managers who had similar views, the importance given to each aspect of business value varied. While everyone focused on organisational performance, the majority were more concerned with financial benefits, and the rest considered intangible benefits such as business reputation as more important. This finding was not surprising as such differences in the concept of business value were observed in the initial review of literature as well. Further, owner-managers’ indications of realised and perceived value from ICTs over their expectations from ICT investments are also in alignment with the different concepts such as potential value, realised value and perceived value in delivering the business value of IT discussed in the literature (Section 2.2.2). The different views of the owner-managers and how they are supported by the literature is illustrated in table 8.1. The percentages represent the number of participants who mentioned each term when describing the business value of ICT.

Table 8.1: Business value concepts supported by the literature and evidence from cases

IT business value concept	Justifications from the literature	Illustrative evidence from case data
Improved organisational performance (Financial)	Banker and Kauffman (1991) Berger (1992) Katz (1993)	<ul style="list-style-type: none"> <li>• Increased the revenue of the business (91%)</li> <li>• Increased profits (97%)</li> <li>• Increased the occupancy</li> </ul>



	(Masli, Richardson, Sanchez, & Smith, 2011)	rate (94%) • Reduced cost (83%)
Improved Organisational efficiency and competitiveness	Brynjolfsson and Hitt (2003); Cronk and Fitzgerald (1999); Kohli and Devaraj (2003); Melville et al. (2004); Tallon et al. (2000) Aral and Weill (2007) (Masli et al., 2011) (Wang et al., 2013) (Sun et al., 2014) (Afflerbach, 2015)	• Improved the efficiency of business processes (86%)  • Increased ability to compete with other businesses (60%)
Intangible benefits	Barua et al. (2010); Kohli and Grover (2008); Prasad (2008); (Schryen, 2013) (Wang et al., 2013)	• Helped improving the business recognition (69%) • Improved customer satisfaction (77%) • Improved business stability (60%)

The previous literature on the business value of IT focused on large scale businesses in the contexts of both developed and developing countries. However, as illustrated in table 8.1, the findings of this study which focused on STEs provided evidence that regardless of their smaller size, ICTs do contribute to the business value in a similar way to their counterparts. How this contribution is actually made will be discussed under three main themes:

1. Improving organisational performance in terms of financial gains;
2. Improving organisational performance in terms of efficiency and competitiveness;
3. Improving the reputation of the business.

Each of these themes will now be discussed in the following sections.

### **8.6.1. Increasing financial gains**

As depicted in Table 8.1, for the overwhelming majority of the businesses in this study, ICT investments led to an increase in their organisational performance in terms of financial benefits. As discussed in Section 8.3.1, these financial gains were achieved

mainly by increasing the revenue/profits and by reducing the costs of business operations.

This increased revenue was mainly based on the growing number of customers which was a direct result of the investments they made in ICTs through their presence in OTA websites. As described in detail in Chapter 6's overall findings section, managers who compared their revenues before and after ICT investments could see the clear difference. In particular those businesses which had a pre-ICTs life stage were appreciative of the effect of ICTs in increasing occupancy. This aligns with the business value concept discussed in the literature review, i.e. that the businesses can better understand the value gained from ICTs by measuring performance prior to and after an IT implementation (Brynjolfsson & Hitt, 1998). All the owner-managers agreed that their occupancy rates increased after implementing ICT initiatives such as hosting the business website and especially through the integration of OTAs' resources in distribution processes. Further, as described under the online selling strategies section in Chapter 7, this was a result of ICTs providing a global presence for these small businesses which otherwise would have been more difficult to find. Therefore the findings of this study made it evident that ICTs contributed greatly to these small businesses by allowing them to reach a virtually unlimited pool of potential guests. As a result of strategically aligning the ICTs with tourism distribution these small businesses were able to avoid the limitations of seasonality. Online presence meant businesses received an increased number of customers throughout the year which led to an increase in revenues. As owner-managers confirmed, before the implementation of ICTs the business would experience such high numbers of guests only in the peak season. As well as the owner-managers' statements, increased occupancy rates also provided evidence for this claim. In agreement with this finding, in a study comparing reservations channels by Masiero and Law (2015) also found that facilitating online reservations is important to attract travellers in both low and high seasons.

Further it was identified that by exploiting the multi-channel strategy and customising their choice of OTAs to serve niche markets such as high end tourists, STEs were able to sell more of their deluxe rooms which had a higher profit margin. Further as discussed earlier, through the marketing strategies of participating in special offers and deals organised by OTAs these small businesses were also able to increase their profits

through cross selling their additional products and services such as Ayurveda treatments and package tours. This has provided further evidence to confirm the existing arguments on IT business value: that IT does not create value itself but needs to be combined with other resources and processes of the businesses to gain optimal business value (Barua et al., 2010; Brynjolfsson & Hitt, 1996; 2000; Hitt & Brynjolfsson, 1996; Kohli & Grover, 2008; Melville et al., 2004).

Although ICTs were standard in STEs, use of limited ICT resources in multiple business processes reduced their operational costs. As described in the STE business processes section in Chapter 6, distribution and sales was the key business process for reservation and marketing functions. A set of resources comprising OTAs, a business website, online review sites and social media was collectively used in these two key processes, minimising the costs and effort involved in operating them as different functions. In alignment with these findings, the focus on increasing the revenue and profit was the basis for early definitions of the business value of ICTs. Abundant literature provides evidence that originally IT business value was measured in financial terms by looking at how ICT investments affected increasing revenues and/or profits for the businesses (Bakos & Kemerer, 1992; Banker & Kauffman, 1991; Katz, 1993). The findings indicated that owner-managers of STEs also give a greater weight to financial benefits when considering the business value gained from their ICTs. Due to this emphasis on the financial benefits, the majority of owner-managers measured their realised business value of ICT by means of increased revenues and/or reduced costs (refer to Table 8.1).

Although the majority of the participants in this study were satisfied with the financial gains they received, some were reluctant to make further investments in ICTs as they could not see further direct financial benefits from the investments they already made. In particular those businesses who had started operations with essential ICTs (such as OTA registrations, and business websites) did not see any need for further investments and were sceptical about ICTs' ability to provide any extra value to their businesses. The literature suggests that firms which fail to simultaneously invest in the ICT prerequisites can be unsuccessful in the realisation of the full value from their investments in technology (Kauffman, 2000; McKeen & Smith 2009). Hence the researcher identified this unwillingness to invest in upgrading and maintenance of the initial ICT investments as a risk for these small businesses. Although they are still receiving benefits from these

initial investments, in the long term they could be at a disadvantage. These claims of owner-managers further emphasised the limits to ICT investments and ICT resources owned by these small businesses. However even these few businesses accepted that ICTs help in improving the efficiency of their business processes and were necessary for surviving and competing with the other similar businesses. However, with the evolution of the concept of the business value of ICT, assessing it only in financial terms is now considered only a partial measure as investments in ICTs also provide many non-financial benefits (Brynjolfsson & Hitt, 2003; Melville et al., 2004) which are discussed in the following sections.

### **8.6.2. Improving operational efficiency and competitiveness**

Increasing the efficiency of business processes is considered a major potential value brought to businesses through investments in ICTs. This was one of the major areas where STEs were able to gain added business value through using ICTs. ICTs helped these businesses by improving efficiency in key business processes such as communication, reservations and marketing. The use of portable devices such as smartphones allowed them to promptly respond to customers and other stakeholders. By automating room reservation processes using the facilities of OTAs they were able to provide more efficient services to customers.

Buhalis (2003) proposes that consumers are becoming more sophisticated and experienced and, therefore, more difficult to please without the use of advanced technologies. Hence the availability of powerful ICTs is necessary to improve their efficiency and re-engineer communication strategies. More than two thirds of the cases in this study used ICTs to improve their communication in terms of speed and quality by using portable devices, powerful Internet facilities and in some cases targeted e-mailing strategies. As identified in the previous discussion, in the context of STEs there were particular characteristics that shaped the use of ICTs in their businesses. Mainly their ICTs resources were limited and integration with trading partner resources (particularly OTAs) in business processes was mandatory. However this led the businesses to optimise the use of their own resources to match efficient services provided by OTAs as well as to allocate more firm resources to the processes of actual customer service.

Increased competitiveness is another important feature of business value recognised by the STE managers in the study. Competition is considered a function of a combination of factors such as innovation, international benchmarking, leadership, quality focus and responsiveness to competition that work collectively to enhance the profitability of the enterprise (Favre-Bonté & Tran, 2015; Williams, Hare, & Uwi, 2012). The cases provided evidence for the achievement of competitiveness by innovative use of ICTs. As discussed in the findings, based on their specific market focus (such as high end European tourists) STEs designed German translated versions of their websites and by allowing their guests to use their own language such businesses had the advantage of reaching a wider customer base than their competitors. Use of social media for sales promotions could also be seen as innovative and brought first mover advantages to those businesses.

Regardless of the size of the businesses, a website provides tourism organisations with a global presence and the ability to make partnerships around the world in an efficient and cost effective manner (Buhalis & O'Connor, 2005). Further, according to these authors it enables small firms to build and expand their virtual size. Nearly all (97%) of the small businesses in this study had a website and as discussed in the cross case analysis (section 7.5.2), some of the businesses had their own special strategies for using the website to their business advantage. These findings provided evidence that ICTs are contributing to business value in STEs by stimulating organisational performance through increased operational efficiencies and competitiveness.

### **8.6.3. Improving the reputation of the business**

Reputation is a valuable intangible asset for any business. Corporate reputation has been defined as “a collective representation of a firm's past behaviour and outcomes that depicts the firm's ability to render valued results to multiple stakeholders” (Fombrun, Gardberg, & Sever, 2000). One of the main reasons for tourism businesses to implement ICTs and to carry out online activities is the assumption that they are beneficial for their reputation (Dijkmans et al., 2015). Although it is not directly measured in financial terms, the positive reputation of a business is considered a major part of the business value.

Dijkmans et al. (2015) claim that reputation matters in tourism businesses for several reasons: for example, it is a key parameter in the selection process by potential

customers, consumers are more likely to select companies with a positive corporate reputation, and are willing to pay more. Reputation also matters in maintaining beneficial relationships with other stakeholders such as OTAs (Brown et al., 2014). In alignment with these claims it was clearly identified by the managers of STEs that business reputation is one of the main ways in which ICTs bring value to their businesses. Moreover managers believe that ICT is second only to customer service as one of the main sources of their business reputation. It indicates business reputation as one of the main potential business value opportunities anticipated by these businesses. The findings also make it evident that the owner-managers who anticipated such value, have implemented effective conversion contingencies in order to obtain a better business reputation through their ICT investments. For example as discussed in Section 6.3, from creating awareness of the business to obtaining positive feedback from customers these STEs utilise various ICTs such as their business website and OTA registrations. Due to the current trend of travellers seeking information with regard to destinations and accommodation through eWOM sources (Gruen, Osmonbekov, & Czaplewski, 2006), managers also recognised the value of engaging with these sites to establish their names in a selected market niche.

Managers and owners also praised ICT for its contribution towards the achievement of higher customer satisfaction. According to them having a satisfied customer is the basis for positive reviews, word of mouth promotions and returning customers, which leads to an improved reputation and improved overall business performance. As ICTs play a major role in business processes from reservation of rooms to free high speed Internet services, it helps these STEs to keep their customers satisfied before their arrival as well as during their stay. As table 8.1 illustrates, almost 70% of the managers agreed that ICTs contribute to business value by improving customer satisfaction. Further evidence was provided by the customer review analysis performed using the Trip Advisor reviews of these STEs (presented in Chapter 7). In support of this finding Bilgihan and Bujisic (2015) also found that customers who trust a business for its good customer service are more likely to return and recommend the businesses.

Based on the findings of this study, it was evident that ICTs contribute to the business value of STEs mainly by:

- Improving financial performance by increasing revenue and profit;

- Increasing operational efficiency and competitiveness; and
- Increasing business reputation through customer satisfaction.

While all three points are interrelated and improve the performance of the businesses both in financial and non-financial terms, those were discussed previously as potential areas where ICTs can make a unique contribution to STEs. However organisational performance is considered a complex multi-dimensional construct both in tourism (Melián-González & Bulchand-Gidumal, 2016) as well as in the IT business value literature (Schryen, 2013). While economic performance is most important for the majority of businesses they believe that the non-financial performance such as customer satisfaction and business reputation is crucial for their long-term success. This finding is consistent with the more recent research in both the domains of tourism (Ashari et al., 2014; Cohen & Olsen, 2013) and IT business value in other industries (Afflerbach, 2015). Indeed Melián-González and Bulchand-Gidumal (2016) suggest that any attempt to describe how IT can improve hotel performance should consider these dimensions of organisational performance including customer satisfaction, operational productivity, and economic benefits.

Studying the literature on IT business value which focused on productivity, financial benefits, intangible benefits and organisational performance, Schryen (2013) concludes that this discipline still lacks a consistent and widely accepted definition of IT/IS business value and concepts are still overlapping and complicated. Hence, Schryen's definition of IS/IT business value focuses on the effects of IT investments on firms' multidimensional performance and capabilities. Therefore, aligning with the recent research recommendations and the integrated business value model by Melville et al. (2004) which was the basis of this study, it is clear that the case evidence supports the broader views on the concept of business value of ICT.

### **Drawbacks and barriers affecting STEs' ability to gain business value from ICTs**

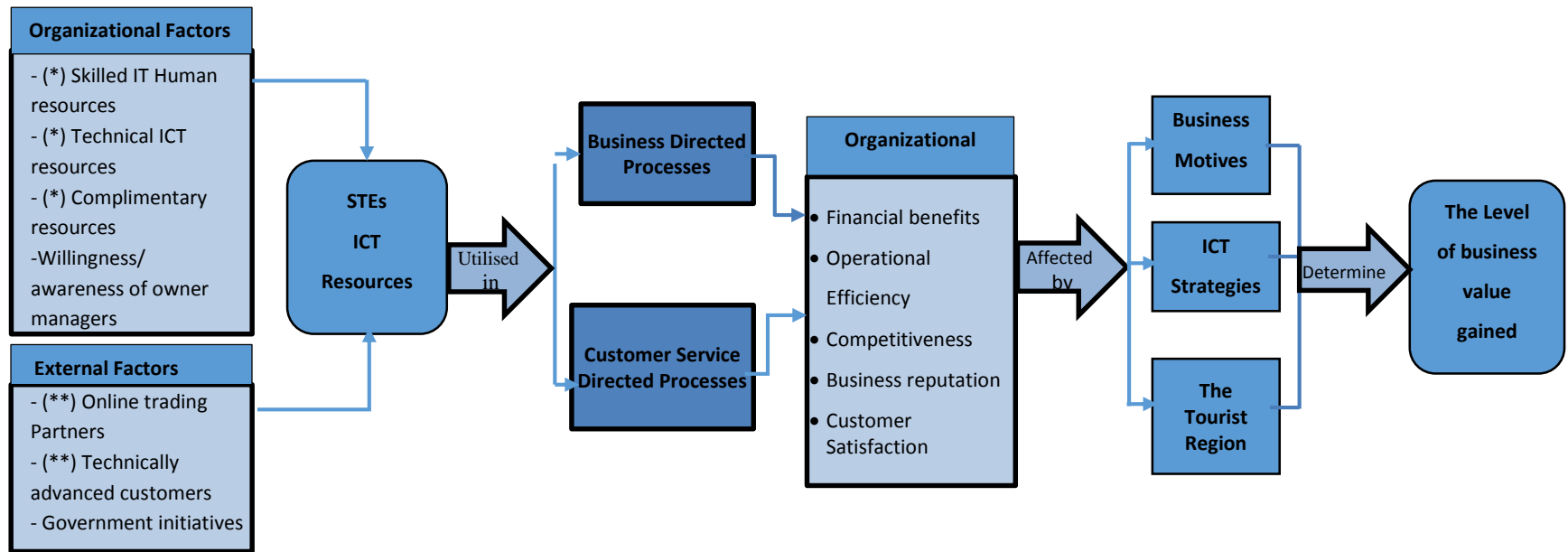
The initial literature review identified that the drawbacks and barriers to adoption of ICTs are well researched. The literature provided evidence that the most common barriers are: limited financial resources, lack of IT skills and knowledge of owners and

employees, limited technology infrastructure, for small businesses in general (Hashim, 2015; Irvine & Anderson, 2008; Kuwayama, 2001; Migiro & Ocholla, 2005; Purcell et al., 2004; Zelenka, 2009) and for small tourism businesses in particular (Anckar & Walden, 2001; El-Gohary, 2012; Law et al., 2014; Main, 2002; Rayman-Bacchus & Molina, 2001). Although it was not a focus of this study, the findings revealed that these barriers to technology are applicable to STEs in this study as well. While the lack of skilled IT human resources affected all STEs the effect of other barriers varied according to the tourist region they are located in. STEs in rural regions like Hill City experience a higher level of negative effects due to the lack of general infrastructure, Internet facilities and accessibility to technological services. Although limited financial resources was generally identified as a barrier, the findings of this study indicated that, more than its limited availability, owner-managers' unwillingness to invest in further ICTs was negatively affecting their ability to gain business value from ICT resources. As described in Section 6.5.3 the majority of STEs were able to make initial ICT investments but they preferred to stay at that point and expand investments on tourism business products rather than on any more ICTs. This was identified as the second major barrier to gaining business value for these STEs which limits their capabilities.

The factors that answer the research question and address the research aims are illustrated in Figure 8.4. It illustrates the key findings of this study focused on the research aims. Firm ICT and complementary resources are utilised in business and customer directed processes in order to gain business value in terms of financial and non-financial gains. The firm's ability is affected by the organisational and external factors and ultimately the business value gained varies based on the business motives, ICT strategies and the tourist region where the STEs are located.

After analysing the findings of this study it was identified that there are certain features of business value of ICT related to the STEs of Sri Lanka. After considering these new concepts which emerged from this study (illustrated in Figure 8.4), the initial conceptual framework was refined to reflect the findings. This refined theoretical framework is described next.





(\* )The level of availability (\*\*) Pressure of

Figure 8.4: How ICTs contribute to the business value of STEs

## **8.7. Business Value of ICTs: A Revised Theoretical Framework**

This research used the Resource Based View of the firm by Barney (1991) as the theoretical basis. Under the theoretical lens of RBV, an initial conceptual framework was developed integrating the IT business value by Melville et al. (2004), the tourism production system by Poon (1993) and tourism business processes by Alford (2005) to guide the research (refer Figure 3.2). The discussion of findings demonstrated a need for more specific variables to be included in the framework to better reflect how ICTs contribute to the business value of STEs. While the core variables of the initial framework (business value of IT, focal firm and the external environment) were closely applicable, the components under the two major variables had a varying level of importance for the STEs of Sri Lanka. Therefore the initial conceptual framework has been revised to introduce the new concepts which emerged from the research (refer to Figure 8.5).

The initial conceptual framework focused on IT business value for business in general and the variables of the framework were described under two main entities of focal firm and the external environment. The purpose of this study was to extend this general framework to small businesses with a focus on STEs. Hence the focal firm in this study was the STEs represented by 35 tourist accommodation businesses in Sri Lanka. Based on the focal firm in the initial framework, ICT resources, complementary resources and the key business processes were investigated in order to find how ICTs contribute to the business value of these firms. Under the external environment industry characteristics, government support and the trading partners' resources and their business processes were investigated to identify how the external environment affects the focal firm in gaining business value from their ICT and complementary resources.

The revised theoretical framework is presented in Figure 8.5 followed by Table 8.2 which summarises the variables of the revised framework compared to the initial conceptual framework. The blue coloured blocks of the framework represent the areas of contribution of this research. The next sections discuss each of the variables in the revised framework starting with the focal firm.

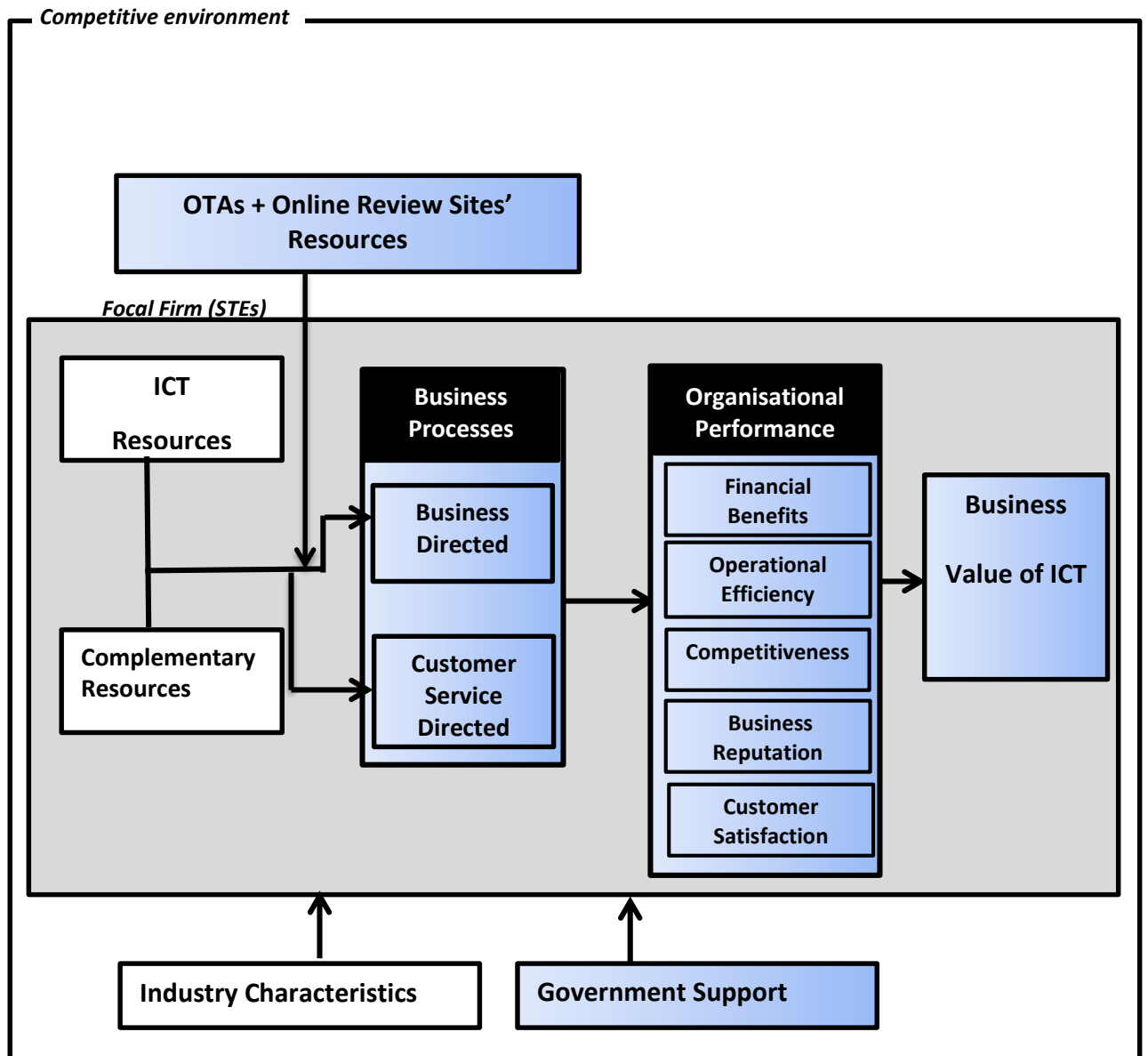


Figure 8.5: Revised theoretical framework of business value of ICTs to STEs

Table 8.2: Features of the initial conceptual framework and the revised theoretical framework

Component	Initial Conceptual Framework	Revised Theoretical Framework
<b>Focal Firm</b>	Refers to all business enterprises in general	Refers to STEs
Firm resources	Refers to the firms' ICT and complementary resources	Refers to the same in the context of small firms in tourism and consists of:  <i>Technological ICT resources:</i> ICT devices, software/applications, Internet and telecommunications infrastructure  <i>Human ICT resources:</i> Technological awareness and skills to effectively operate the technological ICT resources Managerial skills to collaborate with online trading partners and customers  <i>Complementary resources:</i> Tourism specific resources which can be used in collaboration with ICTs to promote the business such as location, buildings, culinary and other services
Business processes	Refers to comprehensive set of business processes	Refers to key business processes in STEs: distribution and sales, service delivery and management functions and categorised as business and customer directed processes
<b>External environment</b>	Refers to the external environment for general businesses	Refers to the external environment of STEs
Trading partner resources and business processes	Refers to the general trading partner resources and business process	Refers to two specific tourism trading partners – OTAs and online review sites – and the integration of their resources particularly in the distribution and sales process
Industry characteristics	Industry characteristics in general	Tourism industry characteristics including tourism trends, regulations, and pressure from competitors that shape the way in which ICTs are utilised in small tourism firms
Government support	Represent selected country specific characteristic which affects performance of small businesses	Specific government initiatives to develop the tourism industry in general and in particular for the development of small businesses
<b>Additions in the Revised Framework</b>		
Business directed processes	Refers to the use of ICT resources in the key business processes in order to improve the productivity of the business, particularly in distribution and sales and management processes	
Customer service directed processes	Refers to offering ICT resources (e.g. free Wi-Fi) for customers within the business premises to achieve a higher customer satisfaction in the service delivery process	
Organisational performance	Refers to the areas of improvements in business operations through ICTs' overall firm performance including financial benefits, operational efficiencies, competitiveness, customer satisfaction and business reputation	

### **8.7.1. Focal Firm**

As described above, while the original IT business value framework considers businesses in general (regardless of the scale of the business and the industry) the revised framework is specific to the small tourism businesses from the accommodation sector in the context of Sri Lanka. As the revised framework is highly contextual to the Sri Lankan STEs (refer to Chapter 4 – research context), the generalisation of this framework will be limited to other contexts which have a similar social and economic background. This will be further discussed in chapter nine.

#### ***8.7.1.1. Firm resources***

Based on the RBV, the resources of the firm are categorised as ICT and complementary resources. The literature claims that the firms need to use ICT resources along with the complementary resources to gain competitive advantage and in turn increase business value. In agreement with this argument, the findings of this study also provided evidence for the significance of the integration of firms' complementary resources. Therefore the revised framework includes the same two categories as the initial framework. However one of the key findings in relation to STEs was the significance of the integration of trading partner resources with the combination of ICT and complementary resources. Hence in the revised framework trading partner resources were integrated into the firm resources. The following sections discuss ICT and complementary resources as significant variables in the revised framework.

#### ***8.7.1.2. ICT resources***

ICT resources were categorised as technological ICT resources and human ICT resources. However as this study is concerned with small businesses, scarcity of resources was highlighted as a barrier to the exploitation of ICTs. STEs can integrate their limited ICT resources with trading partner resources to overcome barriers such as lack of ability to process financial transactions online. Furthermore the study provided evidence that even with limited ICT resources, STEs can achieve competitive advantages by the strategic use of OTAs and online review sites. Therefore in addition to combining ICT resources with complementary resources, there is a need to also integrate trading partner resources into the revised framework.

Another unexpected finding was the fulfilment of the technology needs of these STEs through a standard set of ICTs. Obtaining more advanced devices did not seem to be necessary in this small businesses context; for them what mattered most was the effective integration of basic ICT resources with OTA resources. This emphasised the significance of the ICT skilled personnel which was the key to using these basic ICT resources to their optimum potential. The findings of this study revealed that this significant asset was the scarcest resource for most businesses.

#### ***8.7.1.3. Complementary resources***

The tourism resources which could be combined with ICTs to gain competitive advantage were categorised as complementary resources of STEs. Non-ICT physical capital resources such as buildings, furniture and other facilities, non-ICT human resources such as culinary experts and customer care employees, and complementary organisational resources such as supportive policies and procedures as well as strategic plans were included in this category of resources (refer to Section 6.2.3).

In this study the STEs who used their ICT resources in combination with complementary resources and shared resources of OTAs were reported as being more competitive than their counterparts. Therefore regardless of the smaller size of the selected businesses the emphasis given to the firm resources is as high in the new framework as it was in the initial framework. However, to overcome the resource constraints of the small firms, the new framework emphasises the significance of the integration of firm resources with trading partner resources to obtain optimal business value.

#### **8.7.2. Business Processes**

The original theoretical framework emphasised the business processes of the firm. The key business processes in the initial framework were derived by amalgamating the tourism production system by Poon (1993) with tourism business processes by Alford (2005) (refer to Section 2.2.2). However, during data collection it was identified that the tourism processes mapped through the literature review were too broad in the context of Sri Lankan STEs. It was revealed that the small tourism businesses in Sri Lanka do not have a specifically defined set of business processes but view the business as a whole, and identify a set of key activities to be performed. Therefore, three main areas of

activities were identified as key business processes: distribution and sales, service delivery and management. As previously mentioned, when allocating ICT resources to these three processes STEs have to consider the two dimensions of operational efficiency and customer satisfaction. Allocating ICTs to both the domains was important in order to reach optimal business performance. Distribution and sales, and management processes were identified as business directed dimensions which need to be integrated with ICTs to increase operational efficiency, and service delivery was identified as a customer directed dimension which is facilitated by offering ICTs to customers in order to gain customer satisfaction.

#### ***8.7.2.1. Business directed processes***

In order to achieve operational efficiencies and improve business productivity STEs need to incorporate ICTs into their key business process which is distribution and sales. However further analysis of this process identified that in the context of STEs, firm ICT resources are not the sole factor affecting the ability of STEs to gain business value. The key process of distribution and sales was mainly performed by OTAs and online travel review sites. As repeatedly highlighted in the findings, firm resources have to be integrated with online trading partner resources to perform these processes effectively. Therefore any attempt to emphasise these business processes in isolation seems meaningless in the context of Sri Lankan STEs. More emphasis needed to be placed on the way small businesses are collaboratively operating this process with their trading partners. While the majority of the businesses had other channels for reservations and promotions, the dominance of online trading partners in both processes was clearly evident throughout the study. Due to the significance of the role played by the OTAs, a perception that “registering with OTAS will do everything” has been established among most of the owner-managers. However instead of this passive acceptance, STEs who actively participated in the implementation of specific strategies based on their market focus have been able to achieve increased operational efficiencies and higher revenues compared to their competitors. This finding was significant as it showed that leaving trading partner resources outside the firm resource layer was not justifiable in the context of STEs. Therefore in the revised framework (refer to Figure 8.5) this variable is integrated into firm ICT resources through business directed processes.

While the dominance of OTAs and online review sites were the most significant finding, ICT adoption was also found in the back office management processes. Maintenance of business accounts and customer databases were the processes which used ICTs to an average level by the majority of businesses. Although it was evident in only a few businesses, use of social media in marketing also seemed to be emerging in Sri Lankan STEs.

#### ***8.7.2.2. Customer service directed processes***

The analysis of the findings revealed that utilising ICTs in business directed processes alone was not enough to gain optimum business value from ICTs. Although it is a part of customer service to provide effective online services through the integration of ICTs in business processes, one highly influential factor from the external environment was the growing customer demand for technological facilities such as free Wi-Fi, Internet access, and printing facilities within the business premises. Therefore improving the efficiency of business processes which produce the tourism product through ICTs was a requirement in order to increase the business value. In addition, using ICT resources for satisfying customers' technology expectations was also crucial to gain optimum business value from ICTs. Furthermore, allocating ICT resources for customers was mandatory in the context of STEs in Sri Lanka. While the actual process of service delivery leans more towards the provision of tourism products and services, offering ICT resources as a service was also central for achieving customer satisfaction. Therefore this element was added to the new framework as a separate area. Based on the findings of this study as well as the support from recent literature particularly in the context of small tourism businesses it was found that this needs to be given the same emphasis as the use of ICTs in other business processes.

#### **8.7.3. Organisational Performance**

As the initial conceptual framework did not have a separate variable for organisational performance, the use of ICTs in business processes was connected directly to the business value of STEs (refer to Section 3.3). However the original IT business value model by Melville et al. (2004) did include organisational performance as a separate variable. The findings indicated the importance of including the organisational



performance variable to better define the varied forms of performance achieved by STEs through the use of ICTs. As discussed when answering the research question, STEs had varying views on how organisational performance is achieved. Different owner-managers identified financial benefits, operational efficiency, competitiveness, business reputation and customer satisfaction as important. To represent these varied views, organisational performance was added to the revised framework.

#### **8.7.4. External environment**

The external environment refers to the environment in which the focal firm (STEs in this framework) operates. The initial framework included three variables: industry characteristics, trading partner resources and business processes, and government support. As the revised framework focused on STEs, the specific trading partners are OTAs and online review sites. Industry characteristics remained unchanged as they affect all businesses in the tourism sector regardless of the size; government support also remained in the revised model due its significance in business performance of STEs.

##### ***8.7.4.1. OTAs and online review sites' resources***

In the initial conceptual framework the focus was on general businesses, and trading partner resources and processes were included in the framework due to their effect on gaining business value from ICTs. However, as discussed before, one of the major findings of this study was the significant role played by OTAs and online review sites in shaping the STEs' ability to gain business value from their limited ICT resources. Moreover, it was evident that only the businesses who combined their own resources with OTAs in a strategic way achieved optimum benefits. As the new framework focuses on small businesses in tourism, rather than naming the variable as general "trading partners", specifically mentioning "OTAs and online review sites" was considered more appropriate. Therefore as discussed under the organisational perspective these trading partners were integrated into the resources of the focal firm.

#### **8.7.4.2. Industry Characteristics**

The initial conceptual framework includes industry characteristics as a variable in the external environment in order to consider the effect of salient features of industries in shaping how ICTs are used within the focal firm to create business value.

Industry characteristics are considered important because of the nature of the tourism industry. The tourism industry is highly information intensive and consists of diverse characteristics such as: global markets and the salience of destinations; high volumes of transactions and customised products; and structured, standardised data as well as multimedia representations (Favre-Bonté & Tran, 2015; Law et al., 2010; Poon, 1993). Further the new trends in the industry are largely based on online activities from both businesses and guests (Ardjouman, 2014; Xie, 2013). These characteristics have a positive effect on the contribution of ICTs to increasing the business value of tourism enterprises (Buhalis, 2003; Idisemi, Latham, & Moreton, 2011; Sheldon, 2003). This study found evidence to confirm the emphasis given to the industry characteristics (refer to Section 6.4.1). Globally as well as in the local context of Sri Lanka it was identified that the STEs are facing a rapidly changing dynamic environment in this industry. With the limited resources owned by these small businesses it was a challenge to be competitive and even survive in the industry. Further as industry characteristics affect all the businesses in a similar way, how individual STEs respond to these industry stimuli also affects their ability to achieve competitive advantage. The need to meet customer demands and manage relationships with industry trading partners influenced how these small businesses used their resources to gain business value. As illustrated by examples given in the discussion regarding computer security, in some cases they had to give a lower priority to business needs in order to meet customer demands. The influence of industry characteristics on ICT business value for STEs was clearly reaffirmed in this study. Hence this element is kept unchanged in the revised framework.

#### **8.7.4.3. Government support**

The initial conceptual model included government support as a variable in the external environment which represents the country-specific factors that affect the firm's ability to generate business value from ICTs. Literature suggests that the government support for STEs in the areas of developing ICT skills of employees, making appropriate

infrastructure available and providing financial support is crucial for STEs particularly in the context of developing countries. The findings provided evidence for the significance of these factors for STEs, therefore this element was also kept unchanged in the revised framework.

## **8.8. Chapter Summary**

This chapter discussed the findings presented in chapters six and seven with reference to the literature in order to address the research aims and answer the main research question “How do ICTs contribute to the business value of STEs in Sri Lanka?” This was answered along with a discussion of how STEs use ICTs to gain business value, what factors affect the STEs’ ability to gain business value and why different STEs gain varying levels of business value from ICTs. In conclusion, based on the key findings of this study, the initial business value of IT framework was revised to be more appropriate for STEs in Sri Lanka. The next chapter presents the concluding remarks of this study including the contributions, limitations and recommendations for future research in this domain.

## Chapter 9: Conclusion

### 9.1 Chapter introduction

The purpose of this study was to explore how ICTs contribute to the business value of STEs in the context of Sri Lanka. Multiple case study research under the post-positivist paradigm was conducted in order to address the research question. In answering the overarching research question this study has also identified the different ways in which STEs use ICTs to gain business value, the factors affecting their ability to gain business value from both within the firm and externally, as well as the reasons for the variation in levels of business value gained.

This final chapter revisits the research question and reviews the main findings of the research. Firstly, a synthesis of the key findings is presented. Next, the contributions of the research including the theoretical inferences for academics and the practical implications for policy makers and managers of STEs are identified. The limitations of the research in terms of research method and context are then examined. Finally, directions for future research are outlined.

### 9.2 Research Synthesis

This research was motivated by the rapid growth of the tourism industry after the long lasting civil war in Sri Lanka. Increased international tourist arrivals provided growth opportunities for locally-owned small accommodation providers. While anecdotal evidence has pointed to the significance of ICT in helping small tourism enterprises to have a global presence and increase business value, no significant research has been carried out on this topic. Hence this study was conducted to investigate how ICT contributes to the business value of STEs in Sri Lanka.

The overarching research question ***“How do ICTs contribute to the business value of STEs in Sri Lanka?”*** was posed with three research aims:

1. Explore how STEs use ICTs to gain business value;

2. Examine the organisational and external factors that affect STE's ability to gain business value through ICTs;
3. Evaluate why the contribution of ICTs to business value varies from one STE to another.

An initial conceptual framework was developed by integrating the IT business value model by Melville et al. (2004) which was based on Barney's Resource-Based View of the firm with the tourism business processes by Poon (1993) and Alford (2005) (Figure 3.2). The framework consisted of two main layers: the focal firm and the external environment. Multiple case studies were carried out under the post-positivist paradigm. Semi-structured interviews were conducted with owner-managers of 35 STEs from four tourist regions in Sri Lanka. Using an integrated inductive and deductive coding scheme the findings were analysed overall and across cases to address the three research aims. The relationship of the findings with extant literature was subsequently discussed and the overarching research question was answered. Key findings of the research were as follows.

***RA1: How STEs use ICTs to gain business value***

Firstly, this study explored how STEs in Sri Lanka use ICTs in business processes. It revealed three key business processes, categorised broadly as distribution and sales, management, and service delivery. Out of the three processes distribution and sales was identified as the process in which ICTs make the most contribution. Facilitating online reservations, the use of business websites and online review sites for marketing were the main areas in which ICTs were effectively utilised by STEs to gain business value. Back-office functions such as accounting and inventory (non-room) management processes also utilised ICTs to improve operational efficiencies. Under service delivery, offering ICTs for customers was considered crucial for obtaining customer satisfaction directly. While integration of ICTs in business processes indirectly contributes towards customer satisfaction, fulfilling customers' technology needs during their stay was considered essential in the context of STEs. Therefore this study identified the importance of utilising ICT resources both in business-directed as well as customer-directed processes. Business-directed processes (e.g. distribution and sales) were

important as they improve operational efficiencies and competitiveness. However, the customer-directed processes (e.g. service delivery) were found to be equally important as they lead to increased customer satisfaction and improved business reputation. One of the key findings of the research was that STEs would benefit from focusing more on effective integration of online trading partner resources to achieve success in their business-directed processes, while firm resources should be focussed more on the process of service delivery.

***RA2: Factors affecting the STEs' ability to gain business value from ICTs***

Secondly, the research examined the factors affecting the STEs' ability to gain business value from ICTs. Factors were identified in two categories as organisational and external factors. Within the focal firm, the level of availability of technological ICT resources, IT-skilled human resources, complementary resources, financial resources, and willingness and awareness of owner-managers to adopt ICTs in the business were identified as having an effect on the business value STEs obtain from ICTs. Among the organisational factors the key factor was the skilled ICT human resource, however it was revealed that this is the scarcest resource. From the external environment, the pressure from online trading partners, technologically-advanced customers and government initiatives were identified as influences. Due to the technological demands of customers, it was found that STEs even had to compromise their own business needs and allocate resources to customers. Section 8.4 provided a detailed discussion of these factors.

***RA3: Determinants of variance in business value gained by STEs***

The findings revealed that even under a similar set of organisational and external factors, different STEs gained varied levels of business value from their ICTs. In order to find reasons for these variations, a further evaluation of the organisational and external factors was performed using a cross-case analysis. The analysis revealed three main determinants for the varying level of business value gained by STEs: business motives of the owners, ICT strategies used and the tourist region they are located in. The owner-managers who were profit oriented made more strategic use of ICTs. STEs who were able to use commonly available ICT resources effectively in business processes were able to gain a better business performance than their competitors. The general level of ICT

infrastructure in tourist regions also determined the extent to which the STEs could gain business value from using ICTs. A detailed discussion of these determinants is presented in Section 8.5.

**RQ: How do ICTs contribute to the business value of STEs?**

Finally, the research answered the overarching research question. The findings of this study confirmed that regardless of their smaller size and the limited availability of resources, ICTs do contribute to STEs' business value. While the findings confirmed the financial aspect of the business value of IT, the research also discovered the importance of the non-tangible benefits of ICT investments such as customer satisfaction and business reputation. The contribution of ICTs to the business value of STEs was identified under three main themes: improving financial performance, increasing operational efficiency and increasing business reputation.

The findings indicated that the owner-managers of STEs give a greater weight to financial benefits when considering the business value gained through ICTs. The findings provided evidence for the direct financial benefits of their ICT investments through increased revenues from higher occupancies and reduced cost of business processes. In addition to the direct financial benefits gained, it was further identified that ICTs contribute to the business value of STEs through increased operational efficiencies and competitiveness. However the perceived business value of ICT varied among the owner-managers of STEs. While financial benefits were the most important concern, the majority believed that non-financial aspects of performance such as business reputation were crucial for their long-term success. The study provided evidence that the owner-managers of STEs consider improvement in business reputation as one of the main ways in which ICTs bring value to their business. Moreover managers believed that ICT is second only to customer service as one of the main sources of their business reputation. All three aspects discussed previously are interrelated and improve the performance of the businesses both in financial and non-financial aspects. The detailed discussion of how ICT contributes to business value was presented in Section 8.6.

### **9.3 Contributions of this research**

This research has deepened the understanding of the contribution of ICTs to the business value of STEs in the context of a developing country. Using a post-positivist approach with multiple case studies, this study analysed how STEs in Sri Lanka use ICTs to gain business value. The study identified the factors affecting the level of value gained from ICTs and revised the IT business value framework. The revised framework is more nuanced and appropriate for small businesses in the context of developing countries. By recognising that tourism represents a distinct industry where ICTs can have a prominent impact in increasing small firms' business value significantly, this research has addressed the knowledge gap identified in the two disciplines (illustrated in Figure 2.3). This study contributes to the literature in the following areas:

- (1) Business value of ICTs for SMEs; (contribution to IS literature)
- (2) Business value of ICTs for STEs; (contribution to tourism literature) and
- (3) Business value of ICT in the context of developing countries.

This section presents the contributions made by this research towards both the IS and tourism literature, and practice.

#### ***Contribution to literature***

This research contributes to IS theory by extending an existing framework of IT business value to small organisations (refer to figure 8.5). This study demonstrated that Barney's resource-based view of the firm had limitations when it came to providing full insights or identifying complex issues in the context of small firms in a developing country. The combination of ICT and complementary resources specified in the RBV did not fully explain the situation of small businesses as this study emphasised the significance of the integration of online trading partner resources in order to achieve competitive advantage. Further, previous frameworks of IT business value in the IS domain are focused mainly on large-scale businesses. Although several variables of the initial conceptual framework were validated by the findings of this study, as discussed in Section 8.7, additional information emerged that contributes to a more in-depth understanding of how ICT contributes to the business value of small firms.



This revised theoretical framework contributes to tourism with a special focus on small tourism enterprises. The framework highlights the specific requirements of small tourism enterprises in utilising their ICT resources more for customer service directed processes and integrating OTAs' resources for business directed processes. Further, the importance of government support is also emphasised in the framework, indicating its significance to the business value of ICT of small businesses in the context of developing countries. Hence, through this revised framework, this study contributes to theory both in the IS and tourism disciplines not only by increasing the understanding of how ICT contributes to the business value of small businesses but also by showing the importance of resource integration with trading partners and the utilisation of ICT resources in the business processes directed to customer service.

In addition to extending the existing theory on IT business value to small businesses, the findings of this study contribute to the literature in the following areas:

As emphasised in the introduction to the research, this study reconfirmed the benefits of ICTs to SMEs beyond the commonly understood financial gains. While the financial gains and operational efficiencies were validated in the context of small organisations, this study contributed to the literature by deepening the understanding of business reputation as a strategic path for small businesses to grow using ICTs. Further, this finding added to the knowledge of ICT business value in tourism by recognising business reputation as a component of the business value of ICT, particularly for lifestyle tourism businesses.

A common approach in the IS literature on SMEs is to treat ICTs as collective "black boxes", without recognising that business value obtained from each ICT might differ (Borza & Bordean, 2006; Sainaghi et al., 2013). By reporting the contribution of each ICT application to overall business value separately (e.g. website, email, customer databases, etc.) this study extends the knowledge on how business value of ICT is gained through different applications. Moreover, the findings of this study deepened the understanding of business processes of small tourism firms and how they link ICT resources with their processes in order to gain the optimal business value from ICTs.

Further, it added to the knowledge of how ICT and complementary resources can be employed in the business processes of small tourism business. This study confirmed the validity of literature which underlines the importance of combining ICT resources with complementary resources. The findings of this study clearly indicated the complementarity of ICTs with tourism resources, for example ICTs provided a platform for advertising and promoting unique tourism resources. This study also highlighted the significance of integrating online trading partner resources with the already established combination of ICT and complementary resources in the context of small businesses. Such integrations helped small businesses to overcome financial and technological barriers in implementing advanced technologies in the business by themselves.

In contrast to the literature which often claims that ICTs, in particular the Internet, facilitates STEs presence in the global marketplace and allows them to become independent of intermediaries, this study provided strong evidence that STEs are highly dependent on online intermediaries to achieve a global presence and gain a higher occupancy rate. Although almost all STEs had their own business websites they still had to register with OTAs in order to appear in the result pages of customer searches. The influence of OTAs on STEs' business processes was so high that they seem to act as business partners rather than just intermediaries.

Further, in 2004 when the IT business value model was developed by Melville et al., they posed the "role of the resources and processes of electronically-linked trading partners in impacting the value generated and captured by the focal firm" as an important area for future research on IT business value. Although it was not the major focus of this study, the findings revealed the significant role played by OTAs and online review sites (STEs' electronically-linked trading partners) in generating business value for STEs. It was found that the STEs rely on OTAs to cover most of their sales processes and have even reduced their own efforts to process financial transactions and now direct their customers to OTAs. Through these findings this study contributes to an area which is considered important in IT business value but is under-researched.

Another key contribution of this research is an expansion of the understanding of prioritising ICT resources to customer service directed business processes. The literature emphasises the deployment of ICTs in business processes in order to improve operational efficiencies. While confirming that importance, this study also emphasised the need to allocate resources to customers (particularly in terms of free Wi-Fi and also the provision of computers and printing facilities) in order to achieve higher customer satisfaction.

In addition, a range of influential factors that can either promote or hinder a firm's ability to gain business value from both within the firm and the external environment were also recognised. The identification of these organisational factors and external factors (discussed in detail in Section 8.4) added to existing knowledge, particularly in the context of small firms and the context of developing countries. The study identified some unique areas where small firms can overcome commonly-identified barriers, such as lack of skilled human resources through the utilisation of informal labour of family members although this was found to be limited to school/university holidays for many STEs.

Further the study contributed to the IT business value literature by identifying the determinants of the varying levels of business value gained by small businesses particularly in the context of tourism. It has been shown that the business motives of the owners, ICT strategies and regional location are the reasons for these variations.

This study further argues that the findings of this study could be transferable to other contexts with similar economic, technological and tourism backgrounds, such as countries in the South Asian region or South East Asian region. For example, in countries like Nepal, India and Pakistan, tourism plays an important role in the economy and they have a similar level of ICT infrastructure to Sri Lanka (Table 4.11). Further, Maldives has a well-established tourism industry which contributes more than 50% of the total GDP with a comparatively higher level of ICT infrastructure. However, a recent study conducted in Maldives (V. Ali et al., 2015), indicates that less IT skilled employees, lack of awareness of owner-managers regarding ICT business applications and poorly developed infrastructure in rural areas hinder organisations from gaining optimal business value from ICTs, which are similar findings to this study conducted in Sri Lanka. Thus, the

findings of this study are relevant to the countries of this region and possibly to other developing countries with a similar economic and technological background to Sri Lanka.

Although case research design has been widely used in the IS literature on SMEs, many studies often conduct only surveys and interviews with SME owner-managers to collect data (Gibbons & O'Connor, 2003; Parker, Burgess, & Al-Qirim, 2015). In addition to semi structured interviews conducted with owner-managers this research performed a comprehensive data collection through multiple sources such as documents, website analyses, and analysis of SME use of third-party websites (e.g. customer review sites). This added a degree of novelty to the case study research design in the field of Information Systems.

### ***Contributions to practice***

The findings of this research will be helpful for both the private business and public sectors. The operators of STEs can use the findings of this research in their decision-making for utilising ICT resources in more effective ways to gain business value. Government policy-makers can utilise the research findings to allocate resources for ICT infrastructure and training in the small tourism sector and to shape their strategies for achieving development of the industry. The following section provides a more detailed discussion of the implications for STEs and for the government of Sri Lanka.

### ***For Small Tourism Enterprises***

This research provides guidance for owner-managers of STEs on how to utilise their ICT and complementary resources in combination with online trading partner resources to obtain optimum business value. Each component of the focal firm layer of the framework can assist small tourism operators with their decision-making processes when implementing ICTs in their organisation. Effective decision-making can enhance operational efficiency and in the long term, business value. The research framework can be translated into a set of useful implications for owner-managers in Sri Lanka and other similar developing countries. The implications are discussed under each of the variables of the focal firm.

### *ICT resources*

The research shows that investing in expensive advanced technologies is not essential for STEs to gain business value. Maintaining a standard set of ICT devices and software which facilitates effective collaboration with online trading partners was confirmed to be sufficient to perform key business processes. Though a standard set of technological ICT resources is sufficient it was found to be critical to have skilled human IT resources in order to optimise the benefits. As hiring ICT skilled employees was unaffordable for STEs, the findings suggest that it is important for the owner-managers to receive ICT training themselves and to maximise the use of informal labour that can be obtained from families. Based on the research findings following recommendations are made:

- Use of more affordable and portable devices such as smartphones in increasing the efficiency of key business processes such as distribution and sales.
- Use of smartphone apps to increase the benefits of these devices;
- Maximise the use of available laptop and desktop computers in increasing the efficiency of back office functions.
- Use of skilled human resources to obtain optimal benefits from the available ICT resources.

### *Complementary Resources*

In order to optimise the benefits of complementary resources, the findings suggest that STEs should promote them using ICT tools such as the business website and social media. The regional resources and services unique to each STE can be converted into a competitive advantage when they are effectively combined with ICT resources for promotion.

### *Use of ICT resources*

Distribution and sales is the key business process that can be enhanced with the use of ICTs, and special attention should be given to the:

- Use of business websites for promotion, reservations, and communication; and
- Use of social media for promotion.

Further, the research shows that incorporating the customer-directed dimension when allocating resources to business processes and offering ICTs to customers has a positive

effect on organisational performance. However, just because the effect is positive does not mean that managers should sacrifice their business requirements and put the business at risk to satisfy customers. Instead, owner-managers need to have an open mind about implementing ICTs in the business to enhance efficiency of processes and increase customer satisfaction. For best results, managers should plan for high capacity Internet services for peak periods only ensuring the customers are provided with uninterrupted connectivity when needed but reducing costs at other times of the year so that essential ICT investments like virus guards can still be purchased.

#### *Online trading partner resources*

While online trading partners are a commonly available resource for all the STEs and considered a necessity for the survival of the businesses, the findings revealed that the strategic use of this resource can bring competitive advantage for STEs. Effective use of OTAs include:

- Choosing OTAs based on specific market segments (e.g. budget tourists versus high-end tourists or regional markets such as Europe versus Asia);
- Participation in OTA promotional offers and deals (such as discounted last minute rates) to appear on top of search results.
- Use of multiple OTAs based on types of facilities available in the business (e.g. standard rooms versus deluxe suites).
- Use of channel management software for STEs to avoid duplication of reservations when multiple OTAs are being used;
- Registering with alternatives to OTAs, such as Airbnb which facilitates direct communication with customers and charge less commission; and
- Registering with online review sites and actively engaging with the sites by frequently reading, reviewing and responding to user reviews.

#### ***For the public sector***

The Sri Lankan government has launched a number of projects to develop the tourism industry after its recovery from the civil war. Further the government has made investments in improving ICTs as well as other general infrastructure facilities in the country. While the role of assistance for STEs was highlighted as crucial the findings of this study indicated that some of the programmes initiated by the government have not

reached these small businesses. Therefore the government of Sri Lanka can utilise the findings of this study in future policy-making and when making investment decisions on which areas to prioritise when allocating development funds in different regions of the country. Recommendations for the Sri Lankan government are:

- *Allocation of funds for human resource development in small businesses regarding ICT skill development*

One of the key findings of this study was that a basic set of ICT equipment is sufficient to add business value to STEs but the owner-managers need to know how to use them in a way that optimises their benefits. However, the largest barrier that hinders the STEs' ability to gain business value from ICTs was the lack of IT-skilled human resources. This was identified in the study as an area in which the government can make a great contribution to the development of small businesses in the tourism industry. The study provided evidence of cases who had improved their businesses by using the skills they gained from training programmes conducted by the government. If the government could expand such initiatives to other regions particularly rural regions such as Hill City it would potentially contribute to the development of small tourism businesses in such areas. However, one important feature that the government should take into consideration in providing ICT training is the fast-changing environment related to both ICTs and tourism. Therefore the government needs to focus on sustainable ways of delivering on-going training to these STEs which have the potential to be implemented through the widespread Tele-centres in the country.

Further the study identified that the majority of the STEs reduced their use of ICTs due to the lack of affordable technological support services. The government can make such services available through these Tele-centres. The government could utilise the beneficiaries of ICT training programmes to deliver such services.

- *Expanding the development of general infrastructure in rural regions*

To facilitate the smooth operation of businesses using ICTs, improving national infrastructure such as reliable electricity for rural regions in Sri Lanka is necessary. Lack of access to uninterrupted services was identified in this study as a major barrier to the

use of ICTs for STEs in rural regions. A national infrastructure plan is therefore important and required to ensure Sri Lanka has adequate infrastructure to support the use of ICTs in business operations.

Although these recommendations are specific to the context of Sri Lanka, they are transferable to other contexts with similar economic backgrounds and tourism attractions, such as countries in the South Asian region (Maldives) or South East Asia (Vietnam) and even the Pacific region (Fiji) as the literature suggested that most of the barriers faced by STEs in Sri Lanka are common in similar developing countries. The following section discusses the limitations of this research.

#### **9.4 Limitations of this research**

Despite the efforts taken to maintain rigour in conducting the case research (Dubé & Paré, 2003; Miles, Huberman, & Saldaña, 2013; Yin, 2014), there were certain limitations arising from this study. The limitations of this study include both those common to case study research and those particular to the context of this research.

The major limitation of case study research is its lack of generalisability (Yin, 2014). Findings and recommendations may not be readily transferred to the wider population of all STEs since the results are more contextual. However, this research was carried out under the post-positivist paradigm within which the phenomena of interest were independently and objectively observed in a variety of contexts (Orlikowski & Baroudi, 1991), and as suggested by Benbasat et al. (1987) and Yin (2014) multiple cases (35) were studied to improve the generalisability of findings to similar contexts. As discussed in Chapter 8 most STEs in developing countries face common challenges such as lack of skilled human resources, limited access to infrastructure and limited financial resources. Therefore, although case study research itself reduces the generalisability of findings, based on the research paradigm and approach taken in carrying out this study, steps have been taken to mitigate this as described in section 5.8.

Limitations specific to this research study involve the case selection, data collection, and data analysis phases as follows.



Cases for this study were selected using theoretical and practical criteria; however, the sample was limited to the tourism businesses from the accommodation sector of Sri Lanka. Thus findings may not be readily applicable to other sub-sectors of the tourism industry who operate as small businesses. Another criterion used in selecting cases was the use of ICTs in at least one business process, which excluded the opinions of STE owner-managers who do not use ICTs in their businesses yet.

The data collection method of this research also has its own limitations due to the use of semi-structured interviews as the main data collection method. The questions may have been misinterpreted by the participants and the responses may not have represented the best answers. Further, about 25% of interviews had to be conducted in the local language (Sinhalese) and later translated into English which could have resulted in some data loss. Further the findings represent the perspectives of owner-managers of STEs who were willing to participate in the interviews and others who may have had different opinions were not included in this research.

The data in this research were gathered at one point in time. Given the rapid changes in technology, perceptions towards the phenomena of this research may have changed. Therefore, future work could use a longitudinal approach to capture any changes that may have taken place.

The data analysis may also have been influenced by researcher subjectivity. This was partially remedied by returning transcriptions of the interviews to the interviewees for their approval and performing member checking of the template codes with another five researchers.

Overall, there were a number of limitations in the study. Not all of them were alleviated during the research process. The use of other research methods to verify the findings of this study would address some of these limitations.

## **9.5 Directions for future research**

With the revised framework of the business value of ICT for STEs, this research opens up several possibilities for further work in both the domains of the business value of ICTs and tourism.

The revised framework has the potential for use in other contexts, especially in other developing countries. The framework forms a broad starting point for future researchers by providing various themes and categories that can be critiqued and developed in order to acquire a deeper understanding of the contribution of ICTs to the business value of STEs in other contexts.

One of the limitations of this study was its limited scope in relation to the sample selected from the tourism sector. While it contributed to filling the existing gap of IT business value literature in relation to small businesses, due to unique characteristics of the tourism industry the findings of this study may not be directly applicable to small businesses in other industries. Therefore future research on IT business value of small businesses in other industries would be able to expand the findings of this study.

One of the key findings of this study was the importance of considering customer-directed processes when utilising ICT resources in business processes. As customer satisfaction is considered a major determinant of long-term business success, satisfying customers through the fulfilment of their technology needs is important in tourism businesses. However as small businesses are struggling with limited resources they need to learn how to effectively manage them by allocating resources to customers without compromising their essential business requirements. The findings of this study indicated that this is still an underdeveloped area both in practice as well as in the existing literature. Therefore, further research related to the customer perspective of ICT business value, particularly in the context of tourism, would contribute to both practice and the literature.

Another major area emphasised in this study is the significance of effective collaboration with OTAs. While the crucial role played by the OTAs in the business performance of

STEs was highlighted throughout this study, the literature on the effect of OTAs on small tourism businesses is extremely limited. The implications of this study show that the role of OTAs in relation to small business value generation through ICTs would be a very important area for further research.

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## **Appendix A: Interview Protocol**

### **Interview Protocol**

Before the interview begins, briefly describe the research to the participant. The brief will include points such as the research aim to explore how ICTs contribute to the business value of small tourism organisations and how the organisation can be benefitted from this research and how confidential the data that they provide at the interview.

### **Section 1 Focal Firm**

#### **Participant Profile**

Background information of the participant

- a. Name, age, position

#### **Business profile**

##### 1.1 Background information of the Organization

- b. Number of employees, organization structure, the year of establishment
- c. Category of accommodation (Hotel, Guest house, B& B, Homestay etc..)
- d. No. of rooms/beds available
- e. Additional services provided to guest (food, travel assistance, rental services, tour packages...)
- f. Market focus (Domestic vs. International)

##### 1.2 Briefly describe the recent business performance

##### 1.3 No of visitors arrived, occupancy rate, average guest nights, duration of stay

##### 1.4 Briefly describe the ICT resources available within the organisation

- a. Devices available, Software and special applications,
- b. Infrastructure (Internet – broadband Wi-Fi, Networking)
- c. Specialised ICT skilled employees
- d. ICT budget

##### 1.5 Briefly describe the other resources available within the organisation : Physical resources, Special attractions / features, Specialised human resources (non-ICT)

## **Section 2 - Business Process**

2.1 Can you please describe the main activities you perform to produce the services that you mentioned earlier

- a. Developing the product or services (only if they provide services other than accommodation like tour packages and food services)
- b. Contracting with other suppliers
- c. Procurement

Briefly describe how you use your ICT and other resources in producing services. If not why?

2.2 What business activities you perform in distribution and sales of your services?

- a. reservations and sales
- b. booking administration
- c. marketing and promotion

Briefly describe how you use your ICT and other resources in distributing and selling the services. If not why?

2.3 Please explain what activities involved in delivering your services

- a. Creation and control inventory allocations
- b. The release of allocations
- c. Customer service
- d. Complaint management

Briefly describe how you use your ICT and other resources in the activities of delivering the services. If not why?

2.4 Briefly describe the business activities involved in the management of the business

- a. Accounting and finance
- b. Human resources development
- c. Legal affairs
- d. General management

2.5 What are the most crucial activities of the above and what value they add to your business?

2.6 Which resources (ICT and other), do you think useful and what makes them useful (examples /evidence)

### **Section 3 – External Environment**

3.1 What developments changes you see in the industry after the war (After the year 2009)

3.2 What characteristics in tourism affect the use of ICTs in your business? (Encouraging or discouraging)

3.2 What recent trends you see in the industry that needs attention?

3.2 What kind of collaborations you have with your trading partners?

3.3 How you describe the benefits you gain from collaborating with your trading partners?

3.4 What type of support you received from the government

3.4 What initiatives the government has taken to the development of the tourism industry as you aware

### **Section 4- Business value of ICT**

4.1 In what ways do you think ICT add value to your business? Why if not?

4.2 Do you have any future plans for employing ICTs , Please describe ( Like developing a website , expand current website with a payment gateway, register with online travel agents , providing more Internet facilities to customers etc.)

4.3 Anything else that you would like to add?

## **Appendix B: Participant Information Sheet**

### **Participant Information Sheet**

**Research Project Title: Business value of ICTs for Small Tourism Enterprises**

**Researcher: U.G.D. Lakshila Dilhani Abeysekara, School of Information Management,  
Victoria University of Wellington**

As part of the completion of my PhD, this study is designed to explore how Information and Communication Technologies (ICTs) contribute to the business value of small tourism enterprises. This research will provide useful information for small tourism organizations that use ICTs or, are considering the use of ICTs in their business processes. This study is intended to provide recommendations supported by sound research about how ICTs can be utilised effectively in the business processes of small tourism organizations.

Victoria University requires, and has granted, approval from the School's Human Ethics Committee to conduct this research.

This study will involve a number of small enterprises from different types of accommodation services with less than 20 employees. Organizations should be registered at Sri Lanka Tourism Development Authority and should use ICTs in at least one business process (for reservation, accounting, marketing etc.). Your organization was selected because it fits the above profile.

Interviewing is the data gathering method for this research. I am inviting owners or managers of small tourism enterprises and key employees related to ICT functions of their organizations to participate in this research. Participants will be asked to take part in a one hour interview. Permission will be asked to record the interview, and a transcript of the interview will be sent to participants to review the accuracy. Participants will be given the choice of language to be used in the interview. If the participant selects the Tamil language, an interpreter will be used at the interview. The interpreter will sign an agreement of confidentiality of information.

Participation is voluntary, and you or your organization will not be identified personally in any written report produced as a result of this research, including possible publication in academic conferences and journals.

All material collected will be kept confidential, and will be viewed only by myself and my supervisors as detailed below. The thesis will be submitted to the School of Information Management, and subsequently deposited in the University Library.

Should any participant wish to withdraw from the project, they may do so within two weeks after receiving the interview transcript and the data collected up to that point will be destroyed. All data collected from participants will be destroyed within 5 years after the completion of the project.

If you have any questions or would like to receive further information about the project, please contact me at [lakshila.abeysekara@vuw.ac.nz](mailto:lakshila.abeysekara@vuw.ac.nz) or telephone +64 21 2364384 ( in Sri Lanka 0718 238390) or you may contact my supervisors Dr. Janet Toland, Senior Lecturer at [janet.toland@vuw.ac.nz](mailto:janet.toland@vuw.ac.nz) or telephone +64 4 463-6861 and Dr. Christian Schott, Senior Lecturer at [christian.schott@vuw.ac.nz](mailto:christian.schott@vuw.ac.nz) or telephone +64 4 463 5719

U.G.D. Lakshila Abeysekara

## **Appendix C: Participant Consent Form**

### **Participant Consent Form**

**Research Project Title: Business value of ICTs for Small Tourism Enterprises – The case of Sri Lanka**

**Researcher: U.G.D. Lakshila Dilhani Abeysekara, School of Information Management, Victoria University of Wellington**

I have been given and have understood an explanation of this research project. I have had an opportunity to ask questions and have them answered to my satisfaction.

I understand that I may withdraw myself (or any information I have provided) from this project, without having to give reasons, by e-mailing lakshila.abeysekara@vuw.ac.nz within two weeks after receiving the transcript of my interview.

I understand that I can use my preferred language (English, Sinhalese or Tamil) at the interview and if I choose to use the Tamil language, an interpreter will be provided for the interview.

I understand that any information I provide will be kept confidential to the researcher and their supervisor, the published results will not use my name, and that no opinions will be attributed to me in any way that will identify me or my organization

I understand that the data I provide will not be used for any other purpose or released to others.

I understand that, if this interview is audio recorded, the recording and transcripts of the interviews will be erased within 5 years after the conclusion of the project. Furthermore, I will have an opportunity to check the transcripts of the interview.

Please indicate (by ticking the boxes below) which of the following apply:

- I would like to receive a summary of the results of this research when it is completed.
- I agree to this interview being audio recorded

Signed:

Name of participant:

Date:

## **Appendix D: Final Template**

### **1. CASE BACKGROUND**

#### **1. Accommodation Category**

1. Small Hotel
2. Guest House
3. B & B Unit
4. Home stay
5. Budget accommodation

#### **2. Scale of the business**

1. Number of Full time Employees
  1. 1 to 5
  2. 5 to 10
  3. Above 10
2. Number of rooms
  1. 1 to 5
  2. 5 to 10
  3. Above 10
3. Types of rooms
  1. Standard
  2. Luxury

#### **3. General Background**

1. No of years in the business
  1. 1-5 Years
  2. 5-10 Years
  3. Above 10 years
2. Business motives
  - Lifestyle
  - Profit
3. Market Focus
  1. Domestic
  2. International
  3. Both
4. Services other than accommodation
  1. Food and Beverages
  2. Tour operating
  3. Ayurveda
  4. Airport pickup
  5. Other

#### **3. Business Performance**

1. Average occupancy rate
  1. Below 50%
  2. 50 to 80%
  3. Above 80%
2. Average duration of Stay
  1. 1 to 2 days
  2. 2 to 4 days
  3. Above 4 days

3. User reviews
  1. Positive
  2. Negative

## **2. TECHNOLOGICAL ICT RESOURCES**

### **1. ICT Devices**

1. Desktop
2. Laptop
3. Printer
4. Fax
5. Scanner
6. Multifunction device
7. Smartphone
8. Other

### **2. Software /Applications**

1. E-mails
2. Office applications
3. Accounting software
4. Inventory control systems
5. Social media
6. Other

### **2. ICT Infrastructure**

1. Fixed line phone
2. Broadband Internet
3. Wi-Fi
4. Website

## **3. HUMAN ICT RESOURCES**

## **4. COMPLEMENTARY RESOURCES**

- 1. Non ICT Physical Resources**
- 2. Non IT human resources**

## **5. ICT BUDGET**

## **6. ICTS IN BUSINESS PROCESSES**

### **1. Distribution & Sales**

1. Distribution and sales
2. Marketing & promotion
3. Booking administration

### **2. Services Delivery**

1. Customer Service
2. Complaint management
  1. Physical
  2. Online

### **3. Management**

1. General management

2. Accounting & Finance
3. Human Resources development
4. Inventory management (non-room)
5. Legal affairs

**7. INDUSTRY CHARACTERISTICS**

1. Recent Trends
3. Developments after the war

**8. GOVERNMENT SUPPORT**

1. ICT training
2. Tourism training
3. Financial support
4. Tourism promotions
5. Other

**9. COLLABORATION WITH TRADING PARTNERS**

1. OTAs
2. Online Review Sites

**10. BUSINESS VALUE OF ICT**

1. Financial benefits
  1. Reduce cost
  2. Increase revenue
  3. Increase profit
  4. Return on investment
2. Business process performance
  1. Time saving
  2. Improved coordination
4. Competitiveness
3. Business reputation
4. Customer satisfaction

**11. OWNER-MANAGERS' OPINIONS**

1. Key processes for business success
2. Possible areas for improvement
4. Future plans
5. Barriers
  1. Skilled employees
  2. Finance
  3. Infrastructure
  4. Awareness
  5. Other



## Appendix E: HEC Approval for Interviews

### SIM HUMAN ETHICS COMMITTEE Comments on Application for Human Ethics Approval

**Date:** 16 December 2013

**Principal Researcher:** Lakshila Abeysekara

**Research Project:** Business Value of ICT for Small Tourism Enterprises

**Supervisor:** Janet Toland

**Reference No:** 20552

	Accept
<b>X</b>	Accept with minor changes. (Stated below)
	Accepted with required changes. (Stated below)
	Do not accept in present form. (Changes required as below)

#### Required Changes (dealing with ethical issues only)

- If an interpreter is used for data collection purposes, they will need to sign a confidentiality agreement. Please include a copy of the agreement that will be used for interpreters.
- The Participant Information Sheet and the Consent Form should include the possibility of an interpreter being used, and that they would be signing a confidentiality agreement.
- It is not clear how many participants may not speak English. Please indicate how the Information Sheet and Consent Form will be discussed with the participants if they don't have sufficient fluency to understand the English documents. The best option is to have Sinhalese translations of these documents on hand. Another is to explain the contents and ensure they understand their rights and what they are agreeing to when signing the consent form.
- Should the information sheet and participant consent form be translated in Sinhalese too?