

**The Adoption of Internet Technologies by Independent
Hotels in the UK**

by

WAI MUN LIM

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ABSTRACT

The growth of the technology and its range of possible uses have made it a necessity for independent hoteliers to examine their use of the internet, specifically its effectiveness for marketing and distribution purposes. It is widely recognised that the independent hotel sector makes up the bulk of the hotel industry in the UK and often do not have the resources or desire to keep up with new technologies. This study scrutinizes, evaluates and establishes the factors that influence the decision to adopt a range of internet technologies for marketing and distribution within the UK independent hotel sector.

The conceptual framework of this study is underpinned by Davis's Technology Acceptance Model (1989) and Rogers' Diffusion of Innovations model (1995). The study's findings have confirmed, challenged and extended these two theories. Critically, it has established that the ease-of-use of a technology and its affordability do not affect hoteliers' deployment decisions, when numerous studies have suggested otherwise. The study also revealed that the hotel sector as a whole had not only expanded the range of internet technologies adopted, but the proportion of adopters had also increased.

A series of qualitative exploratory interviews were carried out and analysed to inform a larger quantitative survey. Survey data was collected from 408 independent hoteliers and analysed to contribute to the conceptual development of a taxonomy. In the process, hypotheses testing, regression, discriminant and cluster analysis were carried out, linking various hotel characteristics, hotelier perceptions and their propensity to deploy internet technology for marketing and distribution. The core of the developed taxonomy illustrated three groups of hoteliers: the internet application (IA) reticent; the IA realist; and the IA rationalist. This taxonomy, supported by a more precise profile and definition of independent hoteliers, facilitated the identification of managerial implications for various stakeholders. A significant implication of the study inferred that travel intermediaries' will continue to have a sustained stronghold on independent hoteliers.

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AUTHOR'S DECLARATION

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without prior agreement of the Graduate Committee.

Relevant seminars and conferences were regularly attended at which work was often presented.

Presentation and Conferences Attended:

- | | |
|------------|---|
| Dec 2005 | TTRI Conference, Nottingham University, UK

Paper: Channels of online marketing utilised by Cornwall Independent hotels: An exploratory study |
| May 2005 | 3rd International Doctoral Colloquium in Tourism & Leisure, Barcelona, Spain

Paper: The role of the internet in the marketing of independent hotels in the UK: Work in progress |
| Jan 2004 | IFITT/ ENTER 2004, Cairo, Egypt

Poster: Factors influencing the adoption of information technology in UK independent hotels |
| July 2003 | Business Information Knowledge Economy Conference, IBM, Warwick, UK

Paper: Managing e-Distribution for small and medium sized hotels: Framework for consideration |
| April 2003 | Seale Hayne Post-graduate Symposium, University of Plymouth, UK

Paper: Investigating hoteliers' e-Distribution strategies: A look at Singapore's Hoteliers' perspectives as a pilot. Research in progress |
| Jan 2003 | IFITT/ ENTER 2003, Helsinki, Finland

Paper: The influence of e-commerce on hoteliers' distribution strategies and the consequent effect on the sustainability of travel intermediaries as distributors |

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CHAPTER 1

INTRODUCTION

1.0 Introduction

This chapter introduces the background for the research by examining how and why the proliferation of the internet has had a significant impact on the hotel industry, with specific reference to the independent hotel sector. This is discussed in the context of marketing and distribution channels, investigating the antecedents that influenced whether hoteliers¹ chose to deploy or not deploy various forms of internet technologies that could be used to enhance their marketing and distribution potential. It ends with an overview of the thesis's structure and an outline to the rest of the study presented here.

1.1 Contextual background

The BDRC (Business Development Research Consultants) report showed a surge in online bookings for UK hotels in 2006 (Fearis, 2007). More notably, 89% of all business and leisure travellers were found to have booked through search engines compared to the 41% who booked via a hotel website. Not only is there a documented increase in the number of online bookings, TravelCLICK (2006) has also revealed that worldwide electronic hotel revenue increased by 14.7% in the third quarter of 2006. The growth of such online bookings and revenue has been greatly aided by the use of internet technology, as its intensive use appears to be a new solution for hoteliers to garner customers or new business, as attested by the Hotel Electronic Distribution Network Association (HEDNA, 1996).

¹ Hotelier defined as hotel keeper (Oxford Dictionary, 1997; 425)

INTRODUCTION

This spread of internet technology has been found to have made an impact that cuts across all industries and sectors. Evidently, the tourism and hospitality industry is not excluded from the onslaught of internet marketing opportunities that present themselves. However, it should be noted that the use of electronic data interchange (EDI) within the broader travel industry began as early as the 1960s, when the airline industry was already familiar with computing systems that permitted reservations to be made by travel agents and ticketing offices without remote operators. Technology developed subsequently relates to systems performing largely similar reservation functions, but advanced by airlines in the North American continent (Inkpen, 1998). It was not until the 1980s that European airlines began investing in similar reservations technology. At the same time the first Transmission Control Protocol/ Internet Protocol (TCP/ IP) and Wide Area Networks (WAN) were made operational in the United States. However, it was only in the early 1990s that the internet was given a public face, by means of the World Wide Web (essentially a global, read and write information space) (Berners-Lee, 1999). While the functions of the internet appear to be straightforward, there are many electronic communication technologies in use today that require the use of the internet as a gateway in order to function. For example, electronic mail, online payment facilities, web based ordering and the most often used, electronic data interchange (EDI) (Chaffey, 2004).

While the airline industry has long experienced the global reach of its reservation systems that are real-time and synchronous (an example of which is the Global Distribution Systems (GDS) currently dominated by Amadeus, Galileo, Sabre and Worldspan), the hotel industry appears to have only arrived in the internet technology frame fairly recently. Before the era of the internet, hotels anywhere in the world were able to put their rooms up for sale on the GDS, very much like an airline seat. However, the GDS as a distribution

technology remained an unaffordable mode of doing business for many hotels (Davis, 2007) and particularly so for the smaller independents.

Nevertheless, hoteliers could not afford to ignore the colossal rise in the consumer room nights that are bought via the internet (Table 1.1), which is often on sites that are powered by the GDS or the ADS (Alternate Distribution Systems- powered by online third party intermediaries). The table reveals that travel agent bookings represented almost 80% of total room nights sold electronically in 2006, while the biggest change is in the electronic room nights sold via consumer online transactions.

Table 1.1: Third Quarter of 2006: Internet bookings by mode

(adapted from TravelCLICK, 2006)

	Room Nights	Change from Q3 of 2005
Travel Agent component	26,051,207	+4.9%
Consumer Internet component	6,478,183	+6.4%
TOTAL GDS and Pegasus Hotel e-commerce	32,529,390	+5.2%

Data from the same report also revealed that worldwide electronic revenue increased by almost 15% over the year which was almost on par with the increase in the average daily rate (ADR) of 9% (TravelCLICK, 2006)

With the ostensibly strong presence of online intermediaries receiving room bookings, hoteliers are not simply relying on this single mode of reservation source, as they appear to be looking for other internet technology tools to aid their expansion of distribution channels. The extent of technology use and the impact of technology felt by the hoteliers were found to be dependent on the specific sector of the hotel industry, particularly

whether the hotel is branded or independent (Slade & Van Akkeren, 2002). Similarly, Julien and Raymond (1994) also discovered that independent organisations tend to be strategically reactive, and adopt technology less easily compared to affiliated organisations which are more likely to be strategically proactive and future oriented in adopting technology.

However, very little appears to have been written specifically about the independent hotel sector, particularly in relation to the operations and strategies they implement to uphold and support their business functions. More importantly, fewer studies have attempted to define independent hotels and describe their characteristics which have implications for the operations and strategies they adopt. There have been some estimates on the proportion of independent hotels in the UK, and it has been assessed that the number of independent hotels are certainly declining (Anon, 2001). Although there are no official figures, the percentage of independent hotels in the early 1990s was at a high of 90% of the UK hotel industry (Main, 1995; Stewart, 1996), while more recent articles have placed the figure at between 70-80% (BHA, 2004). To place these figures into context, a Mintel report stated that there were an estimated 47,000 hotels in the UK in 2005 (Frewin, 2006). Although these findings have indicated that the overall number of UK hotels have not declined, the drop in the number of independent hotels could be a result of mergers and acquisitions from hotel chains and groups (TravelCLICK, 2002).

Despite this, the independent hotel sector makes up the bulk of the hotel industry, where 70% of hotels outside the U.S. are independents (Hausman, 2007), and is evidently a significant sector in its own right. From the pieces of information obtained from literature and past studies found for this study, independent hotels are more often than not, found to be family controlled businesses which target regional markets and serve local communities

(Stewart, 1996). It has also been suggested in various studies that little has been done to examine the importance of the family or individual hospitality business in shaping economic development (Getz, Carlsen & Morrison, 2004). Since independent hotels are likely to be family run businesses, an investigation of other factors, such as the characteristics of both the hotel and hotelier, could potentially shed light on whether being a family business made a difference to a hoteliers' propensity to deploy internet technology. The next section will discuss how these investigations could be conducted in relation to existing theories.

1.2 Conceptual foundations

There are four fundamental reasons why a study is performed. According to Field and Hole (2006), they are to test a theory, to replicate a theory, to extend findings of previous research or to resolve some anomaly that has arisen. This research undertakes to do each of the above to varying degrees. Specifically, this section will explore findings of previous research and literature, which may help to elucidate the theoretical background and pertinent topics surrounding internet technology, marketing and distribution, and the independent hoteliers' propensity to use and adopt internet technology.

The first of the theories to be explored is Davis's (1989) Technology Acceptance Model (TAM), a model that expounds the importance of a core range of variables that were found to influence technology adoption decisions (Venkatesh & Davis, 1996). These variables include perceived usefulness, perceived ease of use, attitude towards use and other external variables. To understand the TAM, it is useful to note that it was adapted from the Fishbein and Ajzen's (1975), Theory of Reasoned Action (TRA), followed by Ajzen's (1985), Theory of Planned Behaviour (TPB). Studies have shown that the TRA is effective in explaining marketing environments, where the model has accurately predicted utility,

'even when utilized to investigate situations and actions that do not fall within the boundary conditions originally specified for the model' (Sheppard, Hartwick & Warshaw, 1988: 27). Furthering the study of the TRA, the TPB was developed, this time it included the perceived difficulty to perform the behaviour of interest (Van Hooft, Bhom, Taris, & Van Der Flier, 2006). The new emphasis of TPB is the belief about the presence of factors that may further or hinder the behaviour of interest (Bamberg, Ajzen & Schmidt, 2003). However, the theory was widely disputed, because, as observed by Sheppard et. al. (1988), there could be actions undertaken that were a result of factors that are beyond an individual's control, therefore falling outside the conditions of the model. Dishaw & Strong (1999) have also found in their study that behavioural control has limited importance in relation to technology usage behaviour.

Hence, the TAM is an improved adaptation from both the TRA and the TPB but, unlike the earlier versions, it excludes both the subjective norm and behavioural constructs in the model. Instead, the TAM examines the attitudinal aspects of predicting and understanding human behaviour, including 'determinants of behaviour and relations among beliefs, attitudes, subjective norms, intentions, and behaviour' (Igarria, Parasuraman & Baroudi, 1996: 227). These behavioural dimensions play important roles in influencing an individual's decision to use technology (Poku & Vlosky, 2004). However, a potential drawback of TAM is its lack of focus on the spread or diffusion of technological adoption, hindering a comprehensive understanding of technology acceptance at various stages of technology deployment. Rogers' (1995) diffusion of innovation paradigm helps to address this problem.

The concept of diffusion is explained as the process where new technology (or a new way of performing a task) is deployed through a variety of means over time among members of

a social system (Rogers, 1995). Rogers's diffusion of innovations construct bears some resemblance to the TAM as it also recognises within the innovation-decision process model, that decision-makers develop an attitude towards an innovation prior to making a decision to adopt or to reject it. A function of Rogers' diffusion of innovations construct includes categorising adopters on the basis of innovation. This begins with adopters who are the least receptive to adopting an innovation, being classified as laggards; followed by early majority, early adopters, and finally innovators, who are the first to adopt a new technology. Each of the five adopter categories were classed as ideal types, defined by a range of dominant characteristics and values including social factors, personal and organisational characteristics and socioeconomic status (Rogers, 1995).

An application of the main principles found within the TAM and the 'adopter categorizations based on innovativeness' archetype provide the basis for an understanding of how the perceptions of hoteliers could help to explain the range of internet technologies they have adopted. The next section identifies the gaps in literature and past studies in relation to how hoteliers react to existing internet technology for marketing and distribution purposes, and to investigate the core antecedents explaining their choice of technology.

1.3 Implication of study

1.3.1 Establishing the independent hoteliers' antecedents in the deployment of internet technology for marketing and distribution

In the main, there are three key areas that are worthy of examination. The first is to establish what the features of an independent hotel are in the context of the UK hotel industry. This will provide the research with a lucid stance on how the functions of marketing and distribution in the independent hotels sector (the second key area) differs

from the larger, branded, chain hotels. Few studies have attempted to define independent hotels, let alone examine their operational strategies, and identify the range of internet technology deployed. This study therefore defines UK independent hotels, examine the perceptions of the hoteliers running them and the range of internet technologies deployed (the third key area).

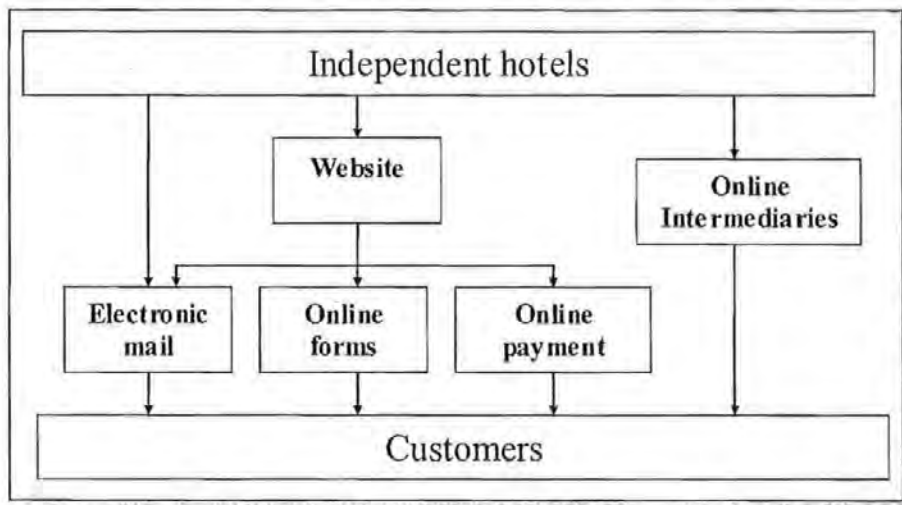
This research addresses these 'gaps' by first identifying the characteristics of independent hotels based on past literature, studies and hospitality trade articles. It will then move on to develop the definition of independent hotels by adopting Brotherthon & Wood's (2001) two broad approaches of defining hospitality (the two approaches being the semantic approach, which focuses on definitions by informed commentators; and the evidential approach, which relies on definitions from secondary literature).

Following the development of a working definition, the structure of independent hotels in the UK is examined. A majority of studies within semantic investigations of independent hotels seem to originate from the United States and few studies have explored this sector in the UK. Nevertheless, regardless of geographical boundaries, independent hotels, particularly those in Europe were discovered to be experiencing a large challenge in relation to technological upgrading, so as to meet changing consumer needs and improve communications with customers (Cass, 2005). The discussion of such challenges includes hoteliers' perceptions that influence technology adoption, new emerging markets, and the apparent rise in affiliations amongst independent hotels.

The subject of affiliation is particularly pertinent, as independent hotels seem eager to embrace new strategic alliances to improve their distribution programmes across geographic and price segments (Swig, 1998). This challenge of affiliation will thence lead

to a closer examination of the challenges in marketing and distribution within the hotel industry. While the growing intensity of marketing in the hotel industry has been observed and heavily documented by academics and industrial analysts, the investigation therefore includes both offline and online channels, with an emphasis on the internet technological elements of online marketing, (Carroll & Sigauw, 2003; O'Connor & Frew, 2004). An example of how internet technology can be deployed by independent hotels is found in Figure 1.1 below.

Figure 1.1: Illustration of online channels deployed by independent hoteliers



1.3.2 Categorisation of hoteliers based on the intensity of internet technologies deployed

Research to determine the various core antecedents and hotel operational characteristics influencing hoteliers decision to deploy or not deploy internet technology would both examine sections of the independent hotel sector that are previously unexplored, and enable a taxonomy of independent hoteliers to be developed, based on their propensity to deploy internet technology. Each category (taxonomy) of independent hoteliers identified,

describes their characteristics and attitudinal perceptions in relation to the range of internet technology deployment.

In the first instance, while endogenous and exogenous factors are known to be pertinent in influencing hoteliers decision to adopt or not adopt technologies, no previous studies have explored in detail the relevance of factors that influence hoteliers to deploy, or otherwise. With the use of suitable statistical analyses, this study seeks to identify the importance of each examined factor to explain the hoteliers' phases of technology deployment.

The factors and antecedents that are recognised as influencing hoteliers' propensity to deploy technology are used to determine if they can explain the changes in business performance measures. While past studies and literature have presented various business performance measures commonly used within the hotel industry (Christian, 2000; Mistilis, Agnes & Presbury, 2004), it has been acknowledged that it is a complex task to determine an absolute performance measure value, based on such an unquantifiable variable as internet technology (O'Brien, 1997). This study therefore sets out to identify relevant business performance measures for independent hotels, and justify their suitability by conducting a set of statistical analyses against the earlier factors and antecedents found.

Finally, the evaluation of past studies and literature, backed by appropriate statistical analysis of the data collected is used to classify independent hoteliers based on their intensity of internet technology use. In addition, this classification aids in the development of a taxonomy, which ultimately affirms the endogenous and exogenous antecedents a hotelier possesses, and the form of operational procedures practiced, by determining the range of internet technology deployed or not deployed by a hotelier.

1.3.3 Implications for independent hoteliers and relevant stakeholders

In addition to filling the academic gaps described, this section identifies the implications of this study for both independent hotels and relevant tourism bodies.

In 2002, the Department for Culture, Media and Sport launched a 'Web Wise' campaign for smaller tourism businesses including hotels. By showing how small tourism businesses can benefit from marketing on the internet in simple and cost-effective ways through successful examples of tourism businesses, the campaign encouraged tourism operators to 'Go for IT' to realise net benefits (DCMS, 2004). Instead of a generic campaign for the entire tourism industry, answers established from the study can specifically help to pinpoint the factors that influence a hotelier's decision to adopt a range of internet technology for marketing. More importantly, the study defines what an independent hotel is, thus enabling the findings of the research to develop a framework that is exclusively applicable to the sector rather than the hotel industry as a whole.

Furthermore, the 2002 English Tourism Council (ETC) report on E-tourism in England, acknowledged that distribution opportunities via the internet was a major e-business activity that required streamlining particularly within the hotel sector. It also revealed figures of adoption of the internet by serviced hotels and B&Bs shown in Table 1.2.

Table 1.2: Adoption of the Internet by Service (Hotels & B&B's)

Source: English Tourism Council (2002)

Sector	% with email (Feb 2001)	% with email (Jan 2002)	% with websites (Feb 2001)	% with websites (Jan 2002)	% with online booking (Jan 2002)
Serviced (Hotels & B&Bs) Total: 16,631	45%	58%	33%	45%	2%

This study examines how the adoption of the internet has grown, and identifies which other types of internet applications have been adopted by hotels in the UK. More importantly the study also seeks to discover whether the cost for businesses in adopting internet application is a barrier to successful adoption as claimed in the 2002 report.

Finally, this study serves to update and further inform the EnglandNet project (a national distribution system for marketing Britain's tourism providers) of current internet adoption trends amongst independent hoteliers so as to facilitate data exchange within the EnglandNet infrastructure. Capturing the dynamics of the independent hotel sector along with the dimensions which influence hoteliers' to adopt the internet, the study could potentially support EnglandNet in its efforts to effectively promote e-business awareness, skills and best practice amongst tourism providers and to encourage participation in its network assessing inventories, reservations and payment facilities (ETC, 2002).

1.4 Aims and objectives

The aims of the study are therefore:

- A to establish, in the context of the independent hotel sector, the various antecedents that influence the deployment of internet technologies for marketing and distribution purposes;
- B to construct a taxonomy of independent hotels based on the range of internet technologies deployed, the hoteliers' characteristics and perceptions of technology use.

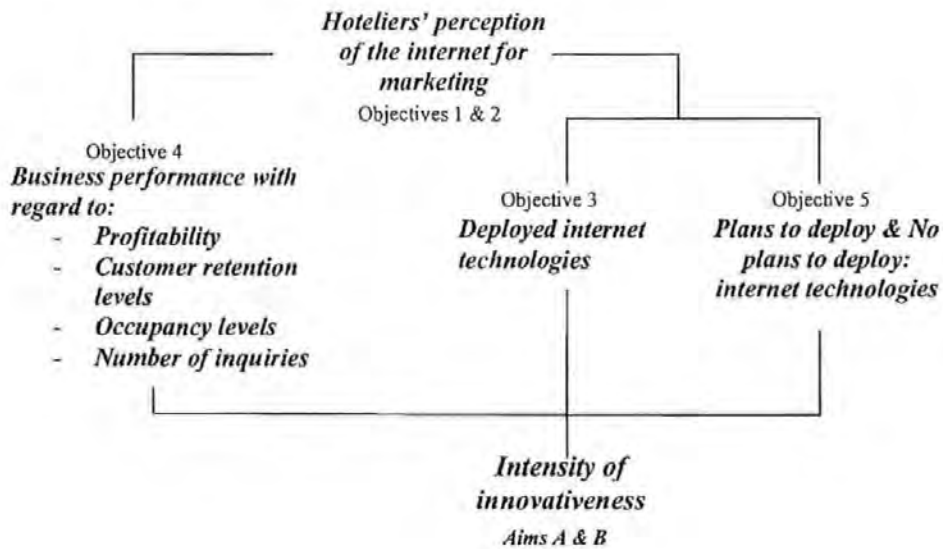
These aims are based on fulfilling the following objectives:

1. to scrutinize and explore theories that have been used to explain adoption and acceptance behaviour of hoteliers;

2. to analyse the general perceptions and impression of internet technologies for marketing and distribution by independent hoteliers;
3. to evaluate the factors that influence which internet technologies hoteliers choose to adopt;
4. to examine the range of internet technology adoption that influences the hotels' business performance measures;
5. to analyse the importance of each factor for the deployment of internet technologies.

Figure 1.2 summarises how the focal points of the study are aligned with the aims and objectives listed above.

Figure 1.2: Focal points of the study



1.5 Structure of thesis

Chapter 1 presented here, serves as an introduction to the research motive while providing some indication of how it contributes to academia, by providing a snapshot of the research's findings.

Chapter 2 is the first of two major parts of the literature review; describing independent hotels in the context of the research and providing an overview of relevant concepts corresponding to the research problem. There are three main sections to the chapter; it first describes the structure of the hotel industry, followed by an exploration of the features and key factors that define an independent hotel, before concluding with a review of the UK independent hotel sector.

Chapter 3 examines the marketing and distribution circumstance in which the research context is formed. It examines both online and offline channels, while at the same time seeking to assess the role of decision makers who ultimately make the final decision of technology adoption or non-adoption. This chapter will also critically evaluate the understanding of internet technology use for marketing and distribution purposes.

Chapter 4 assesses the operational profile of the hotel, the behavioural dimensions of the hotelier, and how these have an effect on the research context that was framed. Essentially, independent hotelier characteristics and perceptions are identified and investigated, enabling the systematic distinction of endogenous and exogenous antecedents. The chapter also evaluates other various antecedents that have influenced decision makers in the range of deployed internet technology in other sectors.

Chapter 5 draws upon the theoretical models of Davis's (1989) Technology Acceptance Model and Rogers's (1995) Diffusions of Innovations, which form the basis of the study's conceptual framework. The contexts of the research from the previous three chapters are synthesised, providing an in-depth examination of hoteliers' perception and the profile of hotels they run, in relation to the range of internet technology deployed.

Chapter 6 describes the methodology used and the approaches adopted. The chapter discusses the rationale of both a qualitative and quantitative investigation, including an examination of research philosophy and design. An account of how the interviews and main survey were strategized, to how they were designed and administered is presented in this chapter.

Chapter 7 presents the first set of qualitative findings. An exploratory study consisting of in-depth interviews with a sample of independent hoteliers, identified antecedents that were found to be relevant in the independent hotel sector. The chapter also explains how data from the interviews were transcribed and analysed, facilitating the development of hoteliers' profiles and themes that emerged from the exploratory interviews (as recommended by Seidman, 1991).

Chapter 8 describes the main survey data. The chapter explains how non-response bias was conducted and provides a general overview of hoteliers who responded to the survey. With the massive amount of data collected, extensive cross-tabulations are carried out, so that the most relevant data and findings are presented and evaluated here.

Chapter 9 identifies and analyses the range of influences affecting the adoption of internet technology. Data reduction of variables is conducted (factor analysis) so that a smaller

number of valid and meaningful factors are obtained to enable further analysis. The chapter then discusses the multiple regression analysis which tested the four hypotheses (derived from Chapter 5) by measuring the relationship between the new found factors and each of the perceived changes in business performance measures.

Chapter 10 describes the discriminant analysis conducted to obtain the specific factors which influence the internet technology deployment decision of hoteliers. This analysis enables the hypotheses testing of perception variables that discriminate between those who have deployed, plan to deploy or are not deployed.

Chapter 11 explains and describes the rationale of a cluster analysis. This chapter investigates if internet technologies currently deployed by hoteliers could be similarly clustered. Critically, this chapter investigates if the study can be compared with Rogers' (1995) adopter categorization model and if it is applicable to the understanding of the UK independent hotel sector.

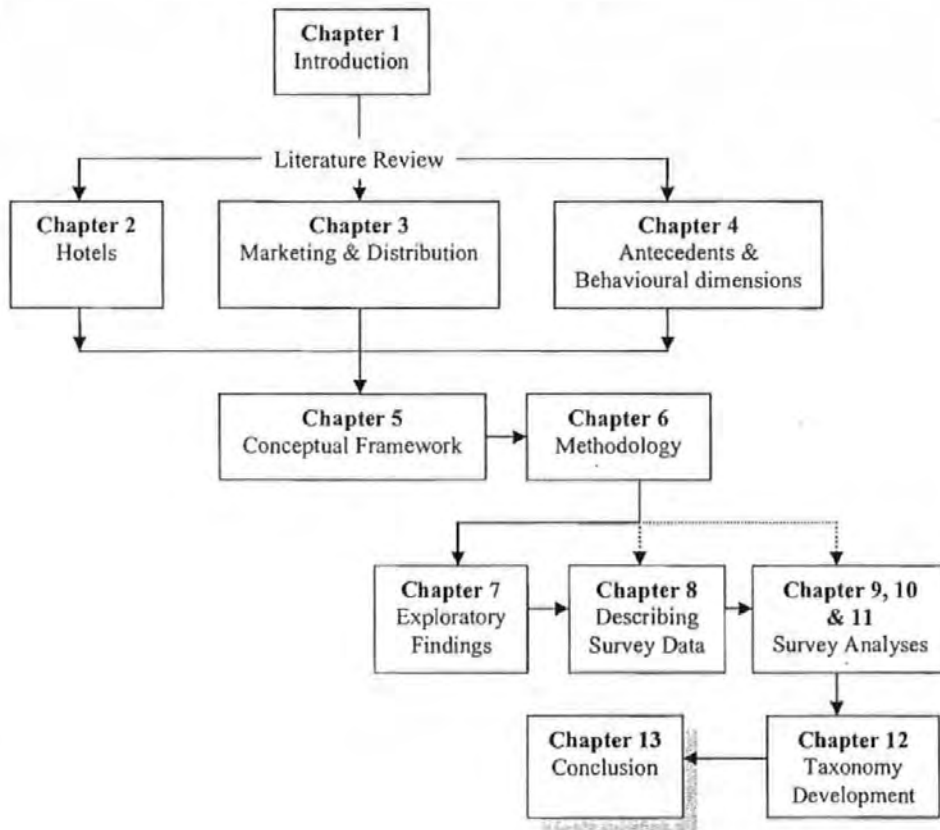
Chapter 12 brings together the findings of this research to build a coherent archetype that can be put into use, not only in theory but also in practice. This chapter essentially describes the process in which the study's conceptual model is developed and how the combined analyses amalgamate to form a taxonomy which is presented in the final chapter.

Chapter 13, the concluding chapter presents the taxonomy with a discussion of findings and the uncovering of significant factors influencing technology adoption. The chapter explains how the multitude of tests, suggesting non-affiliations and correlations between variables (from the previous chapters) led to the conceptual development of a taxonomy. The study's theoretical contributions and implications for the stakeholders of independent

hotels are then discussed, followed by an acknowledgement of the research's limitations, and suggested agendas for future research.

A diagrammatic structure of the thesis is presented below.

Figure 1.3 Structure of thesis



CHAPTER 2**HOTELS****2.0 Introduction**

This chapter consists of three main sections that chronicle the independent hotel sector's use of internet technology for marketing and distribution. The first section describes the structure of the hotel industry, specifically including a broad examination of the current UK hotel classification system. Following this is an evaluation of how the location of a hotel has been found to influence the extent of success in hotel operations and critically its effect on technology adoption. A general overview of hotel size follows with due regard to The Companies Act (1985) and the European Commission's definition of small and medium sized organisations. This leads to a discussion of the adoption of technology and the relationship with company size. To draw the section to a close, an investigation of the key business performance measures ordinarily used by the hotel industry is carried out.

The second section of this chapter explores the features and decisive factors that define an independent hotel. This includes an identification of how independent hotels are dissimilar from other hotels in many respects and an examination of the exogenous environment they operate in. Finally, a review of the UK independent hotel sector is undertaken, before a summary outlining the continued challenges faced by independent hoteliers is presented.

2.1 Hotels Today

Hotels today, regardless of their size, are faced with various threats, from new competition to a volatile world economy and social unrest. As more new competition enters the small and medium-sized hotel sector, the competition for a slice of the domestic market becomes ever more intense, gradually driving more hoteliers to look farther afield for international and regional guests. Reaching out to these tourists mean that the hotelier's marketing

efforts should be effectively expanded to include middlemen with a global clientele. The challenges that lie ahead for hoteliers are to reach out to these new markets and strategise them into realisable opportunities. More often than not, major hotel chains and properties though faced with these challenges are more equipped to ride these turbulent times, not necessarily with ease but with approaches that involve the consideration of organization hierarchical levels requiring more complex forms of strategic manoeuvres and management devices. Small and medium-sized independent hotels do not normally have numerous stakeholders to report to. They are all the more susceptible to mounting threats, requiring them to frequently make swift changes and adopt new practices so as to remain 'in the game'.

One strategy that has been repeatedly underscored by academics and the industry alike, and often thought to level the playing field, is for hoteliers to rethink distribution. This chapter will therefore aim to provide some background information about the hotel industry, what an independent hotelier is, how the UK independent hotel sector is performing, the relevance of independent hotels amongst the bigger players of the industry in the UK and finally the challenges that lie in store for the hotel industry.

2.1.1 Hotel classifications

This section will illuminate the importance of understanding and using hotel classification as a tool to examine the relationships between star ratings, hotel performance and adoption categories. An internationally recognised hotel ratings system does not exist because hotel ratings in different countries are accorded by different institutions varying from governments and independent rating agencies to hotel operators themselves (Kozak & Rimmington, 1998). The World Tourism Organization (WTO) has sought to develop a universally accepted hotel rating system since 1962, but according to Ingram (1996), there

are currently well over 100 classification systems in operation. The UK alone has three major bodies which oversee *bona fide* hotel grading schemes. These are the Automobile Association (AA), the RAC (Royal Automobile Club) and VisitBritain (a merger of the English Tourism Council and the British Tourist Authority).

The chief motive for the implementation of grading schemes was to help the tourist and traveller find out quickly and effectively about the types of accommodation available, what level and range of facilities are offered within the establishments, and at what price. Since the early 1960s, the then British Tourist Authority (BTA) began to notice the growth and changes taking place within the hotel sector. This led in 1969 to a proposal for possible hotel registration and classification schemes being implemented (Callan, 1994). By 1970, there were only five countries in Europe that had a grading scheme in place; they were Belgium, France, Greece, Norway and Spain (Vine, 1981). It was only in 1971 that the now defunct English Tourism Board began looking at various international classification schemes covering various types of tourist accommodation, the methods of registering and classifying tourist accommodation.

The fact that the hotel industry is ever-changing, has resulted in the classification scheme expanding and changing with it, undergoing a string of developments in relation to classification and quality grading (Ingram, 1996). Crown classifications were first introduced by the Scottish Tourist Board in 1983 but were soon adopted by all the National Tourist Boards (NTB) (Hotelkeeper, 2001). New categories were added to top or match various grading schemes in the early 1990s. The NTBs added a deluxe category, while the AA had red stars and the RAC had the blue ribbon (Callan, 1994; Kozak & Rimmington,

1998). Motorway lodges qualified for the NTB's scheme when a new 'lodge' classification was introduced in 1992 (Callan, 1997).

Rating schemes fall into two main clusters. The first form of classification involves grouping together the different types of serviced accommodation differentiated by the criteria of physical facilities (Callan, 1994). The second form of classification is operated in the form of star rating schemes for hotels, by private organisations like the RAC and the AA in the UK (Ingram, 1996). This form of grading indicates that a wider scope of criteria are used to assess quality and involves a more distinct and individual assessment of the quality found within facilities and services indicated in the classification schemes (Callan & Lefebvre, 1997; Kozak & Rimmington, 1998). These grading schemes assess mainly tangible elements of the service mix and in the case of star ratings, the scheme examines the intangible elements of service as well (Kozak and Rimmington, 1998).

Due to the significant growth and development of grading schemes and hotel guides, there seems to be a need for more reliable information to support and aid consumer choice and expectations. The Quality Review Group (QRG- the Britain-wide Quality Review created by the three NTBs chairs) reached an agreement to introduce a system of common standards for rating UK accommodation in 2006 (Hotelkeeper, 2004). Inspections using the new system began in January 2006 and the new ratings will be phased in by January 2008 (Hotelkeeper, 2005). The review group includes the five UK accreditation bodies comprising of the AA, RAC, VisitBritain, Visit Scotland and Wales Tourist Board. This will be the first time since the grading systems were introduced in the 1970s that a single method of assessing and rating serviced accommodation has been agreed by all of the UK's main grading bodies.

VisitBritain, the AA and the RAC have created one overall rating scheme for serviced accommodation using stars to represent hotels and diamonds to represent guest accommodation (VisitBristol, 2005). The new system divides accommodation effectively into multiple categories including hotels, guest houses, budget and travel accommodation (Hotelkeeper, 2005). This followed the agreement-in-principle by these organisations on common standards for star ratings in Britain and was endorsed by regional development agencies, tourist boards, government bodies and industry associations. It is also important to note that while VisitScotland, Wales Tourist Board, Jersey Tourism, Guernsey Tourism, Isle of Man and Northern Ireland will continue to operate their own grading schemes, VisitBritain, AA and RAC grading will apply to all assessments taken throughout England. Service accommodation is graded by stars, with higher star ratings symbolising a higher level of service, range of facilities and quality of guest care (VisitBristol, 2005; VisitBritain, 2006).

It can therefore be said without doubt that the most widely used and significant hotel grading institutions are the AA, the RAC, (both being privately run commercial organisations) and VisitBritain- a national tourism board. At present, nearly half of all accommodation operators in England participate in either the VisitBritain, RAC or AA quality assessment schemes, and a majority of local authorities have adopted a policy of promoting quality-assessed hotels (VisitBritain, 2005). It is also worth noting that while the AA produces a publicly available UK hotel guide annually, the rest do not (at the time of survey planning) although the RAC now produces a collective hotel and bed and breakfasts guide while VisitBritain allows the public to search for hotels online.

Research has shown that hotel star ratings have a significant effect on the uses of electronic mail (Wei, Ruys, van Hooft & Combrink, 2005), although studies have discovered that

while almost all hotels use electronic mail, only the four or five star hotels that have the 'critical mass' of users who enable the electronic mail systems to be used effectively and continually (Komsky, 1991). Pechlaner, Rienzner, Matzler & Osti (2002) also found significant differences in the perception of internet use between four and three star hotels, with the former having a more positive attitude towards the internet, using it more frequently and more effectively. These findings were supported by Siguaw, Enz & Namasivayam (2000), where it was discovered that luxury hotels were more likely to implement new technologies than budget or economy hotels. Crucially, star ratings were also proven to have a stronger influence on electronic response behaviour, where it was found that the higher the star rating, the higher the possibility of obtaining online information (Matzler, Pechlaner, Abfalter & Wolf, 2005).

2.1.2 Hotel location

Past research has often suggested that geographic differences influence the intensity of technology adoption (Rees, Briggs and Oakey, 1984). The hotel's location is a particular characteristic that has often been noted in literature when analysing operational aspects. Marvel (2001) suggested that location is probably more important than any other factor when measuring the success of a hotel. He supported this statement with findings from an Arthur Andersen study of hotels in Germany where, for example, hotels in large cities and near airports have a higher average occupancy compared to those in secondary cities or resort and regional locations.

The lack of economies of scale and scope in smaller hotels are often pronounced as the deficiencies are translated to suggest poorer profitability and turnover. Furthermore, Glancey & King (1997) insinuated that the poorer performance experienced by smaller hotels could be attributed to their peripheral location. This was reinstated by Barros &

Mascarenhas (2005) who claimed that the challenges to successful business development are accentuated when the small hotels' characteristics are combined with a peripheral location (Morrison, 1998) and this fact was found to apply in their Portuguese hotel study. Furthermore, in Matzler et. al.'s 2005 study of Austrian hotels, it was revealed that hotels located in regions that extensively promoted tourism are more inclined to adopt new technologies while hotels in regions with a lesser tourism focus perceive new technology as being less important. The study concluded that urban hotels use new technologies more effectively than rural hotels.

On a more specific level, Wei et. al's (2001) study on internet use by the global hotel industry revealed that the geographical location of the hotel had varied effects on the use of the electronic mail. However, there were no significant differences geographically in relation to communicating with customers. Swig (1998) concludes rather fittingly that independent hotels are able to capitalize on their often 'unique locations and associated amenities to identify with their targeted demand generators'. Interestingly, Scaglione, Schegg and Murphy's (2004) study of internet adoption by Swiss hotels discovered that geographic location related significantly to technology adoption, where hotels in the city were found to be quicker in their adoption of new internet technology (such as a domain name).

2.1.3 Hotel size

According to Kimberly (1976) the size of an organisation develops over a period of time and signifies the social complexity that exists within it. A large company has always been time and again proven to be more capital intensive as it is able to efficiently assign resources (financial and human), hence improving productivity (Idson & Oi, 1999). Similar statements are so often made in literatures that Song and Zahedi (2006: 9) concluded, 'size could be considered a proxy for the firm's organizational resources and

capacities...operational scope, and extent of inertia'. Kagan, Lau & Nusgart (1990) confirmed in their survey of small businesses that company size was indeed indirectly related to the software sophistication index. The implementation of an internet-enabled distribution strategy was found to be dependent on the size of the company in Ranchhod and Gurau's study (1999) of 500 internet commercial sites. However, will size matter when deciding on an internet enabled distribution strategy for smaller organisations such as an independent hotel? Are the majority of hotels both small medium sized and independent? How do independent hotels as a sector capitalize on its size combined with their other unique features to succeed?

One of the many characteristics of a UK independent hotel has been established as typically a small and medium sized enterprise, as highlighted in our introduction. Although there has been a growing awareness of the role of small medium sized enterprises in recent years, resulting in a number of studies as to how governments could help in their creation and management (Marvel, 2001), current literature is still surprisingly unhelpful about the role of small and medium sized tourism businesses (Shaw & Williams, 1994; Dahles, 1999). The importance of small and medium sized businesses is well known in the UK with the continuing growth and development of hospitality enterprises joining thousands of other small businesses that make up the back-bone of the industry (Smith, Mitra & Narasimhan, 1998). However, there is no single consensus on what constitutes a small or medium sized enterprise although there is a plethora of attempts at defining and classifying small and medium sized enterprises from both industry and academics.

Often, the label of small or medium enterprise is attached with quantitative definitions (Anon, 2002a) relying on employee numbers, sales turnover and profit. For instance,

Dahles (1999) observes that depending on countries, the definition of a small enterprise could range from 6 to 500 employees. More specifically, the European Commission adopted a single definition for SMEs that applies across community programs, and proposals as of December 1997 also encouraging Member States and the European Investment Bank to adopt the same definition. The definition adopted by the Commission from 1 January 2005, is as follows: (adapted from SBS, 2005)

Table 2.1: Defining micro, small and medium sized enterprises

(adapted from SMS, 2005)

CRITERION	MICRO	SMALL	MEDIUM
Max. number of employees	9	49	249
Max. annual turnover	2 million euros	10 million euros	50 million euros
Max. annual balance sheet	2 million euros	2 million euros	43 million euros

Reports by the DTI (2004) indicate only statistics based on small, medium and large enterprises, furthermore hotels are combined together with restaurants to form an industry sector estimated to be numbered at 134,035. The DTI reported that at the start of 2003, 43% of the hotels and restaurants sector in the UK employs 49 or less employees while 16.7% of the sector has no employees.

More recently, qualitative definitions focused on the characteristics that distinguish small and medium-sized enterprises from larger corporations (Anon, 2002a). According to the subsidiary arm of the Department of Trade and Industry's (DTI) Small Business Service division, 'the best description of the key characteristics of a small firm remains that used by the Bolton Committee....it stated that a small firm is an independent business, managed by its owner or part-owners and having a small market share.' (DTI, 1994). The Bolton

Report (1971) proposed that a small business with an economic definition had three characteristics in common:

- one that has relatively small market share
- one that is managed by its owners or part owners in a personalised way, not by an organised managerial structure
- one that is independent, with the owners/managers having control of the activities of the business. They should only be limited by outside elements in matters of financial obligation.

However, the Bolton Committee seems to have found it appropriate to define size by the number of employees in some sectors and turnover in others. For instance, according to the committee, to fall under the definition of a small hotel (services), it must have a turnover of £50,000 or less. The Companies Act of 1985 has since stated that a company is small or medium-sized if it satisfies at least two of the following criteria:

Table 2.2: Defining small and medium sized companies according to The Companies Act 1985

Criterion	Small	Medium
Turnover not more than	£5.6 million	£22.8 million
Balance sheet total not more than	£2.8 million	£11.4 million
Employees, not more than	50	250

So can most hotels be generally labelled as SMEs? According to Medlik (1990: 143), 'whether measured by the scale of investment, turnover, number of rooms and beds, numbers employed, or by other criteria, in most countries, a large proportion of hotels are small businesses' and although 'the independently-owned hotel may be still the typical

firm in the industry...the growth of the industry has been increasingly associated with hotel groups' (ibid: 153).

While the independent hotels sector seems to be experiencing a reduction in numbers, its competitiveness with the bigger brands and chain hotels remains. Independent hotels in comparison tend to be smaller, as we have suggested earlier. One noticeable characteristic of independent hotels is that they are mostly defined as small businesses. As has been reiterated earlier, there is little or no study of independent hotels in particular; we will therefore begin by attempting to understand and examine consensus within the tourism and hospitality industry as a whole.

The European Commission's definition of an SME (small, medium sized enterprises) states that a small enterprise should have less than 10 employees and a turnover of less than 10 million Euros, while a medium sized enterprise should have between 50-249 employees with a turnover of no more than 50 million Euros (SBS, 2005). The European tourism (which includes hospitality) sector as a whole consists largely of SMEs, since over 99% of firms employ less than 250 persons as confirmed in another report by the European Commission. In the UK alone, tourism is a major component of the economy, contributing some £76 billion in annual turnover or over 4% of GDP (VisitBritain, 2005) with one in seven working in the sector. In 2001, 98% of the 123,425 hotels and restaurants were characterised as small enterprises as they employed fewer than 50 employees (DTI, 2002).

According to Davies (1999:295) there are a small number of large hotels and 'a long tail of medium and small sized hotels'. Very often, 'independence' of the operation has also been used to define a small business in the hospitality industry (Pickering et. al, in Thomas, 1998, Ball, 1996 & Ingram, 1996) and as interpreted by Marvel (2001), a large majority of hotels are not only small, owner-managed hotels but are also independent operators. In his

discussion, he claimed that 'most chain hotels under franchise or management contract are still in reality SME...as they continue to represent individually owned units' (ibid: 44), except that this argument is vague because it presupposes that all individually owned (independent) units are SMEs, which is not always the case. With these characteristics in mind, Marvel (2001) recognised that independent small hotels in general do not have the resources of their larger counterparts to ensure efficient marketing and distribution, but with the perceptive use of evolving technology to even out the imbalance, the dreaded scenario of reduced occupancy levels translating to reduced revenue can be prevented.

2.1.4 Hotel business performance measures

Having explored the key features that explain the structure of the hotel industry, this section will review the operational characteristics of hotels by means of business performance measures that have been frequently found in literature. Investigations have shown that business performance measures can vary from organisation to organisation, but within the hotel sector, a specific few seem to have stood out. These were obtained from substantial literature and industrial reviews carried out. Not in any particular order, the following four facets have been consistently highlighted in the literature examining hotels financial performance (Sargeant & Mohamad, 1999; Haktanir & Harris, 2005), customer retention levels (Imrie & Fyall, 2000; Sin, Tse, Yau, Lee Chow & Lau, 2000; Subramaniam & Gopalakrishna, 2001), the number of inquiries received (Swig, 2000) and the occupancy levels (PKF Report, 2004; Swig, 2000; Haktanir & Harris, 2005; Pine & Phillips, 2005).

The success of a hotel operation is traditionally provided by financial performance measures (Haktanir & Harris, 2005). Marvel's 2001 study of financial performance in

hotels confirms this, although the same study also emphasised that size, location and affiliation were important determinants of general levels of competitiveness and profitability. Few studies disputed these determinants, while Pine & Phillips (2005) reported that the size of hotels did have an impact on the proportion of total revenue earned. More specifically, Phillips's (1999b) investigation found that return on investment and market share were popular indicators of effectiveness and efficiency for hotels.

To understand the impact of web technology on the operating performance of hotels, we need to first recognize the various ways in which operating performance is selected and measured. The Travel & Tourism Intelligence (2004) explained that the comparability of data on a year to year basis becomes inaccurate should indicators vary, therefore in their analysis of hotel industry operating performance between the years of 1991 to 1997 covering 220 million available room nights in 24 countries worldwide, key indicators used were (i) occupancy levels, (ii) ADRs (Average Daily Rate) and (iii) revpar (revenue per available room). For unambiguous profitability indicators, the study used key ratios in the industry including, for instance, revenues, expenditure, payroll and related expenses.

There has however, been some debate about the use of revpar as an indicator of operating performance, as hoteliers have of late often commented that while many hoteliers use the revpar and its accessible data, it has its limitations and may not be an accurate or valid measure, since it focuses only on room revenue. The argument has occurred because a hotel's revenue is coming from other areas besides the 'available room', such as the conferencing market which has become a very important sector of UK hospitality (Smith, 2006). Furthermore, as suggested by Michael Wane, Senior VP of Europe's Starwood Hotels and Resorts in the same report, 'we're interested in understanding all the incremental income streams per customer, not just rooms revenue'. Many other alternatives of revpar were discussed but as noted by David Bailey, Director of Tri

Consultancy, hoteliers have long recognised that revpar is limited and represents only part of the picture but it is an important one.

Increasingly, room occupancy figures via online booking sites are also becoming one of the top concerns for hoteliers, as a question posed to the 'strategy clinic' of the *Caterer and Hotelkeeper* magazine (Smith, 2006:58) showed. Responses from the expert panel of three indicate that online 3rd party booking sites which are a 'valid part of the (marketing) mix when it comes to keeping occupancy high' have 'taken the travel world by storm', but ultimately these sites 'complement what you (a hotel that sells directly) sell yourself or through other intermediaries'.

Occupancy levels are often taken into account as a legitimate and appropriate performance measure as both industrial (PKF report, 2004; Swig, 2000; Price & Starkov, 2006) and academic (Haktanir & Harris, 2005; O'Connor, 2004) literature alike often include occupancy level as a form of 'health' measure. It does not matter that room rates and yield advances healthily, because if occupancy figures do not match up, a shadow remains cast over hoteliers (PKF Report, 2004). It was reiterated that 'average occupancy... is perceived to be important indicators of performance (Haktanir & Harris, 2005; Marvel, 2001) examination of small/ medium sized enterprises' (hotels) profitability concluded that occupancy rates of a hotel were dependent on its location and that higher occupancy rates seem to translate to better RevPar growth as well. At the other end of the spectrum, occupancy levels were used as a comparative measure amongst other hotels and also used to conduct further analysis on financial performance in Sharma & Upneja's (2005) study on factors influencing financial performance of small hotels. It is therefore beyond any doubt that, 'occupancy is the main worry in the minds of UK hoteliers' (PKFReport, 2004).

Customer retention levels, on the other hand were more often in relation to sustained customer loyalty (Imrie & Fyall, 2000). In Sin et. al.'s (2000) analysis of business performance in various organisations, customer retention was found to be of significance to the overall financial success of organisations in mainland China. A study conducted in India by Subramaniam & Gopalkrishna (2001) revealed similar findings. Customer retention as a performance measure was not the only variable tested, as revenue growth and sales growth were also measured based on established market orientation instruments.

The third facet that emerges when measuring performance is the number of inquiries received. There seems to be little academic literature on this measure, particularly within the hotel industry. The main premise of this facet stems from the level of visibility hotels achieved and its success is gauged by the number of inquiries received. Some studies have examined response behaviour to inquiries (Voss, 2000; Murphy & Tan, 2003; Matzler, 2005) but none appears to have examined increases in inquiries as a form of performance measure, particularly for the success or failure of marketing or a particular mode of advertising. Pilot findings from this study also seem to reveal that independent hoteliers are able to discern the difference in the number of inquiries received pre and post internet applications adoption.

The traditional numeric performance measures described above are adequate for creating statistical benchmarks although it has been acknowledged that they are far from perfect (Rumelt, 1991; Barney, 1991). It is therefore prudent to consider the 'type and amount of input resources (i.e. practices relating to the technical, managerial and operational capabilities) utilised in generating performance outcomes' (Barros & Mascarenhas, 2005:209) so that 'measurement of efficiency' can also be obtained (Anderson, Fok & Scott, 2000).

Interestingly, Israeli's (2002) study of hotels' numeric performance in Israel across nine different locations discovered that performance varied little across the various locations. However, the issue of location has been perceived to have differing relevance for business and leisure customers, as better located hotels are viewed as salient competitive factors when the future of hotels is considered (Imrie & Fyall, 2000).

Having evaluated the key features that define the structure of the hotel industry, what are the attributes and operational characteristic of an independent hotel? The next section seeks to describe and identify the traits of an independent hotel.

2.2 Defining an independent hotel

The difficulty of contextualising an independent hotel arises perhaps because there are varying definitions of hotels. More critically, the management of hotels often vary according to the ownership of hotels. Additionally, not all hotels in the UK are registered with a tourist board. Quest & Needham (2003) estimated that there are between 50,000 to 60,000 hotels, guest houses and bed and breakfasts in the UK. However, these figures are about 10 to 25% higher than those estimated by the annual UK occupancy survey of 47,441 serviced accommodation establishments in the UK although it does not specifically confirm the estimated number of hotels for the same year. Within the UK occupancy survey, it is suggested that 54% of its serviced accommodation are bed and breakfasts, guest houses and inns, this implies that there are approximately 20,874 hotels in the UK. The BHA (2003) provided a similar estimate of 21,234 hotels via a personal electronic mail inquiry.

Perhaps also due to the hotel industry's fragmented (Davis, 2007) and heterogeneous nature (Kotler, Bowen & Makens, 1999) as a whole, it has been even more difficult to

form a definition of an independent hotel. Adding to the complexity, there are a handful of private and public organisations within the UK travel industry which have an indirect stake on how hotels or independent hotels could be defined. These are private organisations such as the Automobile Association (AA) and the Royal Automobile Council (RAC) whose central function within the hotel industry is to assess quality standards of hotels agreed between themselves and the various local tourist boards, and thereafter to classify participating hotels in star categories. Although these organisations do not provide similar guidelines in terms of star ratings, they do provide a basis to aid in the search for a definition. However, in order to demonstrate intellectual investigation and a relevance to industrial practices, Brotherthon & Wood's (2001) two broad approaches (to defining hospitality) could be adapted in the search for a consistent definition of independent hotels.

Brotherthon & Wood (2001) two approaches were identified as firstly, the semantic approach, focusing on the various definitions by 'informed commentators' e.g. dictionary compilers or industrial writers. Secondly, the evidential approach relies on definitions obtained from secondary literature, 'theoretical and conceptual in nature...defining...within the 'real world' of evidence' (ibid:135). Independent hotels could be more accurately defined if it is explored by means of both the semantic and evidential approach. This is because, the definition of independent hotels, like the description of hospitality has plenty of semantic discussions, while its evidential approach to the definition has not been developed much (Brotherthon & Wood, 2001). An attempt will therefore be made to adopt and integrate both semantic and evidential approaches to derive at an all encompassing functional definition of an independent hotel.

The dictionary defines independent' as being 'free from outside control or influence....and/or not depending on another for livelihood or subsistence' while 'hotel' is

defined as 'an establishment providing accommodation and meals for travellers and tourists' (Oxford Dictionary, 2003: 448&425). In a nutshell, a definition of an independent hotel within the dictionary's context is 'an establishment providing accommodation and meals for travellers and tourists that is free from outside control or influence and not dependent on another for subsistence'.

Industrial practitioners or informed commentators, often from the United States, offer glimpses into what an independent hotel is, but stop short at defining it. These insights are regularly presented in contrast with large chain hotels and multi properties. For instance, Swig's (1998) commentary on 'The state of independents' concluded that the 'branded field (of hotels) has crowded and gained ground, the squeeze has been put on independent hotels', but 'independent hotels are surviving and thriving....maintaining their positioning by providing the expected basics of cleanliness, service and security, generally coupled with unique characteristics'. Reiterating these basics, John Ueberroth, CEO of IndeCorp (The Independent Hotel Corporation) emphasised that 'there is an overriding passion for individuality, authenticity and personality....the modern traveller wants to explore and experience new things, and independent hotels have the flexibility to exploit this shift in attitude' (Anon, 2004a). At the outset, these observations may seem to have provided a semantic meaning to independent hotels, but it is also evidential since it attempts to bring in 'real world evidence'. As speculated by Brotherton & Wood (2001:136), 'practitioners exhibit the tendency to take a narrow, commercial, economic and industrial perspective to defining hospitality', and it appears that this holds true in the attempt to define independent hotels too. There is, however, neither a more nor less accurate definition, whether acquired via the dictionary or from industrial practitioners, because a combination of these observations not only reflects a healthy pluralism, it also enables us to be aware of the stricture (Brotherton & Wood, 2001) placed on the criteria of defining independent hotels.

As indicated earlier, there is little academic investigation into the definition of independent hotels. While features of independent hotels vary considerably, there are a few core characteristics identified by some academicians that typify the entire independent hotels sector. They are:

1. 'the poorest performing segment of the industry, delivering trading profit per room seven times less than public limited company hotels' (Slattery, 1992:271)
2. often able to ride out the weak economy with their one-to-one guests and proprietors' relationship (Alisau, 2002)
3. increasingly enticed by the lure of 'exposure received by being part of a chain and being connected to a large central reservation system' (Walsh, 2002)
4. 'often family controlled, which serves local communities throughout the year and attracts holidaymakers during the summer months' (Stewart, 1996:187)
5. operated on three main elements; food and drink, business and holiday guests, independent of location (Stewart, 1996)
6. mostly defined as small businesses with less than 50 beds and less than 10 employees (Moutinho, 1990) operated mainly at the low, budget and medium-market levels (Imrie & Fyall, 2000)
7. the geographic target market for these properties tends to be regional, rather than national or international (Knutson, Beck & Yan, 2004)

The list continues and the characteristics highlighted above provide a synopsis of academic reflections on the independent hotels sector. While no straightforward definition could be attributed to such a vital and ostensibly buoyant hospitality sector, amalgamating both the semantic and evidential approach to defining independent hotels could identify some salient and consistent characteristics of an independent hotel. To encapsulate, independent

hotels are therefore typically, individual and personable small medium sized establishments providing accommodation and meals, whose management is free from outside control and are operationally flexible.

2.3 The UK independent hotel sector

Having evaluated the characteristics and traits of an independent hotel, this section examines the state of independent hotels in the UK. The majority of studies within the semantic investigation of independent hotels originate from the United States while very few studies (by academics or practitioners) appear keen to evaluate this sector in the UK. This phenomenon has been rather anomalous because up till as late as the early 1990s, the independent hotels sector represented approximately 90% of all hotels (Main, 1995; Stewart, 1996). Although the sector became gradually obscured when international firms began emerging and the forefront of hotel development became dominated by groups and chains (Imrie and Fyall, 2000), the independent hotel sector began shrinking but is today still the largest segment of the hotel sector in the UK representing approximately between 70-80% of all UK hotel establishments (Morrison, 1998; BHA, 2004).

It must, however be emphasised that the above figures do not testify whether the drop in percentage could be a result of independent hotels joining affiliations or representation firms (e.g. Best Western's website claimed; the brand 'offers members the unique advantage of retaining their independence while providing the benefits of a full-service, international lodging affiliation offering a global reservations system, marketing, advertising, purchasing, training and quality standards') to gain access to new distribution channels, being franchised to a brand or sold on to a chain. One reason for this ambiguity could have stemmed from a lack of common definitive understanding of independent hotels. This is an important consideration because the way in which such affiliations are

subscribed to is not unlike a membership. Independent hotels that do so remain independent, since the form of ownership and management control remain in the same hands. What becomes different when a hotel becomes affiliated is that it has simply added another marketing or sales channel to the hotel's portfolio. An independent owner can choose to join various types of affiliations and representation firms to gain access to traditional distribution channels. Doing so, would enable them to keep up with the competitive chain hotels, as evolving distribution channels are presenting an enormous challenge due to the cost and the management of technology (Cass, 2005). It can easily be misconstrued to think that every added membership to Best Western (for instance) amounts to an equivalent drop in the number of independent hotels. This misinterpretation becomes more significant when reputable consulting groups such as MKG consulting (which compiles in-depth hotel industry reports) cites Best Western along with Accor, Intercontinental, Hilton, and Marriott International etc. when reporting on the top 10 annual ranking of European Hotel Groups and brands (MKG Consulting, 2005).

While this study does not deny that the independent hotel sector is shrinking, there is little collective nationwide research to reveal any distinct trend, except that there is an indication of increased competitiveness within the independent hotels sector and the fervent expansion of international and local hotel brands, fuelled by operators eager to gain a foothold in the UK (Imrie & Fyall, 2000). MKG Consulting (2002) observed a similar phenomenon in the late 1990's when hotel groups were acquiring and merging to build their portfolios. While occupancy figures continued to increase, the number of hotel businesses operating in the UK has been in decline; this was largely due to businesses being bought out. This finding is in line with statistics which showed that the percentage increase in the number of enterprises with a turnover size band of above £250,000

increased significantly, as opposed to a steep decline in the number of enterprises with a turnover sizeband of less than £250,000. While growth opportunities for independent hotels are evident from the above research, it is inevitable that challenges often arise to go hand-in-hand with opportunities (Kouzes & Posner, 2003).

2.4 Challenges of the independent hotel sector

2.4.1 Affiliations

As Bjorn Hanson, global industry leader for PricewaterhouseCoopers reminded us, 'the world is made up of independent hotels, which means tremendous growth opportunities...it is becoming, if not impossible to survive as an independent without affiliation, then approaching impossible'. Affiliation has often been observed in both academic literature and industrial reports as a significant challenge for independent hotels. According to Marvel (2001:52), 'independent SME typically do not have the resources to ensure adequate marketing and distribution of their product internationally or even countrywide. The obvious solution to this dilemma is to outsource this activity through adopting an appropriate affiliation...' He suggested that affiliations enable independent hotels to access global distribution systems (GDS), additional electronic distribution channels, and enjoy joint promotional efforts etc. essentially, enhanced marketing tools an individual hotel would otherwise not likely be able to afford. Marvel (2001) noted a very critical fact that few other academics have pointed out: he had distinguished between two different types of affiliation (which makes defining an independent hotel even more difficult), firstly, voluntary chains and secondly, 'hard brand' franchises.

Voluntary chains require participating hotels to pay initial membership fees, yearly subscription fees and obtain commission from member hotels who acquire firm reservations via the voluntary chain. In basic terms, voluntary chains are lodging affiliations which co-ordinate marketing programs and provide purchasing power while

members retain their independence. An independent hotel owner who decides to franchise the property, on the other hand, will not only pay yearly royalty and marketing fees but are subject to the brand's model of operation which in turn allows the franchised hotel to have the rights to the name, symbols and logos of the often popular franchise name, to flags, welcome mats and a general managers' training course. The basics aside, arrangements with 'hard brand' franchises could be advantageous as they are often able to provide access to the latest marketing and distribution technology, ensuring quality standards and volume purchasing while the member independent owner maintains a high degree of control with low distribution costs.

It has also been suggested that no matter how satisfactory a stay in an individual hotel is, it is almost impossible to sustain loyalty as tourists are known to seek variety (Palmer & Mayer, 1996). With this challenge, Imrie & Fyall (2000:46) have suggested that independent hotels can join marketing consortiums 'which can act as geographically spread referral partners or be seen as a group by the customer who may choose another of the group's hotels on the next session'.

Swig (2000) reported that affiliations have matured having gained credibility with consumers, and broadened the types of services and technology to strengthen their member independent hotels further. Such wide-ranging services have not only satisfied independent hotel operators but also developed consumer confidence. It is therefore not surprising that Smith Travel Research has reported that independents are competing and performing well against the branded competition, achieving an ADR premium and equalize on REVPAR penetration.

As Swig reiterated in his 1998 report, the picture painted of the independent hotel sector is not always positive, as brands will continue to pose challenges to the independents because

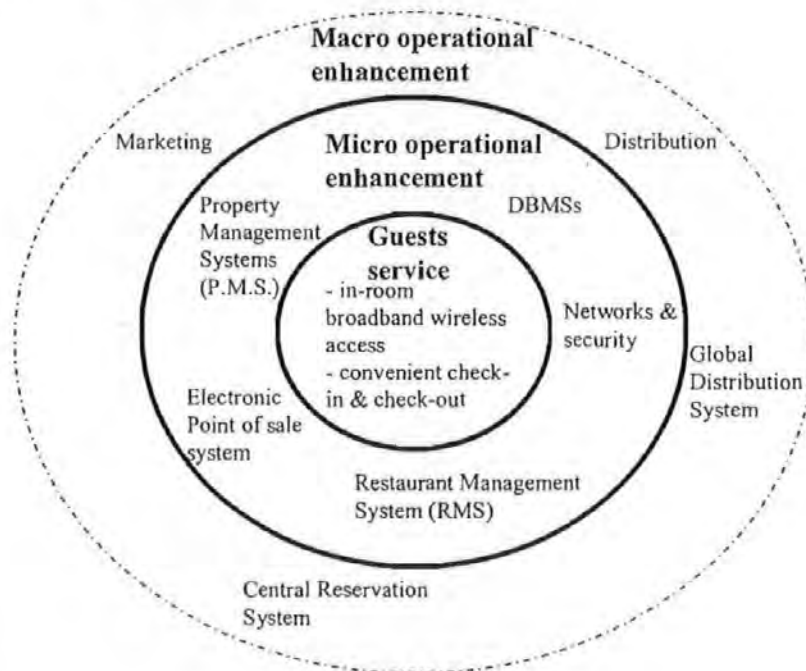
they will continue to dominate the development of leading-edge technology, forming strategic alliances with the travel industry to mass market, with the emphasis on customer incentive and loyalty programs. Brands will also improve on distribution programs to aid high volume purchasers in making contracts more efficient and having transparent group inventory across geographic and price segments. However, as reported in Davis's (2007) article, this may not remain the case, as there may be a shift from brand loyalty to channel loyalty, with the rise in third party electronic distribution channels. For the independent hotels, these challenges are linked directly to how they focus on improving their technological infrastructure and developing multi-channel strategies by using online and offline channels to their advantage.

2.4.2 Technological infrastructures

'Beginning from the late 1990s, independent hotels, particularly those in Europe, began to face the daunting costs of upgrading their technological infrastructure and facilities to accommodate changing consumer needs, as well as the methods with which they communicated with these consumers' (Cass, 2005:162) If industrial and academic literature is to be believed, the challenges faced by hoteliers almost always include the mention of technology as one of the most important trends that will impact on a hotel's 'success'. Nevertheless, discussions of technology for hotels seem to commonly fall into three realms as depicted in figure 2.1. The two darkened inner rings symbolise the internal technology applications of the hotel, where technology is applied for in-house uses. The innermost ring represents technology that enhances the hotel product for the comfort of the guests; for example, offering in-room broadband connections, convenient electronic check-in and check-out, and key card entry. The middle ring represents micro operational enhancement technology that could improve productivity of the hotel's back-of-house, i.e. improved property management systems, database management system software, networks

and security or restaurant management systems (RMS) (Nyheim, McFadden & Connolly, 2005) etc. The outermost dotted ring represents macro operational enhancement technology for enhancing the external persona of a hotel by way of technology for marketing, such as having an online web presence and having the facility to distribute rooms to third party online intermediaries, together with the use of a Global Distribution System (GDS)¹ or Central Reservation System (CRS).

Figure 2.1: Sphere of hotel technological applications



A PriceWaterHouse billboard at a Newark airport in 1998 proclaimed that 'Technology and strategy delivers promises; people and process delivers results'. If this assertion is true, 'people and process' are the drivers that are required to deliver the results- conceivably the 'people' element in the study are the hoteliers who make the decisions, whereas the perception they hold of technology and the steps they plan to take before adopting a

¹ Global Distribution systems service a wide range of travel-related products acting like travel supermarkets where information and reservation capabilities for the complete scope of travel products are available (O'Connor, Buhalis & Frew, in Buhalis & Laws, 2001)

technology, could be labelled a 'process'. It is therefore not surprising that a number of industrial players have repeatedly suggested that being aware of emerging markets and keeping up with emerging trends are critical acts to follow to ensure that a competitive edge can be sustained (Cass, 2005; Chipkin, 2001).

Challenges described in literature often include the human element, as is naturally the case, especially since hospitality, being a service industry, is heavily reliant on people to deliver the desired results. High staff turnover 'has plagued the hospitality business for years, with research suggesting it is among the highest of any industry' said a 2006 Deloitte & Touche report, further emphasising the need for hotels to embrace work life balance and to 'ensure (that) they can hire, train and retain a flexible workforce (with) particular consideration... to staffing in the new emerging markets'.

The 'new emerging markets' referred to in the report were a core challenge that was expounded during an Independent Hotel Forum held in London in 2004. Then, Russell Kett, the managing director of HVS International explored the shift in customer taste, emphasising that while the chains attempt to attract guests with elaborate facilities and technologies, the independent hotel sector could focus on the 'softer part of a hotel's offering, that is charm, authenticity and the personal touch', reiterating John Ueberroth's (Chairman and CEO of IndeCorp) suggestion that 'there is an overriding passion for individuality, authenticity and personality, rather than safe, 'cookie-cutter' approach to hotel choices...'.

Despite the many challenges faced by smaller, independent hotels, it has been reiterated in studies and trade articles that 'if the hotels really are to be masters of their own destiny, then they have quite a bit of catching up to do on the technology front...developing

complex, multi channel strategies and...using online and offline channels to their advantage' (Davis, 2007:3).

2.5 Summary

This chapter has shown the importance of star ratings, hotel location and the size of a hotel in affecting the adoption of technologies within the business. Key business performance measures used to measure the success of a hotel operation were found to be financial performance, customer retention levels, the number of inquiries received and occupancy levels. Core characteristics typifying the independent hotel sector was identified, making it possible to define what an independent hotel is.

It can be seen from this review that some of the most significant challenges are in areas relating to the marketing and distribution of independent hotels. These challenges include the question of affiliation and more importantly, the development of technological infrastructures that are presenting hoteliers with a much wider choice of marketing and distribution mediums. With an understanding of the extensive internet proliferation by both consumers and the industry, the next chapter will be evaluating the electronic marketing and distribution dilemmas faced by independent hoteliers.

CHAPTER 3

INTERNET MARKETING & DISTRIBUTION

3.0 Introduction

Marketing is defined by Kotler et. al. (1999) as a social and managerial process, by which individuals and groups obtain what they need and want, through creating and exchanging products and value with others. The use of the internet has frequently been used in this process, a platform where services and value are exchanged. Technology enables the internet to initiate selling and communication but also to conduct market research and make payments (Grönroos, 2007). Therefore in this study, the term marketing will be all-encompassing; it is perceived as a philosophy, an attitude of mind, a way of organizing and a set of tools, techniques and activities to which customers are exposed (Grönroos, 2007).

The internet has a role to play in almost every aspect of marketing, but it has in particular changed the way 'place', of the marketing mix's 4 P's can be evaluated. This is particularly true when analysing how internet transactions take place within the hospitality sector. As recognized by Laws and Buhalis (2001), 'place' could be replaced more suitably with 'distribution' especially when interpreting the marketing mix within the tourism industry. This chapter will therefore explain how the use of the internet for hoteliers is both a distribution and marketing tool.

3.1 Types of hotel distribution channels

Hotel distribution has come a long way since Thomas Cook provided his travellers with hotel vouchers in the 1840s (Swinglehurst, 1982). Since then, accommodation providers have recognised the need to expand their market far beyond their property's location, so hotel distribution has evolved from the vouchers of yesteryears to employing central

reservation systems (CRS) and global distribution systems (GDS) that were built for the airlines. However, today's main distribution channels of hotel inventory remain mostly via traditional means such as the GDS/travel agents and call centres/reservation offices, modes which are considered inefficient and expensive (HeBS Report, 2002). Comparisons of online and offline bookings have often been conducted and recent statistics by Bear Sterns, Jupiter, PhoCusWright have suggested that internet hotel bookings will begin to surpass GDS hotel bookings as early as 2004, surging in value to US\$14.8 billion by 2007. Table 3.1 below depicts the growth of online bookings.

Table 3.1: Online vs. GDS bookings (worldwide figures)

Source: *HeBS, Bear Stearns, Jupiter, PhoCusWright and industry sources* from HeBS Report 2002

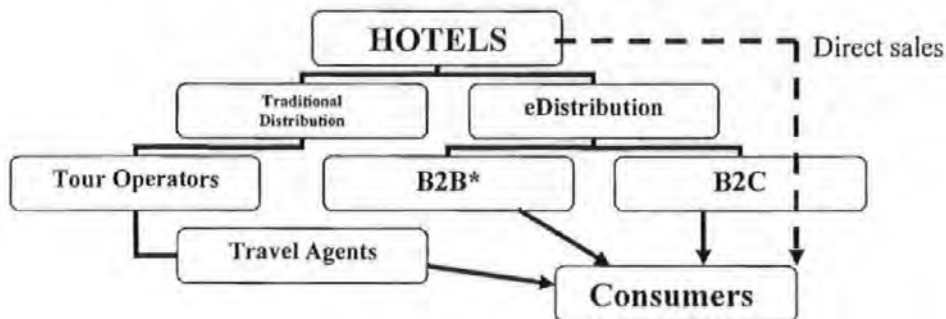
	2001	2002	2003	2004
Online	7%	10%	13%	16%
GDS	20%	18%	17%	16%

Lately, online hotel distribution has been given extensive academic evaluation, in particular the cost effectiveness of international information distribution for small and medium sized hotels. Most authors have concluded that the internet has opened up new opportunities for small and medium sized enterprises, to compete with larger organisations on an international scale and on equal terms (Buhalis, 1998; Hawkins, Best & Coney, 1996; Walle, 1996; Tate, 2001; Christian, 2001; Wardell, 1998).

Hotels, being suppliers at the top of the distribution chain, represent the ownership of services that are reliant on intermediaries such as coach operators, travel agents, tour operators, and tourist information centres, to expand their potential for attracting a larger customer base. Hotels that have the resourceful aid of efficient intermediaries could well

enjoy an exceptionally healthy occupancy level (although not necessarily profitability). At present, an average hotel's distribution channels could include both traditional and contemporary means. From a range of academic and industrial literatures, Figure 3.1 identifies possible online and offline marketing channels a hotel may adopt.

Figure 3.1: Possible online and offline channels used by hotels.



The figure has been extensively simplified within the channel of 'traditional distribution' as it reflects only tour operators and travel agents. In reality, other types of intermediaries such as the tourist information centre, coach companies etc. could also be included. An alternative relevant to hotels is electronic distribution (eDistribution), which can be further classified as B2Bs (Business to Business) distribution and B2Cs (Business to Consumers) distribution. With B2C distribution, a hotel has its own web application, for example, www.hilton.com, reaching directly to its customers. Or a hotel could have a business e-mail address where reservations and inquiries are taken directly from consumers. Figure 3.1 provides an extension of B2B distribution, where a wider variety of distribution methods via a third party web application could be adopted.

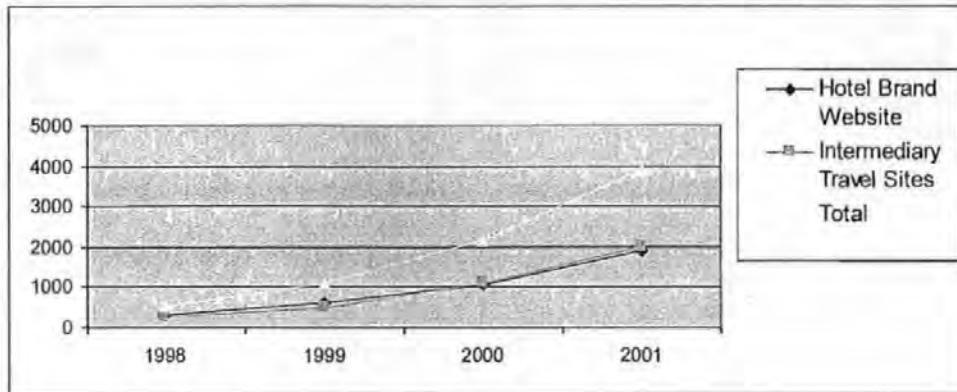
In a B2B distribution, a hotel could opt to give itself a prominent presence online, by registering itself on a search engine. More commonly, hotels can subscribe to hotel directories or portals that are hotel-focused, for example, www.ukhoteldirectory.com.uk.

INTERNET MARKETING & DISTRIBUTION

Rather similarly, destination focused search engines perform the same role, but instead of aiming to sell hotel rooms or travel related services, it aims to sell the destination and incorporates a service that facilitates a hotel search of the destination. Lastly, and also more importantly, there is an emergence of online travel intermediaries, they play the role of traditional bricks-and-mortar travel agents, except that sales, information provision and transactions occur online. A B2B relationship with online travel intermediaries could carry more implications, as there are different modes or levels of services provided depending on the commission scheme opted. Neither of these services can be classified as stronger or weaker, since each of them provide a different form of service dependent upon the strategy favoured by a hotel.

Current online travel intermediaries operate like regular travel agents, offering car rentals, airline seats, hotel accommodation, sightseeing packages, transfers etc.. As revealed by PhoCusWright (1999), intermediary travel sites' market share has been growing and will continue to do so. Figure 3.2 below reveals this trend between 1998 and 2001. Traditional hotel distribution channels via travel agents who book rooms via GDS will continue to dominate, with an estimate of 84.5% of hotel rooms booked offline in 2001 (PhoCusWright, 1999). These estimates were for hotels in the United States, but similar projections in the United Kingdom by TravelClick (2002) reveal similar trends of travel agent bookings being the dominant source of hotel e-business, representing 94% of total GDS room nights, an increase of 3.3%.

Figure 3.2 Hotel Internet sales and channel growth, 1998 and projected 1999-2001 (\$ millions). Source: PhoCusWright (1999)



On the same note, Marcussen (1999) revealed that opportunities for direct internet booking with European accommodation services has a market potential of 62% including both domestic and international reservations. The distinction between domestic and international reservations has been emphasised, as hotel guests vary in terms of international geography. Marcussen (1999) also pointed out that international reservations received by European hoteliers account for a larger chunk of web bookings than domestic reservations, which could be explained by recent findings that Europe has a lower general internet adoption rate compared to America (Sangster, 2001; Internet World Stats, 2006) in terms of population penetration percentage.

Having provided an overview of the various distribution channels utilized by hoteliers, the next sections will describe both the offline channels and online channels in greater detail. These channels will be examined separately, including an investigation into what each of the process entails, how they function and the types of channels that are more commonly used by independent hoteliers.

3.1.1 Offline distribution channels

As discussed earlier, hotel reservations are still largely arranged via travel agents, the hotels' central reservation systems or other intermediaries (Garces, Gorgemans, Sanchez & Perez, 2004). The result of varying distribution opportunities and trends for hoteliers, however, appear to point towards the disintermediation of traditional bricks-and-mortar travel agents. Evidence from recent trade magazines and newsletters proves otherwise. New agreements and renewal of contracts between system providers and hotels for travel agent's commission processing, remain extensive even if it is not on the increase. Dallas-based Pegasus Solutions (the developer of the original universal electronic reservations switch), for example, finalized its Pegasus Commission Processing service renewal agreement with approximately 2,000 U.S. Hilton hotels and resorts in 2004 and is also servicing eight out the ten, world's top ten hotel companies (Anon, 2004b). Such agreements not only convey to travel agencies that they are a critical instrument in the tourism distribution network, but also enable the 'average agency member to significantly save costs due to a sizable reduction in expenses associated with the typical manual, time consuming methods for managing hotel commissions' (Anon, 2004b). With the majority of travel agencies worldwide as subscribers, Pegasus processes an average of US\$40 million in travel agent commissions each month (Jennings, 2005).

Another illustration of confidence and commitment between traditional bricks-and-mortar travel agents and hotels is found in Sabre's (one of four major GDSs today) launch of Exclusives preferred hotels programme in mid 2002, the first merchant program for travel agents, developed and integrated into a global distribution system. The system allows travel agents to quote, book and provide lower cost alternatives to clients effectively within the structure of a GDS system. It also incorporates a two week commission payment guarantee which provides relief in critical cash flow and revenue streams to the travel

agent. In summary, the system allows travel agents to quote hotel rates that are comparable to those found on the web. Participating hotels, in turn, acquire the opportunity to turn potential reservations into newly realized revenues (Anon, 2002b).

Recognising the value of travel agents, the SynXis Corporation (a reservation management and distribution systems provider) developed an internet based system, bringing web-only hotel rates and availability directly to thousands of travel agents, ensuring the continued partnership of traditional travel agents and hoteliers. The system allowed hotels to offer promotions and rates directly to travel agents. This was previously not possible because of high traditional distribution costs. More importantly, the system introduced more benefits to travel agent subscribers and widens the potential market of hotels. The SynXis technology features a consolidated view of web only airfares, with hotel information and access to hotel inventory world-wide. Hotel bookings are commissionable to both online and offline travel agents (Levitt, 2007).

Similar systems introduced from 2002 recognised the effectiveness of a continued partnership between travel agents (whether traditional or internet based) and hotels, because this new platform affirms the important role travel agents play in obtaining customers. Hoteliers' distribution costs are also greatly reduced. The onus, however, is on hotels to select the most effective and efficient e-commerce strategy with new and often complex offerings of distribution channels. Nevertheless, keeping up to speed with such technology does not come with little or no investments or time spent sourcing for the most suitable systems. Initial investments could include hiring the right personnel or consultants to undertake such tasks, and finally adopting the use of the systems either by renting, purchasing or subscribing to their services, which incur substantial costs often costs depending on the scope of services rendered and length of agreement terms. With the

majority of hoteliers operating on small or medium sized accounts, it is little wonder that the e-commerce take up rate is slow.

To ascertain where independent hoteliers will move on from here, it will perhaps be interesting to assess whether their change in relationship with traditional travel agents is similar to their drastic change in relationship between airlines and travel agents. It was the opportunity of reducing distribution costs that propelled the airlines towards improving their online distribution systems. The improvement in turn, enabled the airlines to obtain direct sales. This gradually led to a reduction in travel agents commission, and in many instances, commissions from many major airlines were totally eradicated as early as 2003 (Goldkuhl, 2005). However, a study by Phoenix Marketing International showed that the percentage of air bookings made by travel agents still accounted for more than 50% of all GDS bookings, while only about 10% of them are hotel bookings via the GDS (TravelClick, 2002). Marcussen (1999) also confirmed that the percentage of hotels in Western Europe that are bookable via the internet is lower than 22%, in contrast to the other major travel supplier (airlines). Nonetheless, it should be reiterated that the lodging industry is much more fragmented than the airline industry, with more classification types, and caters to a wider range of consumers. This, perhaps, has resulted in a greater need for the industry to have access to an extensive range of distribution options. Hotels, in seeking to constantly increase occupancy figures, needed the help of travel intermediaries to reach out to potential travellers who may come from further afield. As the relationship between the hotels and traditional travel agents continues to change, it remains to be seen if the continuing evolution and adoption of electronic commerce distribution strategies could lead to a similar change of relationship, experienced by airlines and agents.

Allenson (2004) could not have described the relationship between independent hotels and travel agents better, when she suggested that independent hoteliers are in a classic Catch-22 situation. Independent hoteliers are paying out huge commissions to the intermediaries, but they cannot opt out of working with them for fear of inventory going unsold, because they do not have the chains' experience in managing an assortment of intermediaries' commissions.

3.1.2 Online distribution and internet technologies

This section will begin with an explanation of what the internet is, its technological make-up and a review of how it contributes to the growth of electronic commerce. It will conclude with a review of the online marketing and online distribution functions available to hoteliers.

3.1.2.1 What is the internet?

The internet is a global set up of network amongst networks, interconnecting computers that transmit data using a globally unique address space based on the internet protocol (IP). More profoundly, the internet has been referred to by Inkpen (2005) as a global information system that enables higher level service layers of communications supported by various other infrastructures. Essentially, internet services fall into two broad categories, namely communication services and information services. Internet applications that facilitates communication services are for example, the electronic mail, discussion lists and net news which allows for direct exchange of information between internet users. While internet applications that facilitates information services are for example anonymous FTP (File Transfer Protocol), Gopher and more simply the search engines (Price & Starkov, 2006).

While it was the internet that enabled the transmission of information and communication, it was the World Wide Web (WWW or the web) that has completely transformed the use of the internet since 1993 (Chen, 2005), with its ability to integrate file transfer protocols and allowing users to access search engines like AOL or google, forming newsgroups and more commonly performing synchronous communications such as electronic mailing. A user is able to access any web sites, explore internet resources via an internet browser and having multimedia documents with blended text, pictures, sounds and video clips with the aid of the web's capability, the internet has moved beyond its traditionally academic boundaries and has become an established means of communication in businesses. The WWW has changed the appearance of the internet (Hafner and Lyon, 1996; Maler, 1997) and the publicity WWW has gained by doing so, has been so great that many people naively equate WWW with the Internet (Chu & Rosenthal, 1996).

The emergence of web technology, enabling new distribution and marketing methods brought with it the opportunity to reduce distribution costs. This resulted in hotel managers being more aware of the need to maximize contributions to gross profit, instead of focusing on just revenue from a room sale (Choi & Kimes, 2002).

Persistent and rapid changes in world events in the last decade have driven the hotel industry to reassess their operational and management approaches. One of the earlier developments encountered by the industry was in the advancement, growth and consequential spread of internet technology use in marketing and distribution. This technology was applied in a repertoire of operational units within a hotel. It included the use of technology to improve property management functions, enhance communication amongst personnel, implement advance property management systems and improve reservation figures by expanding audience base with the use of Global Distribution

Systems (GDS) and Central Reservation Systems (CRS). Hotels had to consider the use of different distribution channels so as to ensure that their inventory is conveniently accessible to the widest and farthest prospective guests. Each hotel, regardless of its size or affiliation, aims to acquire as much, if not more visibility than their nearest competitor. Hotels, like any other travel suppliers, must compete for 'shelf space' in any distribution or marketing channel where guests are likely to perform a search.

While the four major GDS players (Galileo, Worldspan, Amadeus and Sabre owned and managed by airlines (Das, 2002)) continued their stronghold of providing platforms for hotel reservations, some new private players also appear to be riding on the success and increase in internet use, by branching out to develop Alternate Distribution Systems (ADS), examples of such systems are Expedia, Hotels.com and Travelocity. ADS, sometimes also known as Internet Distribution Systems (IDS), applies internet technology together with GDSs. It distributes a range of tourism products online, providing immediate online availability and payment facilities.

On the other hand, CRSs once considered and adopted only by bigger and wealthier hotel properties apparently began to be available to smaller and medium sized properties. There could be two reasons for this phenomenon. Firstly, more ADSs have begun to infiltrate the tourism market to obtain a piece of the reservation pie; secondly small and medium sized, independently owned and operated hotels are beginning to feel the pressure, as the UK chain and branded hotel sector began to grow in presence posing a major threat (Bailey, 2003; Imrie & Fyall, 2000a; Ward, 1997).

The growth of online bookings for major hotels has been heavily documented by academics, industrial consultants and analysts (Bailey, 2003; British Hospitality Association, 2003; Carroll & Siguaw, 2003; O'Connor, 2003; tri hospitality consulting,

2002). However, with the intensifying threat of major hotel players rapidly expanding their seemingly effective use of the internet, small to medium sized independent hotels could no longer afford to sit back and watch the internet increase in importance as an indispensable marketing tool, a tool which has time and again been shown to level the playing field (Tate, 2001).

Despite the continued advancement of technology, accompanied by its complexity, the internet is increasingly becoming available to the general public, mainly because of the accompanying decline in costs. As Klein (1998) has suggested, product search on the internet is popular due to its perceived low search costs. It is therefore important to understand what types of internet technology are available and to identify the main factors influencing a firm's choice of an internet-enabled distribution strategy (Ranchhod & Gurau, 1999). The next section will explain how internet technologies are utilised in a hotel enterprise for the benefit of enhancing marketing and distribution electronically.

3.1.2.2 Hotel electronic commerce

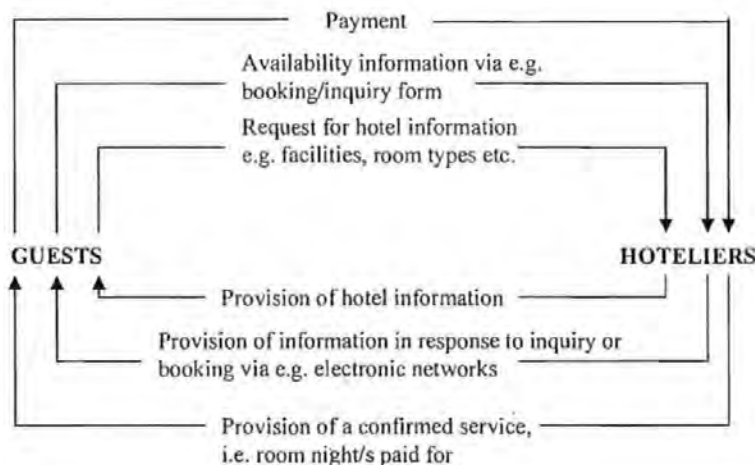
E-commerce utilises internet technologies to function and 'it depends on key infrastructures such as information technology and telecommunications, social/cultural, commercial, and government/ legal' (Javalgi & Ramsey, 2001: 379). Information, technology and communication have frequently been demonstrated to be of supreme importance in the marketing and distribution of hotels (Connolly & Moore, 1995; Main, 1995; Mistillis, Agnes & Presbury, 2004; Christian, 2000; Marvel, 2001; Swig, 2000) but ironically there is also an equivalent amount of lamentation (if not more) about the hoteliers' lack of strategic implementation and management of ICT by the very same writers. Very often, criticisms regarding implementation are directed at small medium sized hotels (Mistillis *et al.*, 2004; Christian, 2001; Main, 1995) while larger hotels have

the effectiveness of their ICT strategies evaluated, criticised and examined (Thomson & Failmezger, 2005; Hayes & Kontzer, 2004).

Electronic business writers (Chen, 2005; McKay & Marshall, 2004) claim that there are many definitions of electronic commerce, one of which is to be particularly relevant for the hotel sector and which is alleged by Chen (2005:3) to be its most basic: 'electronic commerce involves the electronic exchange of information or "digital content" between two or more parties, which result in a monetary exchange'. Figure 3.3 is adapted from Chen's 'Components of electronic commerce' depicting the flow of information to the final provision of service between hoteliers and guests.

Figure 3.3: Hotels' components of electronic commerce.

Adapted from Chen's (2005) 'Components of electronic commerce'



For hoteliers, the basic components required to ensure that the above flow is obtained are, firstly, the resources required for the production of hotel information, such as HTML (Hyper text multi language) tools or web design software or even contracting such a job to 3rd party providers. Secondly, links should be arranged via electronic networks to facilitate

communication; this could be as simple as a dedicated phone line or an electronic mail facility. Finally, the provision of a networked electronic payment system for the purpose of online transactions will fully complete the requirements of adopting electronic commerce. Traditionally, to discuss electronic commerce would include systems such as EDI (Electronic Data Interchange) and EFT (Electronic Funds Transfer), but such systems were mostly limited to large businesses. While electronic commerce evolved with the aid of EDI and EFT to enable open networks such as the internet to develop, businesses and individuals were able to utilize this new network at minimal expense, leading to a frantic adoption of electronic commerce (Chen, 2005).

Having conducted extensive literature reviews of small medium sized hoteliers, it has been discovered that there are a few but specific generic internet-enabled applications that were adopted by hoteliers. The following uses of technology were discovered to be the most common: a hotel's own website; electronic mail to communicate with customers; booking forms on hotel's own website; use of online intermediaries' services; and an online payment facility. Although there is a plethora of literature discussing, examining and evaluating websites of the hotel industry, studies of hoteliers' information technology usually stem from the need to re-examine classical marketing and distribution strategies as the proliferation of the internet intensified (Morris, Morris & Weir, 1997). This study adhered to a similar path as it recognised the new technological distribution and marketing route adopted by hotels, as depicted in Frew and O'Connor's (2000) evaluation of electronic channels of distribution in the hotel sector. Table 3.2 illustrates Frew and O'Connor's (2000) electronic systems that are available in hotels today adapted by Mistilis et. al. (2004), more mediums would have appeared since then, such as mobile technologies (DTI, 2004).

Table 3.2 Electronic Distribution Systems available in hotels today

<u>Electronic Distribution Channel</u>	<u>% Total</u>
Direct sales over Internet	20
GDS	16
Hotel CRS	13
Internet via travel intermediary	13
DMS	8
Internet via switch company site	7
Internet via Hotel chain website	6
Third party representative company	5
Teletext systems	5
Auction websites	5
Interactive digital TV	4
Total	100%

It should be noted that although there are many electronic distribution channels that can be adopted and utilised, it is important to bear in mind that many of these channels are reserved for chain properties or properties with a number of rooms that run into the hundreds. Adopting such channels, therefore, may increase the possibility that the hotel's investment in these electronic channels reap higher returns (Mistilis et.al., 2004). Costs for online routes depicted above are not stand-alone and are often part of a chain of costs that result in a firm reservation. Table 3.3 provides an indication of costs per reservation via the traditional travel agent route, the online agent route and also a hotel which deals with reservations via its own website. Costs are dramatically reduced with a reservation originating from the hotel website, but to date, this method of reservation is not common, albeit the figures are rising (Marvel, 2004). These positive trends are, however, still reserved for primarily chain and larger hotels judging by academic literatures and academic reports (O'Connor & Frew, 2001).

Table 3.3: Cost per reservation according to different booking routes

	Total
Traditional route (via traditional travel agent, GDS, Switch & CRS)	US\$13.50
Online route (via online agent, GDS, Switch & CRS)	US\$10.50
Hotel company website	US\$1.50

Source: Adapted from Dresdner Kleinwort Wasserstein/ Accor in Sangster (2001)

As reiterated earlier, an 'internet channel via a travel intermediary' can mean different things, because online channel intermediaries can be presented in a number of forms. More commonly, they are known or recognised as online travel intermediaries who sell travel services and/or products online instead of selling these in a bricks and mortar shop. Online travel intermediaries can take on various guises, ranging from travel auction sites (e.g. <http://www.priceline.com>) to restaurant recommendation sites (e.g. <http://www.sugarvine.com>). The line between bona fide travel products/services site and a non-travel site has been getting more obscure as the latter are increasingly interacting seamlessly with bona fide online travel product sites.

The availability of an array of new technologies, together with the relatively low costs of accessing and building an internet site (Ranchhod & Hackney, 1997) brought with it new interests in internet-enabled distribution strategies by hotels. These interests have regularly been discussed from two angles, one, for the betterment of in-house service (such as improving back of house clerical functions, providing in-room internet access or speedy check-ins etc) and second, a new channel for hotels' electronic business. There is however, plenty of evidence revealing that hotels are moving away from the 'clerical use of IT and have begun to use it in decision making and for creative marketing' (Murphy, 2004: 522). The study aims to discover the extent of internet applications used by the hoteliers for marketing and distribution purposes.

The hotel sector was not slow in their uptake of new technology. It was evident that the internet provided many advantages to its users, and, most importantly, it was affordable,

allowing any businesses, large or small, to access and eventually adopt it as one of their marketing tools. The biggest incentive for the use of internet is that it is a non-proprietary system, it does not become obsolete. Both practitioners and academics were quick to come to the conclusion that the prospect of 'levelling the playing field' has finally arrived – with the internet (Starkov & Price, 2001; Sheldon, 1994; Klein & Quelch, 1996). In its early beginnings, the prospect of a levelled playing field was real, as Inkpen (1998:178) revealed, 'pages that comprise one company's internet site can be available to the same population of consumers as another company's site, yet without any significant additional amounts of expenditure'. The fact that the internet reaches out to the same population of consumers (despite the size of one's business) is indisputable, but hotels small and large, who have by now completed the exacting task of budgeting and paying for a presence (or more) on the internet, would have discovered that the ability to obtain additional funds, could indeed make a difference to a hotel's marketing scope.

While there has been much analysis and suggestions for chain and brand hotels in relation to controlling online room prices (O'Connor, 2003), smaller and medium sized hotels, particularly independent hotels, do not seem to require similar recommendation. As it will be ascertained later in this research, a majority of independent hotels do not have many online or offline distribution channels. As such, there appears to be less of a need to control prices amongst these intermediaries. Small, medium sized independent hotels are more concerned with utilising the internet as an effective marketing and distribution tool (Mistilis *et al.*, 2004), and as the internet evolves, it became even more necessary to distinguish between using the internet as a marketing or distribution tool. The next section will discuss the differences and similarities between the two often intertwined functions. It will also aim to explore how hotels are dealing with environmental changes with respect to e-commerce, illuminating the possible ways in which these independent hoteliers are adopting internet technologies for enhancing their marketing and distribution and the

resultant effect on the types of channels of distribution used, in particular travel intermediaries.

3.1.2.3 Online Marketing and Distribution Channel

Functions

Having investigated what the internet and electronic commerce entails within the hotel sector, this section will amalgamate the two to illustrate how these technologies contribute to online marketing and distribution for hoteliers.

As it was only in the last decade that the internet was aggressively adopted as an alternative marketing tool, it is nevertheless important to bear in mind that it is just another channel where new opportunities and efficiency (Hymas, 2001) enable hoteliers to project their presence. This new mode of marketing is not only reserved for business-to-business (B2B) marketing, but as the internet became more affordable to the public, it quickly developed into a business-to-consumer (B2C) channel enabling direct selling. In its early days, only the resource-rich had a presence on a website, as it could prove rather costly. Not long after, it was widely claimed that the internet could level playing fields (Sheldon, 1994). As described earlier, this meant that small and medium sized organisations had an equal opportunity to participate on a global level (Klein & Quelch, 1996) but not without a considerable amount of planning, strategic decision-making and financial investment continues to be pertinent.

Even the latest DTI International Benchmarking Study (2004) reveal that the top few usages of the internet amongst small-to-medium sized enterprises in the UK, is for anything else but marketing. It was also reported that, between year 2003 and 2004 the online adoption trend for marketing was slowed. Two adoption trends that are catching-on, and relevant to our research are the 'payment of goods and services' where the 'placement

of orders' experiencing an increase of 6% and 5% respectively (DTI, 2004). These latter adoption trends are undoubtedly two other aspects of online distribution, described in Alford's (2000) paper as key areas that fall under the definition of electronic business (e-business). They are 'Payment of goods and services' which is classified as e-commerce and 'placement of orders' classified as e-procurement. So how does online marketing differ from online distribution? Is it necessary to provide a clear distinction between the two?

In one of the most basic but core theories of the marketing mix, two of the 4Ps (place, price, product and promotion) could aid in identifying the necessity to make a distinction between distribution and marketing. As acknowledged by Laws and Buhalis (2001), one of the P's, 'place', could be rather misleading when analysing most components of the tourism industry, and a more suitable term could be found. The term is 'distribution'. 'Place' in the hospitality context does not only refer to the location of a tourist facility or attraction; in this study, it refers to the hotel room nights that are available for sale at all points of location. Distribution appears to substitute 'place' well because it incorporates the intangible aspect of 'place' in the online context such as accessibility and availability. Woodruffe (1995) confirms the two as main tourism issues expanded from the concept of 'place'. It also includes all likely channels in which products or services are available to consumers (Stern, 1988). These avenues for hotels include, travel agents, tour operators, tour wholesaler, tourist information centres etc.

This appears to be an extension of what Morrison (1996) reveals to be the 5th and 6th P's within the hospitality industry, of people and partnership (the 7th and 8th P's being packaging and programming). How hotels, as suppliers, decide on its distribution strategy is paramount to its achievements not only in the presence of increasing competition from

the perfectly competitive nature of the industry, but also its vulnerability to volatile world events, such as terrorism.

Therefore, a channel of distribution (like marketing) is an inclusive combination of characteristics encompassing all institutions and agencies participating in the marketing process. Bucklin has more accurately defined it in Stern (1969:7):

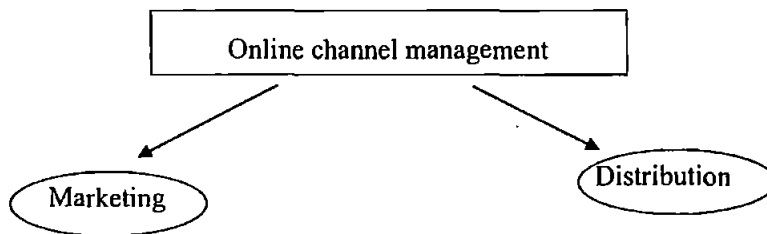
“A channel of distribution shall be considered to comprise a set of institutions which performs all of the activities (functions) utilized to move a product and its title from production to consumption.”

According to Kotler et. al. (1999), the ‘promotion mix’ (another P within 4Ps) is also a company’s total marketing communications program. Describing marketing with direct reference to the hotel industry, however, could not have been made any clearer by Rutherford’s (1995:247) definition: ‘Marketing is an umbrella term that covers a number of strategic and tactical activities designed to tell clientele the “story” of the hotel’s services and to encourage clientele to make choices based on how one hotel’s marketing message compares to alternatives.’

For this research, the distinguishing feature between marketing and distribution is that the latter must entail some form of transaction before ‘consumption’ can take place. It must not only provide information to allow consumers to make an informed decision, it should also ‘provide a mechanism where the consumer can make a reservation and pay for the required product’ (Go and Pine, 1995:65). This process is labelled ‘distribution’, but it is still part of marketing because it involves the ‘process’ of encouraging purchase but may not necessarily result in a final transaction. Distinguishing between the two functions will become more important in the analysis section of this paper, because independent hoteliers

in this study appear to understand the two functions as being similar. The analysis also reveals that marketing and distribution channels can exist independently (as seen previously in Fig 3.1). This is in line with Middleton and Clark's (2001) assertion that hotel distribution channels have two separate functions which overlap. As reinforced by O'Connor (2003:180), the two functions are 'to provide consumers with information to help them in their purchase decision' (an association with marketing) and 'to facilitate the purchase itself' (an association with distribution). As Kotler et. al. (1999) suggested, one of the many key functions of a distribution channel should include promotion. However, the ambiguity and often, common and similar functions of each terminology have created the different understandings of distribution and marketing.

Figure 3.4: Proposed sub-sets of online channel management in the hotel sector



They are not similar but yet, as the definition implies, a marketing process also involves various institutions and agencies that are present in a channel of distribution. For instance, a hotel's marketing strategy includes creating an allotment of rooms to an online hotel wholesaler who also has a high street presence. For the hotel to have decided on that particular strategy, it would involve the hotelier's understanding of how the channel (online hotel wholesaler with a high street presence) works.

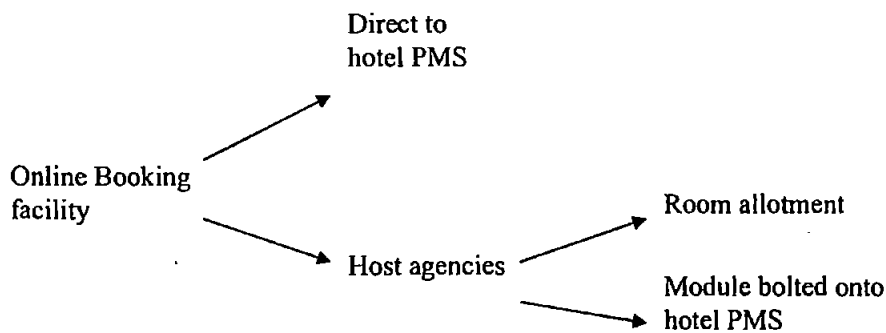
Unfortunately, within the hotel sector, there is little or no definite distinction by academics and industrial analysts of whether hoteliers are adopting the internet as a marketing and/or

distribution tool. Perhaps this is because independent hoteliers tend to stop at marketing, rather than going all the way with distribution, particularly electronically. With the electronic channel, words like marketing and distribution appear to be even more inexorably intertwined. It may be true that these words have traditionally been used for older industries like retail, manufacturing or production, but there are few studies examining marketing and distribution channels separately in the hospitality industry. It has, however, also been proven that the leisure and travel trade is the fastest growing in terms of electronic sales, and currently accounts for the most bought services/goods online (Kaldis et. al., 2003, O'Connor & Frew, 2001, Sangster, 2001, Strassel, 1997). Therefore, a separate understanding of the mechanics of electronic channel management of the hotel industry would help the industry to discover both the marketing and distribution concepts that explain the emergence of online channels. This would include knowing what the process entails in each of these channels and how the deployment decision is being made. Furthermore, by obtaining information on the cost-effectiveness technology, a hotel can then decide on the more viable options of distribution. For instance, a hotel may establish where business comes from by weekly or monthly categorising the source of business; these may include travel agents, tourist information centres, coach operators or walk-in guests. By doing so, a hotel who has a majority of say 60% of reservations from travel agents may decide to enhance its distribution strategies with existing travel agents or expand its network of travel agents. Online marketing on its own seems to be a sufficient business function, but hoteliers have to also be aware that online distribution cannot exist without online marketing.

Online marketing and distribution can be understood in different contexts when explored in the technological context and this could perhaps explain why it is prudent to differentiate between the two concepts. This clarification is necessary because at present a good majority of hotels are online for mostly marketing purposes (e.g. websites), but are

gradually nudged towards considering adopting online booking facilities (Gledhill, 2001) (a distribution feature). What practitioners within the hotel sector call 'online booking', is a facility for browsers to check if a hotel (assuming it has the facility) has an available room or rooms for a particular night, and if the browser so wishes they could choose to pay for the room online instantly, thereby confirming and paying for their reservation. This could be achieved via two means, the more straightforward and possibly more economical mode is via host agencies that handle online booking through an allotment of rooms by the hotel, or the hotel could choose to bolt their property management system (P.M.S.) to the online host agent. The second, pricier, method of adopting an online booking facility involves a direct link between the hotel's website and its PMS. Often, these host agents are also known as 3rd party intermediaries. A summary of online booking possibilities (understood from past literature and industry articles) is illustrated in Figure 3.5.

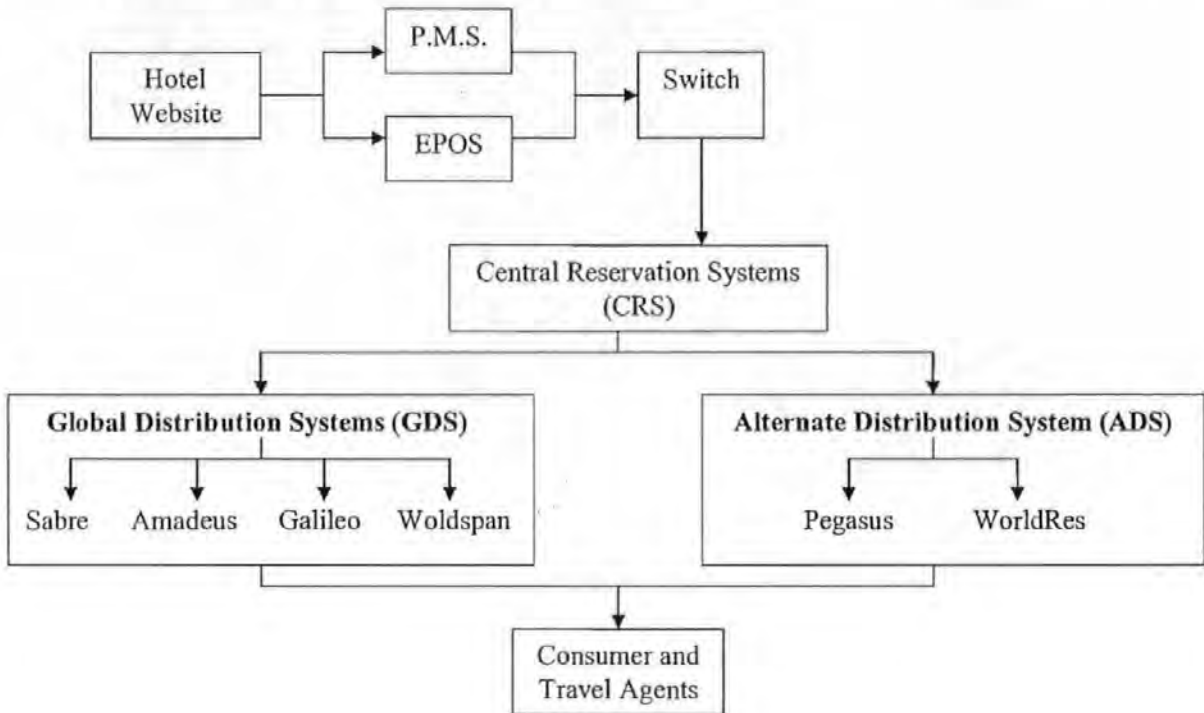
Figure 3.5: Two possible ways of having an online booking facility



In technology terms, 'online booking' can also be referred to as electronic commerce (Alford, 2000; Chen, 2005; McKay & Marshall, 2004). According to these authors, e-commerce involves selling online and must include some form of transaction which must be conducted via the internet. Chen (2005), McKay & Marshall (2004), discussed the definition of electronic commerce and electronic business at great length, offering various authors' insights into what each should entail. While they conclude that differentiating the

two is not a straightforward task, electronic commerce should result in commercial transactions via the internet (i.e. the buying and the selling) and little else, while electronic business includes all other elements 'such as servicing customers, collaborating with partners and communicating within the organization' (Chen, 2005:3). Electronic business should also 'improve efficiencies and effectiveness along the entire supply chain, to create internal efficiencies, and thus to create value directly and indirectly for the customer' (McKay & Marshall, 2004:5).

The evolution of the internet enhanced the traditional uses of central reservation systems (CRS), global distribution systems (GDS) and hotel distribution systems (HDS). GDSs were built for airlines, enabling them to provide information on seat availability and reservation services. Hotel accommodation, being one of the first complementary travel products to be distributed via the GDS, enabled mostly hotel chains to input factual information such as room description, types and price differences. Given that such systems were built and developed for use by airlines, hoteliers using them inevitably began to experience operational problems related to the systems structure. As a result, hotel chains began to build their own reservation systems linking it electronically to HDS which is designed exclusively for the hotel business, which then linked hotels to major GDSs. Figure 3.6 attempts to clarify the intricate relationship of a hotel's possible channels of electronic distribution.

Figure 3.6 Hotels' possible channels of electronic distribution

According to Marcussen (1999), opportunities for direct internet booking with European accommodation services have a market potential of 62% including both domestic and international reservations. This figure represents accommodation services that do not have availability data online. Correspondingly, based on a European screening data from the Danish Tourist Board in 1997 (Macussen, 1999), only 9% of hotel reservations were made directly to the establishment, as opposed to 81% booked through an intermediary. The period spelt the beginning of speculations that traditional travel intermediaries (such as travel agents) could face disintermediation, not only from hoteliers but also from other travel product suppliers. The premise of the travel product suppliers' is that the retail travel distribution system, which includes CRSs/GDSs, wholesalers and other intermediaries, as well as retail travel agents, delivers insufficient value vis-à-vis its cost. The solution, it is argued, is to reduce costs at all accessible levels of the distribution system through 'disintermediation' (Wardell, 1998).

Internet use is no longer confined to the use of the rich and young, nor is it mainly used for e-mailing. According to findings by *Which? Online 2000* documented by the English Tourism Council's Insight publication, 19% of travel products (flights/holidays) bought online by UK web users were at a high of 19% (second only to books at 23%). More specifically, GDS net reservation of hotels has been steadily increasing from 16 million reservations in 1993 to 49 million reservations in 2000 (O'Connor, 2001). According to a recent report by Davis (2007), this phenomenon has not abated, and even more interestingly while hotel bookings made via the web and the GDSs are half of what airlines receive via online, the majority of those hotel bookings are made through the hotels' own branded websites.

Hotels planning on an electronic commerce strategy should be further motivated to do so, as findings by Dresdner Kleinwort Benson/Accor revealed that total cost per reservation with an online travel intermediary can cost up to US\$10.50, as opposed to only US\$1.50 if reservations are made via the hotel company's website. In 2000, 70% of online spending by business travellers was on air travel, with only 20% on hotels. However, the lodging market is a far bigger industry with bookings worth US\$350 billion annually. With an estimate of hotel internet bookings at approximately US\$2.6 billion in 2000 (PKFReport, 2004), the majority of the lodging market remains unexploited.

Interestingly, with the many possible variations in the modes of distribution, GDS room nights booked by travel agents represented 94% of total GDS room nights, and more importantly, displayed growth of 2.1% in contrast to a slow down of 3.7% by GDS powered internet bookings. On the contrary, the third quarter results of 2002 indicated that the majority of the growth of internet distribution is now taking place on non-GDS

websites; either brand/chain websites, or net rate website like Expedia and hotels.com (TravelCLICK eMonitor, 2002).

Evidently, from the results shown, current consumer purchasing trends seem to be moving away from GDS based internet travel intermediaries. There are various channels in which e-commerce strategies could be adopted, as manifested from earlier figures. However, for a hotelier, a non-GDS based mode could translate to a reduction or even a total eradication of commissions and fees.

It may no longer be sufficient for a hotel to simply have pages on a web address, because potential guests may not be able to locate that hotel's website unless it has registered with a particular search engine. Otherwise, the chances of potential guests obtaining information about the hotel via the web may be slim to none. Common forms of e-commerce distribution for hotels are having a web presence on travel portals or hotel directories.

It must, however, be noted that there are a few salient explanations why hotels, particularly in Western European, are not ready or are sceptical about adopting internet travel sales when compared with their American counterparts. Firstly, tour packages (hotels and flights) are more common in Europe (5.7% of travel sales in US compared to 17% in Western Europe – Marcussen, 1999) therefore non-packaged individual room nights appear to be drastically reduced when measuring occupancy in Western Europe. Secondly, European hotels are highly fragmented, as the majority of hotels have a comparably smaller number of rooms (average number of rooms per property in Europe is 26, compared to 78 in US). Economically, *ceteris paribus*, a larger hotel property can justify investments in e-commerce distribution more easily than smaller ones. Thirdly, of the top 50 hotel companies in the world today, 72% are in the US, while 15% are in Europe;

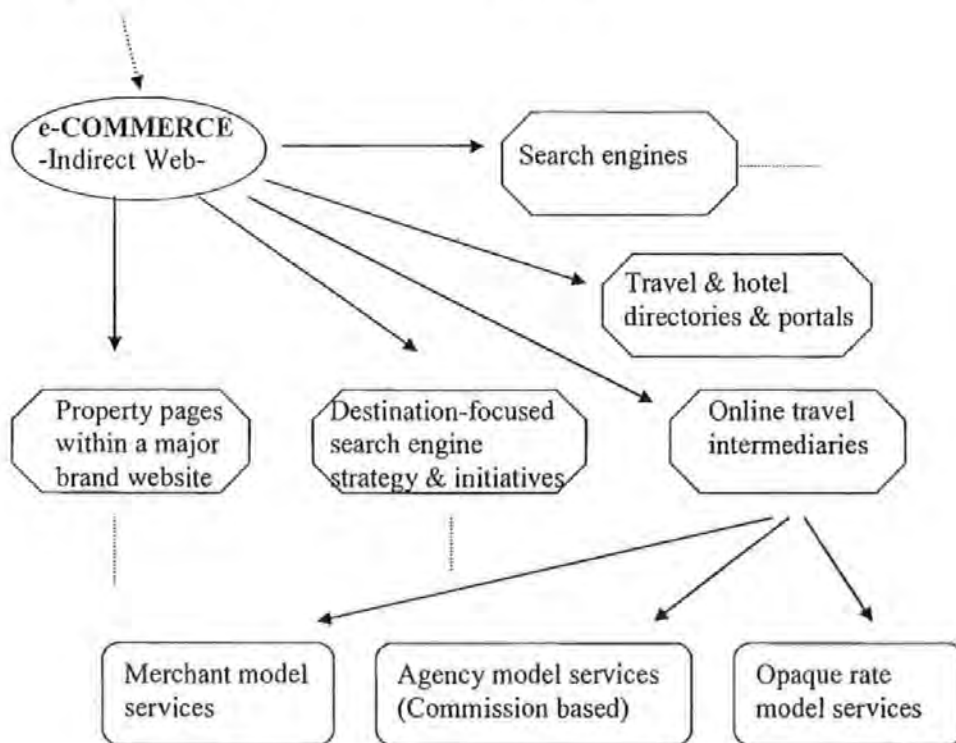
accounting for only 2% of all hotel properties in Europe. Up to 40% of these properties hotels could be members of some chain, large or small. Belonging to a large hotel company or a larger hotel chain, makes it 'technically and organisationally' more likely to acquire e-commerce distribution via real time GDS (Marcussen, 1999).

Non-GDS/CRS based channels of distribution exist too, but variety and more importantly, online availability data of these variations may be unavailable to consumers. Hotels that develop pages within a major brand website ride on the site's wide consumer base and popularity, and in the majority of instances will not have a GDS link. A current example is latebeds.com. Hotels may also choose to place themselves within the sites of destinations, which inform site visitors of available hotels in a destination. The hotel's pages would usually contain basic information such as an address of the hotel, amenities and types of rooms.

Differences in the mass production and consumption of hotel rooms have facilitated the entry of various intermediaries into the distribution network, between sellers and buyers. As reasoned by Alderson (1958), intermediaries provide some level of economies of scale in distribution by improving the efficiency of the process; this remains true as we propel through the evolutionary stages of electronic commerce. This has increased the already huge and strategically placed pool of intermediaries who are claiming to have helped increase revenue for travel product suppliers. These intermediaries are marketing and operating via the latest electronic commerce medium, the internet. The internet, as described earlier, has the capability of providing information regardless of geographical borders, time and space. The amount of choice and variation in its use will be evident in this study, as it reveals not only different distribution channels, but within its internet distribution mode, a range of other diverse internet functions/services that are also offered.

Enterprising travel intermediaries were able to quickly identify areas within the use of the internet to create 'niche' sites that facilitated the ease of consumers to locate travel products and are thus able to entice travel product suppliers to purchase their web services. These Internet travel 'function' sites (ITFS) (gathered from trade and academic reviews), could be grouped as (i) search engines, (ii) Destination focused search engine strategy & initiatives, (iii) Online travel intermediaries, (iv) Travel & hotel directories and portals and (v) Property pages within a major brand website (figure 3.7). What makes the entire travel distribution network all the more complex and exciting is the fact that these ITFS does not represent the final level in the network before the travel product reaches the consumers

Figure 3.7 Internet travel function sites (ITFS)



**Merchant model: Suppliers/clients retain a certain amount of control of room rates, availability and sale.

Each of these ITFS could have another ITFS as its subsidiary or subsidiaries. For instance, a destination-focused search engine (ii), may have travel/hotel directories and portals (iv) as its ITFS subsidiary, or it could be followed by property pages within a major brand website (v). The 'mix and match' strategic opportunities within the scope of internet travel are endless, providing travel product suppliers with an even wider array of marketing and distribution choices.

Common forms of online distribution for hotels are travel portals or hotel directories. Hotel directories involve subscribing to 3rd party sites that bring various hotels of a region or (world wide hotels) together, simplifying travel accommodation searches for potential travellers. Such directories, unlike those previously discussed, could be run by a single entity who collects fees via membership payments from hotels. Their role is to ensure that the site achieve as many 'hits' as possible that translates to bookings for hotels. It may prove difficult for hotels to measure the efficiency with this particular method of distribution because the subscription to hotel sites may only simply be linked to the member site. A hotel may only be able to measure efficiency by looking at the number of 'hits', which is not accurate since it does not reveal the number of such 'hits' that converts into materialised reservations.

Finally, within the realms of e-commerce distribution, we will look at online travel intermediaries, a subject of contention by industrial professionals and academicians alike, and a source of trepidation for traditional bricks and mortar travel intermediaries (O'Connor, 2001; Buhalis & Laws, 2001; Price & Starkov, 2006). Current online travel intermediaries are found to generally use three different types of models: merchant model services; agency services, and opaque rate model services.

In the first model, the merchant services model, travel product suppliers such as hotels subscribe to the services of online travel intermediaries whilst retaining a certain amount of control over room rates, availability and sale. Online travel intermediaries within this model cannot sell their supplier's product below an agreed rate nor can they sell more than a stipulated number of units agreed with their supplier. As will be noted later, this model offers travel suppliers a better control over the image and appeal of their products.

In the second model, the agency services model is a direct reproduction of traditional travel intermediaries, the difference being that the travel intermediaries are providing travel information, packages and reservation facilities online, and unlike their traditional counterparts have no element of face-to-face contact. In this model, their source of revenue is entirely from commissions received from any travel products sold on behalf of their suppliers. Room and package rates, availability and sales are also entirely controlled by the suppliers, rendering these online travel intermediaries mere middlemen no different from their traditional counterparts in terms of function.

In the third model, the opaque rate model services do not trade in exchange for commission. Online travel intermediaries who operate within this model purchase travel products from travel product suppliers at as low a rate as possible (sometimes this is possible when hotels, for example, want to quickly get rid of rooms that they cannot sell), and simply 'sell' them off for varying profits online. This model of services seems to be widely adopted by major brand name hotel and airline suppliers, who allot a number of units (be it seats or rooms) at a minimum price to these online travel intermediaries (who may be operating on behalf of their suppliers), who then run their supplier's reservation and booking website. The availability, rates and sales are entirely controlled by online

travel intermediaries. A business traveller may attempt to make a reservation online on an intermediary's website to discover that seats are sold out on the date s/he wishes to travel, but by giving the airline a call directly they could obtain not only a seat but at a different price to the one quoted on the website. This could occur because unbeknown to the traveller, what seemed like the airlines' reservation site, is managed entirely by a third party intermediary. There are further variations of online travel intermediaries, represented as online travel auction houses and last minute online travel discount. At online travel auction sites, travellers worldwide have the same opportunity to bid for a particular travel product. This allows consumers to 'shop around' before making a bid, and the final price paid is dependent on how informative the consumer is, or how urgently the consumer requires the product. With last minute online travel discount houses, they offer travel products at drastically reduced prices for travellers who plan their travels late or those who take risks by making last minute travel arrangements.

In models where there is little or no control by suppliers, it becomes dangerously apparent that the image of the hotel could be at stake. When room prices are controlled by a third party such as an online travel intermediary, room prices fluctuate according to what intermediaries believe would help them to clear room stock on hand or attain the commission target for the month or day. In such instances, room prices of hotels that frequently appear low may be perceived by consumers as less desirable even though the hotel is clearly superior. On sites served by the opaque rates model, intermediaries are given free reign by hotels to sell their last minute available stock of rooms; prices in such cases are more often than not, way below their normal average. When this occurs too frequently, the odds are that consumers will begin to wait for prices to reach their perceived 'rock bottom' before they proceed with reservations, a practice that will ultimately affect the final achievable yield for the hotel.

Even if a hotel continues to wield some control over its room stock availability and prices, it has to invest a fair amount of resources in terms of personnel to ensure that while information is kept up to date for online consumers, the hotel's online distribution method remains in line with its operational goals and strategies.

Although it would appear that online marketing and distribution are just two of many 'strategic and tactical activities' that are part and parcel of a hotelier's operational strategy, these activities have forced many hotel managements to re-evaluate its technological deployment in line with its channel management strategies. However, it is the critical notion of a hotelier's awareness that brings us to the point of discovering how behavioural dimensions could too affect a hotelier's decision making process in relation to online strategies. To effectively examine these strategies, the next section will be dedicated to looking at the awareness and dependence dimension of behaviour influencing these channel selection and management decisions of independent hoteliers, based on Stern's (1969) analysis of social systems concepts in distribution channels.

To sum up, there are a wide variety of online distribution methods an hotelier could utilise, but which of the ones s/he will be employing is greatly dependent on what has been made available to the hotelier, how much an hotelier understand the various modes available and how s/he came to know about them. Attempting to understand the hotelier's process of attaining knowledge vis-à-vis the many online possibilities through its experiences and thoughts will be a major agenda in this research. By doing so, a more robust conceptualization of key parameters in the context of an hotelier's cognitive consciousness may then help us to explore their dilemmas and struggles with online channel adoption or continuation. However, although hoteliers may know what channels are available and

which channels to use, each member of a distribution channel is still dependent upon the behaviour of other channel members (Ujma, 2001).

An independent hotel has even more limited marketing and distribution resources compared to the larger chain; where the latter are often able to present their hotel property in various sales and distribution channels that are perceived to be the most productive, whether they are print ads, direct mail, public relations, sales call or electronic distribution channels. Only the most cost-effective and compelling channels will be allocated the limited resource, that will in turn bring in guests and improve occupancy (Burns, 2000).

Regardless of how cost effective or useful marketing and distribution 'hardware' may appear, it is the decision maker of a hotel who makes the final decision of whether the 'hardware' is to be adopted. This is where the behavioural dimensions and perceptions of the decision-maker influence the decision to adopt or not adopt an internet application for marketing and distribution purposes. The next section therefore captures the hoteliers' relationship with distribution channels in the behavioural dimension.

3.2 Hotels' relationship with distribution channels: Behavioural dimensions

The concept of distribution must be one of the oldest and most important facets of marketing in any business and it is no less significant within the hospitality sector. Like many tourism organisations, such as airlines and car rental companies, hotels are identified as a supplier within the distribution network of the tourism industry, supplying the core product without which there would be no organizations further down the distribution chain (Renshaw, 1992). Within this network, there are hosts of institutions and agencies involved in a cooperative manner where the success of a service carried out by a channel is greatly dependent on the effectiveness with which resources have been mobilized throughout the

entire network (Stern, 1969). As suggested by O'Connor and Frew (2004), distribution channels in the hotel sector represents the archetypal example of a combination of technology, communications and content.

Definitions of distribution have been wide and varied, depending on the manner in which the term is contextualised. For Garces et. al. (2004), current hotel distribution channels are based mostly around systems that includes intermediaries which could result in the inefficient use of resources and incurring high distribution and administration costs for the hotel. In the context of managerial decision-making, Rosenbloom (1995) defines the marketing channel as an external contractual organisation that management operates to achieve its distribution objectives, but these external contractual organisations were characterised by Christopher (1992) as 'intermediaries acting independently of each other and often with conflicting objectives and requirements'. It is not surprising that these intermediaries are nevertheless working together since the principal aim of all participants in a channel is to generate form, possession, time and place utilities to create value for end users (Stern, 1969). Deardorff's (2001) simple but all-encompassing economic definition of distribution summarises the essence of the business function as the productive activity of getting produced goods from the factory into the hands of consumers'.

Popular paradigms and models within economic and behavioural dimensions have been conceived to explicate the often complicated nature of relationships between suppliers and their intermediaries, but according to Stern and Reve (1980) the particular use of these dimensions presented shortcomings, one of which is the fact that suppliers and intermediaries perspectives are not integrated in analysis when they should be treated as complementary. It was then suggested that there should be an all- inclusive mapping of paths within a network, highlighting all the likely places where a service point may be present. In essence, models and frameworks should reflect the level of efficiency or the

successful attainment of distribution objectives. Therefore the premise of the framework suggested in this chapter, for the consideration of small and medium sized independent hotels will be a blend of the Structure > Conduct > Performance paradigm and a social-political perspective (Manolis and Winsor, 1995).

At an economic level of analysis, Beier & Stern (1969) concluded that the description of market structures (of an industry) could identify the amount of horizontal competition and product differentiation which could determine vertical 'power' relationships. For instance, an organisation operating in an oligopolistic industry is often perceived as being more powerful than a firm in a purely competitive industry, purely because the former can extract more control over the variables that influence patronage further down the channel line, except variables that are beyond the control of any given firm (such as purely market demand). However, as we will ascertain later, for an industry like hospitality, market demand can be induced by various means, especially by an organisation which wields control over the distribution chain. The market structure of the hotel industry can therefore be classified as monopolistically competitive (described as a 'common type of market structure, exhibiting some features of perfect competition and some features of monopoly' in Tribe (2005:123)) as it possess the following attributes:

- i) it offers differentiated products and services; differing types of facilities and amenities provided by each individual organisation. Even within a hotel group, facilities and services provided could still vary
- ii) it is sufficiently made up of a large number of firms; the policies adopted by one hotel have little or no effect on other hotels.

This purely substantiates the fact that suppliers (such as hotels) will have the power over lower channel members if suppliers are able to restrict distribution through differentiation.

Differentiation could, for example, occur within the context of price, where hotels could set a quota on the number of rooms that are sold at various price levels. Restricted distribution can occur when the allocated quota of rooms is sold at the lowest price; the next room would have to be sold at the second lowest price bracket, and so on and so forth. Of particular relevance to further our understanding of distribution and intermediaries within the framework of hotels and online/ offline intermediaries, the 'coercion' base of power seems to represent the relationship of the two. The 'coercion' base of power occurs where an intermediary is aware that in order to obtain the 'rewards' of distribution, it must meet the demands of the supplier (hotel) (Coughlan Anderson, Stern & El-Ansary, 2003). The inability to do so would have direct and indirect repercussions followed by the immediate result that the organization would not stand to gain from any 'rewards' (commissions or incentives from selling the quota of rooms set by the hotel). An indirect result could, for example, lead to the following scenario: Intermediary A (e.g. offline intermediary) does not participate or co-operate, then Intermediary B (e.g. online intermediary) could be a potential organisation that meets the sales requirement of the supplier (hotel). This contention led Beier & Stern (1969) to an in-depth discussion of implied or explicit threats of forward or backward vertical integration where they have discovered that no channel relationships are free of conflict but members make abrupt aggressive retaliatory actions towards one another or reduce their commitment. This occurrence seems to bear similarities with the travel trade as Goldkuhl (2005) found in her study that travel agencies saw the removal of commissions as an act that caused conflict; however in this case travel agencies seem to have no leeway to take 'retaliatory actions'.

On the other hand, the social-economic-political perspectives of channels acknowledges the existence of interaction and engagement of all channel participants, focusing on the process of ownership and the transfer of services within the various classifications of

channels identified by Bowersox (1969) as (i) vertical marketing system, (ii) free-flow channels and (iii) single transaction channels. These three marketing systems were identified based on a singular factor of participant acknowledgement of dependence and interdependence. However, in each of these systems, there were also elements of power considerations where the level of power dominance is relative to channel members acknowledging themselves as leader and therefore wielding the greatest power within the channel. The first two classifications of channels, i.e. vertical marketing system and the free-flow channels are particularly relevant to the travel trade. For example, national airlines seem to be presenting themselves as the power wielders as carriers (particularly national and budget carriers) have started to cut intermediaries commissions since 2003 (Goldkuhl, 2005). Meanwhile, the single transaction channel is less relevant as it is based purely on economic considerations. This channel has no lasting relationship, as it is based simply upon one transaction because any more transactions may not be economically viable to other channel members.

Based on past and present theoretical studies of distribution channels, it is not surprising to note that hotels do not fall neatly into one classification of distribution channel service; as the industry is still evolving and coming to grips with the many possible channels of distribution, the task of selecting distribution channels have become more complex as new online channels surfaces. The next section will examine the types of distribution channels adopted by hotels with a focus on channels that are adopted via internet technologies.

3.3 Electronic channel: Hoteliers' awareness and dependence

3.3.1 Hoteliers' awareness of electronic channels

When deliberating on the online distribution and marketing strategies of the independent hoteliers, the most immediate question is: how much do these hoteliers know about the services offered by the various online channels available? In addition, it would perhaps be relevant to investigate if hoteliers recognize them as marketing or distribution or joint functions and if they are individually perceived to be operationally effective. Apart from the direct B2C relationship, many hoteliers may not be fully aware of what other channels they are working with, whether marketing or distributing. A study conducted by Thong (1999) on information system (IS) use in small businesses suggested that the CEO's IS knowledge was one of the most influential factors in adoption since channel members themselves may not be aware of how many other organizations or individuals constitute the total channel. Managers involved in channel selection should therefore have a comprehensive understanding of the underlying forces at work in a channel design (Bowersox, Cooper, Lambert & Taylor, 1980).

According to Robert, Schurr and Oh (1987), the first of five phases of relationships in marketing channels begins with awareness. Developed in the form of a life cycle, the five phases depict the possible stages a channel relationship could travel through. Prior to embarking on the life cycle of channel relationships, a hotel will have to deliberate over its channel design, described by Bowersox et. al. (1980) as a planning process, where a firm either markets a new service or modifies its existing distribution arrangements. In the case of a functioning hotel, it generally entails the latter. For a channel design to succeed, hoteliers will have to be aware of which channel options are available. Where a firm

markets a new service, it is referred to as channel adoption and the modification of existing arrangements referred to as channel creation (Walters, 1974).

A channel relationship is classified as being at stage one of awareness (adapted from Coughlan, 2003) when,

- a. the hotel sees an intermediary as a feasible exchange partner;
- b. there is little interaction initially between hotel and intermediary;
- c. networks are critical: one player recommends another;
- d. experience with transactions in other domains (other products, markets, functions) can be used to identify parties.

Discussions within Bowersox *et. al.*'s (1980) behavioural and environmental relationships describe the manufacturing sector. These concepts could be adapted to explain the rationale and development of a hotel's electronic channel strategy and how these relationships may affect the hotelier's understanding and subsequent adoption of electronic distribution channel arrangements.

3.3.2 Hoteliers' dependence on electronic channels

A hotel electronic marketing channel can vary in degrees of complexity. This could occur when hotels have rooms that differ in style, especially in the case of higher end unaffiliated independent hotels. Hotels in general have frequently been labelled as offering a homogenous product but this has not been an accurate label for many unaffiliated hotels. Each room in many of these hotels could present a different characteristic, differing in styles and designs. As these hotels market themselves to various traditional tourism organisations and travel operators, they are now presented with more possible marketing channels via the electronic mode which may or may not duplicate itself with their

traditional marketing structure. For example, a particular online site may solely promote only independent hotels, or it would only market and sell lodgings that come with an in-house award winning restaurant. The complexity and variety of products offered by these hoteliers contribute to the variety of channels we have discussed earlier.

Given that marketing and distribution revolves around institutions and agencies participating in the process of 'making a product available to the end-user, dependence is a crucial concept in channels research' (Kumar, Scheer & Steenkamp, 1995). Independent hotels vary in levels of operational complexity and it is therefore often difficult for them to ignore the internet as another potential marketing tool. Conversely, a new sector of online marketing intermediaries such as destination marketing sites and online travel sites cannot exist without selling hotels as part of their product range. Interdependence is then created between hotels and these online marketing intermediaries, suggesting that forming a functional relationship can only work to both parties' advantage. Although there are many ways in which a firm can become dependent on another, the replaceability of a firm's partner is one of many measures of a firm's dependence (Kumar et. al., 1995). The advantage herein, lies with the hoteliers as there are a whole host of online middlemen (marketing or distributing intermediaries) who are 'replaceable', but the challenge would be searching for effective and dependable channels.

El-Ansary & Stern (1972) claimed that the level of dependence could also be measured by the sales and profit method where the larger the percentage of sales and profit contributed by the source firm to the target firm, the greater the target's dependence on the source. According to Ujma (2001), channel members do not act in a harmonized manner, and cooperation between them is important, therefore interdependence should be encouraged.

For dependence to be successful, some form of specialization has to be created by channel members. Specialization as explained by Bowersox *et. al.* (1980) was within the context of economies of scale in advanced industrial societies, where costs are strived to be reduced to aid economic activity. However, in terms of the hospitality trade, online intermediaries (marketers or distributors) specialize to distinguish themselves amongst their competitors, although not all of them do. For instance, an online marketing intermediary may specialise solely in hotels that are located in a particular region or county, or they may only specialize in marketing budget independent hotels. Economic opportunity could be gained by ingenious specialization and knowing which niche market to exploit.

However, according to Bowersox *et. al.* (1980: 7), 'routinization in marketing can also eliminate the need to search out a new specialist and negotiate a transfer price each time a need is experienced'. Therefore as long as there is a need for maintaining consistency in terms of routinization in a channel, the relationships in a channel will continue to exist. For example, if a travel agent has sufficient business volume whether in terms of airline seats sale, hotel room occupancy or car hires, it may consider renting a CRS from a GDS, since this would reduce the confirmation lead time and also the costs of communication.

Depending on which GDS and in which continent the travel agent is operating, a CRS may be hired or offered at no cost.

The combination of these theories and concepts explains how dependence along with awareness, are important considerations to achieve the study's objective of identifying key parameters, based on an hotelier's behavioural profile.

3.4 Summary

With the proliferated use of the internet, hotels are experiencing a more intense fusion between the two business functions of marketing and distribution. According to a study by Tchokogue & Boisvert (2002), 77.8% of internet sites are promotional, while only 12.3% are informational and 9.9% are transactional. Distribution is correctly perceived as part of marketing, where a created channel or channels enables the exchange and transaction to take place, regardless of whether the exchange involves bricks and mortar intermediaries, or middlemen as indiscernible as the internet. Stern (1969) pointed out that the success of a product is dependent on the channel as a competitive unit and can only be determined by the effectiveness with which resources are assembled throughout the distribution channel. In the case of hotels, these resources are the intermediaries they have selected, and the methods in which pricing and allotment contracts are determined between them.

The roles of marketing and distribution can be distinct as much as they can be inexorably intertwined. By obtaining information on the cost-effectiveness or successes of marketing and sales resources, organisations are then able to decide on the more viable options of distribution. For instance, in a simple scenario, a hotel may establish where the source of business is derived from, by systematically categorising the source of business on a weekly or monthly basis. These sources may include travel agents, tourist information centres (Garce, 2004) coach operators or walk-in guests. By doing so, a hotel which has a majority of say 60% of reservations from travel agents may decide to enhance its distribution strategies with existing travel agents or expand its network of travel agents. Distribution often appears to sit conveniently alongside marketing particularly within the context of online distribution within the travel trade, because while a travel product is being marketed online, the function of distribution could directly or indirectly come into play. In another example, a hotel may have a website and use the electronic mail to interact with its

customers, but the hotel may have an online payment system built on to their website enabling their product to be directly distributed. Because of the possibility of direct distribution, it was suggested by Hibbard, Kumar & Stern (2001), the potential for conflict between suppliers (hotels) and channel intermediaries has greatly increased as the multi-channels distribution systems continues to expand. Although internet technology adoption for commercial use within the hospitality industry is slower than that of the airline and transportation industry, most of today's online hotel reservations methods are still reliant on intermediaries' inefficient and costly systems (Garces et. al., 2004)

Having distinguished the principles of hotel online marketing channels and online distribution, this chapter has fundamentally underscored the importance of online distribution in the hotel sector by examining how hotels have repositioned themselves from using mainly offline channels to newer online channels. The relationships between hotels and channels have also revealed that hoteliers have little choice but to consider the use of these newer online mediums or risk losing out to hoteliers who are already utilizing them in their marketing and distribution channel strategies.

Moreover, as the number of internet technology users increases, it has been widely recognised that hotels in general have a slower uptake or more ineffective adoption of new e-commerce distribution strategies. This is particularly so in 'smaller and independent properties in peripheral and resort areas' (O'Connor, Buhalis & Frew, in Buhalis & Laws, 2001: 337) Therefore, to examine the reasons for this phenomenon, the next chapter will delve further into the investigation of possible peripheral factors such as the location, the scale of operation etc. that were found in earlier studies to have an effect on the selection of internet technologies used for the marketing and distribution of hotels (King & Slavik, in Buhalis & Laws, 2001). Factors such as the hoteliers' perception of technology use will

be examined together with other determinants of behaviour, including 'ease of use', 'self efficacy', and 'competitive pressure', as they have also been found to influence technology selection and deployment decisions (Lee, Fiore & Kim, 2006). The following chapter will draw on the above reviews to construct a theoretical framework that forms the basis in discovering the independent hotelier's basic behavioural profile when assessing online channel adoption or continuation.

CHAPTER 4

HOTELIERS' CHARACTERISTICS & PERCEPTION AS ANTECEDENTS

4.0 Introduction

As discussed in the earlier chapters, there could be numerous reasons and factors that contribute to the decision made by hoteliers to adopt or not adopt internet technologies. This chapter examines these factors separately as endogenous and exogenous antecedents. Endogenous antecedents explain the internal 'environment' of both the hotel and the hotelier. In the case of the hotelier, these include their perception of costs and attitude of technology, such as the ease of use, its usefulness etc. The internal 'environment' of a hotel includes the operational characteristics that have been discussed in Chapter 2, such as its business performance levels, the number of rooms, the location etc.

Exogenous antecedents pertain to factors that originate external to the hotel, resulting in hoteliers reacting and perceiving events in an atypical manner. Examples include the competitive intensity of the hotel industry as a whole and customers' pressure. While the study recognises that entrepreneurship could be labelled as an endogenous antecedent, this study adopts Bridge, O'Neil & Cromie's (2003) view that the trait is influenced primarily by the external environmental factors of demand, supply and equilibrium, therefore entrepreneurship will be labelled under environmental features of exogenous antecedents. This supposition is explained in greater depth within this chapter.

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4.1 Endogenous antecedents: Hotelier characteristics

Included in the examination of hotelier characteristics are diffusion theories underpinned with technology acceptance models, so as to provide a more lucid examination of hotelier characteristics in a cognitive context. This method was also used in Akkeren and Cavaye's (1999) construction of a typology of factors leading to the discovery of technology adoption rates by dividing the factors into owner/ manager characteristics and firm characteristics. As Capozza, Falvo, Robusto and Orlando (2003) discovered, the variance in affective and evaluative attitudes are important cognitive elements for understanding the reasons behind people's perception and experiences with the internet. It is therefore pertinent to understand the insight of hoteliers, who are responsible for internet technologies adoption. As reported by Premkumar and Roberts (1999), perceived relative advantage was identified as a significant factor in new technologies adoption in small rural businesses. Similarly, Thong (1999) found that decision maker characteristics and organizational characteristics had roles to play in influencing technology adoption. Harrison et. al. (1997) also argued that owner or decision maker's characteristics had a bearing on technology adoption.

4.1.1 Age and education

Technology adoption studies have often incorporated age and education as independent variables in examining adoption and diffusion of technologies phenomenon. For example, in Kwon's (1990) study of technology use, age was employed as a *maturity* variable. In another study by Brancheau and Wetherbe (1990), specific adopter characteristics including age and education were used to examine the adoption of spreadsheet software by individual accountants and managers.

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Age is deemed important in this study because the internet market exploded only with the introduction of web technology in 1993 (Song & Zahedi, 2006), implying that younger hoteliers may have had the opportunity to grow up with the technology and older hoteliers may have had to make an effort to assimilate with it. It was also found in Dunne and Hughes (1994) that smaller and younger firms have a higher rate of growth in relation to technology use.

A decision maker's age has been found to be significantly correlated to age in a number of studies looking at technology adoption by small businesses (Ching & Ellis, 2004; Thong, 1999). Javalgi and Ramsey (2000) suggested that a country's technological sophistication is an important factor that influences e-commerce use and growth. In their study, technological sophistication was defined by the users' familiarity with technology, educational level, and they were found to influence technological innovations and entrepreneurial spirit as well. It was also argued in Sharma and Upneja's (2005) study that the lack of training and education opportunities was one of the few identified factors that affected competitiveness and performance of small hotels. This was supported by Romer's (1986) findings that both the operator and employee's educational levels were found to influence performance of businesses.

4.1.2 Perceived cost of internet technology adoption

According to Griffin (1997), the investment in the use of a distribution channel must be valid from an economic perspective. Ching & Ellis (2004) also suggested that the cost of innovation consists of many components. They include initial investment costs, operational costs, costs of training etc. However, this perception of costs in relation to internet technology adoption can be understood from two perspectives. The first angle seems to be more frequently discussed and that is the initial cost of adopting internet technologies for

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commercial use. The second perspective is from the cost savings that could result in internet technologies adoption, such as savings in administrative and communication costs (Garces et. al., 2004). Ellsworth and Ellsworth (1995) identified cost savings as one of the top ten business uses advantages for the internet. It was also noted in Javalgi & Ramsey (2001) that, experts believed processing costs could be reduced by up to 20 per cent in industries such as electronics and freight transport, while Cohn et. al. (2000) discovered that costs could be reduced by 12 per cent with a 9 per cent boost in productivity. Cronin (1994) similarly reported that by using the internet rather than alternative channels, cost savings could be achieved.

While many studies have found that limited investment on technology is one of the many important factors affecting the competitiveness and performance of small hotels (Sharma & Upneja, 2005), the cost of internet technology seems to be in a state of Catch-22. On the one hand, the cost of internet technology adoption appears to be reducing due to more potential and actual users of technology in business settings (Slade and Van Akkeren, 2002) but on the other, the cost of adopting internet technology can still be inhibiting, depending on the required technological specifications. For small businesses with presumably smaller investment funds, even the most basic technological investment could sometimes be impeding as discovered by Piovesana and Raush (1998) and McGowan and Madey (1998). This phenomenon was proven in Kumar and Petersen's (2006) discovery that only companies with a substantial cash flow are able to adopt e-commerce strategies, because of the substantial set up costs associated with infrastructure support required of internet web sites.

The simplicity and the minimal expense involved in adopting internet technology (Murphy, Raffa & Mizerski, 2003) have been extensively discussed and evaluated, in both academia

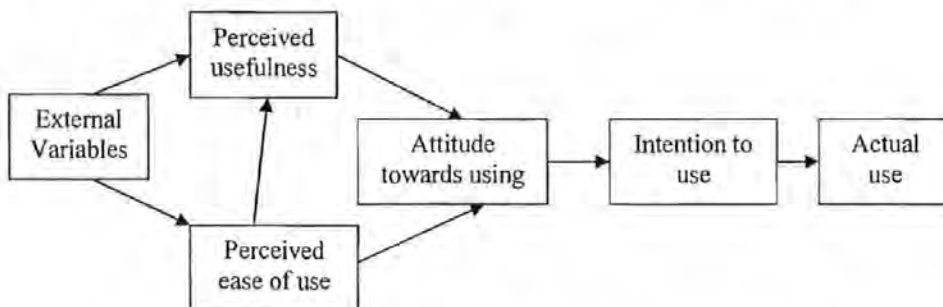
_____HOTELIERS' CHARACTERISTICS & PERCEPTION AS ANTECEDENTS and industry. Lee (2004:57) affirmed succinctly that 'with inexpensive computers, low priced application packages, and low cost internet service providers, the cost of information systems has decreased to a level where the cost of computing ... is not a stumbling block...no matter how small the business'. Palvia et. al. (1994) has similarly suggested that cost is not a significant disincentive of adoption. This may have been perceived as there is increasing competitive intensity but yet a scarcity of capital (particularly in smaller organisations), and a general recognition that electronic distribution channels are essential (O'Connor & Frew, 2004). However, there could occasionally be an element of perceived financial slack by the hoteliers rather than the simple explanation of perceived costs that influences a hoteliers' decision to adopt or not adopt. Financial slack has been defined by Bourgeois (1981:23) as 'a cushion of excess resources available in an organization that will either solve many organization problems or facilitate the pursuit of goals outside the realm of those dictated by optimization principles'. Hoteliers who have slack resources may therefore deploy them towards adopting new technology. If there are limited or no slack resources, hoteliers may be seen as resisting internet technologies investment.

In O'Connor and Frew's (2004) methodological study on hotel electronic distribution, initial capital cost was found to be important when evaluating channel adoption. This view was supported by Premkumar et. al. (1994) who concluded in their study that the cost of adoption is an important consideration when implementing technology. Despite the number of studies that have confirmed the negative relationship between the cost of technology adoption and adoption rates, Hamill and Gregory (1997) believed that although global advertising costs poses as a barrier, they will be considerably reduced as the web makes it affordable to reach a bigger audience.

4.1.3 Attitude and perceived usefulness of technology

There is a plethora of literature on the constructs of the internet applications adoption model. Of particular significance was Davis's (1989) technology acceptance model (TAM- Figure 4.1) which emphasized the importance of perceived ease of use and perceived usefulness in influencing technology adoption decisions (Venkatesh and Davis, 1996; Poku and Vlosky, 2004; Karahanna and Straub, 1999; Malhotra & Galletta, 1999).

Figure 4.1: Davis's et. al. (1989) Technology Acceptance Model (TAM)



Perceived usefulness (PU) has been defined as the extent to which an individual believes that by adopting a particular technology, it would improve his or her performance (Davis, 1989). The notion of 'perceived ease of use' (PEOU) on the other hand illustrates the individual's perception of how much effort is required to use an adopted innovation. After all, the use and adoption of the internet entails a certain level of expertise in the technology (Ranchhod & Gurau, 2000). The main motivator in the use of technology is perceived usefulness (instead of perceived social pressure) (Igbaria et. al., 1996). Both PU and PEOU therefore serve to inform the attitude a user takes on, this attitude can be defined as the user's perceived appeal to the adoption of a technology.

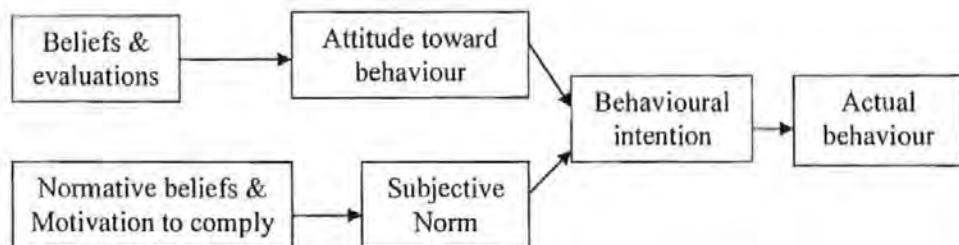
From this point on, the attitude developed by the user will influence his/her behavioural intention to use the system. Actual use by the system is then predicted by behavioural intention (Malhotra & Galletta, 1999). In general, the TAM has been proven to be

successful in predicting about 40% of a system's use (Ajzen & Fishbein, 1980; Legris, Ingham & Collette, 2003).

4.1.3.1 Theory of Reasoned Action & Theory of Planned Behaviour

It is important to emphasise that the TAM was adapted from Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA). The TAM was based on the fundamental construct of the TRA, which examined the attitudinal determinants of predicting and understanding human behaviour. This includes the 'determinants of behaviour and relations among beliefs, attitudes, subjective norms, intentions, and behaviour' (Igarria et. al., 1996: 227) as they play important roles in influencing an individual's decision to use technology (Poku & Vlosky, 2004). More significantly, Sheppard et. al.'s (1988) meta-analyses investigating the TRA's effectiveness in marketing showed that the TRA 'has a strong predictive utility, even when utilized to investigate situations and activities that do not fall within the boundary conditions originally specified for the model' (ibid: 327).

Figure 4.2: Fishbein & Ajzen's (1975) Theory of Reasoned Action (TRA)



Within the context of this study, the theory predicts the intention to carry out a behaviour based on the decision-maker's attitude towards that behaviour, rather than by the decision-maker's attitude towards an internet application per se. The theory further posits that a decision maker's plan to perform a behaviour may be influenced by the normative social

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beliefs held by the decision maker herself. For example, 'a decision maker might have a very favourable attitude toward having a drink before dinner at a restaurant. However, the intention to actually order the drink may be influenced by the decision makers' beliefs about the appropriateness (i.e. the perceived social norm) of ordering a drink in the current situation (with friends for a fun meal or on a job interview) and her/his motivation to comply with those normative beliefs' (Hawkins, Best & Coney, 2001 in Hansen et. al., 2004: 540). Conversely, the same applies for an hotelier who is deciding to adopt an internet application. The hotelier may have a very favourable attitude towards marketing the hotel via the local travel guide, but the intention to advertise again with the guide in the forthcoming year, may be influenced by the hotelier's beliefs about the suitability of the mode, in light of an array of online marketing channels and his/her motivation to comply with competitors' actions and/or beliefs.

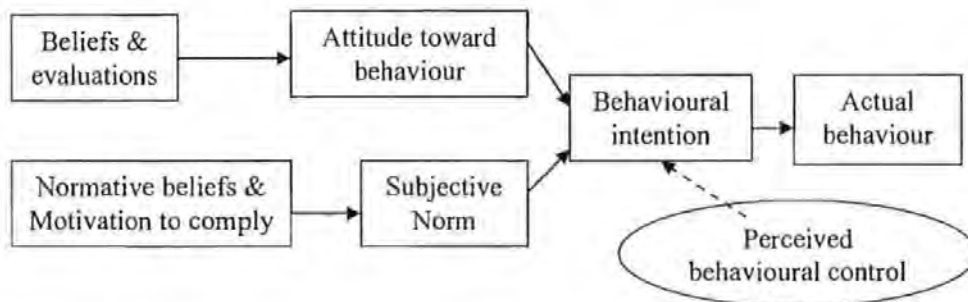
Applied to internet application decisions, the TRA states that the immediate antecedent of the decision to apply is the intention to adopt an internet application (internet application intention). An internet application in turn is predicted by the extent to which the hotelier evaluates adopting the internet application positively or negatively (adoption attitude), and the perception of social pressure to adopt the application (subjective norm). Therefore, according to the TRA, hoteliers are more likely to adopt an internet application if they have a positive rather than a negative evaluation of adopting an application. They will be further inclined to do so if they experience positive social pressure from others relevant to the industry to do so (these significant others could be competitors, clients, suppliers etc.).

Extending the TRA, Ajzen (1985) proposed the theory of planned behaviour (TPB) which is about the perceived difficulty to perform the behaviour of interest (Van Hooft, Bhorn, Taris & Van Der Flier, 2006). The highlight of TPB is the belief about the presence of

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factors that may further or hinder the behaviour of interest (Bamberg, Ajzen & Schmidt, 2003). In contrast, the TRA is concerned with behaviours that an individual has control over (Hansen et. al., 2004). This theory was widely disputed because, as was observed by Sheppard et. al. (1988) there are actions undertaken that can result from factors that are beyond an individual's control, which falls outside the conditions of the model. For instance, a hotelier may be prevented from adopting an internet application if the hotelier perceives the adoption process as too difficult, or if the hotelier does not have the financial or human resources required to carry out the planned behaviour. The TPB includes the consideration of factors that are beyond an individual's control therefore, 'perceived behavioural control' (PBC) as a determinant of behavioural intention is added to the TRA to shape the TPB. The theory of planned behaviour is displayed in figure 4.3.

Figure 4.3: Ajzen's (1985) Theory of Planned Behaviour (TPB)



The additional element of perceived behavioural control is important to the study because it allows for the consideration of other elements such as the perceived costs and perceived competitive marketing intensity (in questionnaire).

In summary, the TAM is an adaptation of the TRA while the TPB is an extension of it, there are however two key differences between the TAM and the TRA/TPB. Firstly, the TAM does not include the consideration of the subjective norms construct (found in the

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TRA) as it was found to be insignificant in one of Davis's later studies (Davis, 1989). Second, the behavioural construct (found in the TPB) is also not included in the TAM because specifically, behavioural control has had limited importance in relation to IT usage behaviour (Dishaw & Strong, 1999). However the TAM includes the very important assumption that users' behaviour is voluntary or at the discretion of the user (volitional) which also partially explains the exclusion of both the subjective norm and behavioural constructs in the model.

A drawback of TAM for understanding internet applications adoption amongst independent hoteliers is its lack of focus on the spread or diffusion of technological (internet) adoption. The internet is a tool for which hoteliers are provided with an array of marketing and distribution possibilities. Not taking into account how internet innovations are utilized when evaluating technology acceptance, use and performance has contributed to a rather perplexing variation of results (Dishaw & Strong, 1999). While TAM is effective in evaluating the concept of user's perception of technology use, having implicitly included the usefulness of internet applications regardless of innovation intensity, could perhaps prove to be a better enhanced model with the explicit inclusion of the various levels of internet applications adopted. Rogers' diffusion of innovation paradigm helps to address this problem.

4.1.4 Understanding technology adoption using the theory, Diffusion of innovation

The identification of conditions or factors that could facilitate the adoption of information systems into businesses has been a subject of rigorous debate (Legris, et. al., 2003). While the adoption of varying internet applications increase, the diffusion of internet applications

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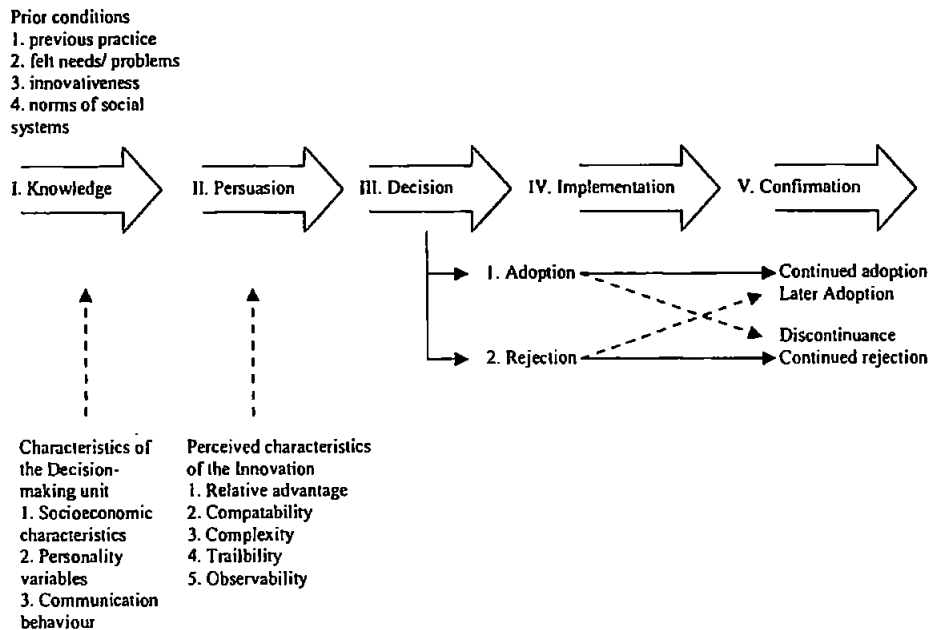
adoption in different sectors has also been a subject of interest for investigation (Foley & Samson, 2003).

According to Knol and Stroeken (2001), adoption and diffusion are separate concepts that occur at very different levels, as adoption 'takes place at the level of the individual adopting unit and at the micro-economic level (ibid: 228)'. However, the proliferation of internet use in expanding marketing, and distribution has meant that the diffusion of varying types of internet use is gradually being perceived as the norm. The concept of diffusion can be understood as 'the process by which an innovation is communicated through certain channels over time among the members of a social system' (Rogers, 1995: 5). More specifically the diffusion of internet applications across the hotel sector could be explained by Rogers' diffusion of innovations decision process. Rogers' diffusion of innovations construct has some semblance to the TAM as it recognises within the innovation-decision process model (figure 4.4) that the process is where 'an individual passes from first knowledge of an innovation, to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of the decision' (ibid: 163). It was also noted in Moore & Benbasat's (1995) paper that perceptions that are hypothesized to have an effect on attitude are also classified as perceived characteristics of innovations; where both were found to be linked with adoption or rejection decisions.

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Figure 4.4: A model of stages in the innovation-decision process

- adapted from Rogers (1995: 163)



Moreover, Rogers has also specifically stated that the diffusion of innovations model is the 'process and rate at which various groups of individuals adopt an idea or innovation in a given society (Shea, Enghagen & Khullar, 2004: 146)'. In short, the definition of Rogers' model indicates that: (adapted from Ho, 1999)

- the adopters can be an individual, group or organization at various levels of the social system
- the objective of the model is innovation use
- the process through which diffusion occurs is through communication
- the context of the innovation is a social system
- it is about changes taking place over time.

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In other words, Rogers' diffusion model is applicable to the hotel sector. Adhering to the first definition of the model, the model is made up of adopters who are individuals. The diffusion model will help this study to appreciate the diffusion of innovations amongst the hoteliers. Communication technologies and innovations are being diffused. The range of internet technology uses, but not the diffusion of technology amongst small and medium-sized businesses, is a common application that requires internet access, email, while other applications such as e-commerce are enabling online payments were possible. It is impossible to determine which of the hoteliers, but this study will seek to determine which internet applications are the most common. It is impossible to determine if diffusion of some magnitude is occurring.

One of the most important aspects of the diffusion model is the changes over time. In the context of the diffusion model, un-adopted at various stages of a hotel application occurs within the social network. The diffusion model in innovations context 'as a set of interdependent units to accomplish a common goal'. The diffusion model consists of independent hoteliers in a social network differentiated from other units. How the structure of a social system can facilitate the diffusion of innovations is a key aspect of the diffusion model.

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system, although it was also acknowledged that it is very complex to separate the members of the system from the structure of an individual's characteristics.

A possible scenario in the said structure within the UK independent hoteliers sector is in the example of the location of a hotel, whether it is located provincially or in the city. A hotel that is located in a city may be more likely to adopt new internet applications more readily compared to a provincial hotel. This could be due to factors ranging from easy access to new technology (after-all not too long ago, getting a high speed connection was a lottery of geographic location as one had to be within a particular catchment area of a cable company (Wearden, 2006)) to the availability of a concerted destination marketing strategy within the hotel's locale.

Furthermore, the groups of individuals who adopt a form of system use (a.k.a. adopter groups) are then categorized as innovator, early adopters, early majority and laggards or non-adopters (Rogers, 1995) and each of these groups can then be described by a whole range of social factors, e.g. personal or organisational characteristics, socio-economic status etc. With these adopter categorizations, the criterion of innovativeness has to be met, although it was acknowledged in Rogers's (ibid) work that such a classification is a generalization to primarily understand human behaviour. These categorizations of adopter categories reflect the fact that internet applications are adopted over a period of time because not all hotels in an industry adopt an internet application or a number of applications at the same time. The time series partially helps to explain the diffusion effect as it is the degree of collective influence on an individual to adopt. While the number of individual adopter grows, the next level of adopter categorization ensues, allowing for diffusion to take place.

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However, as pointed out by Shea et. al. (2003) the diffusion effect also depends on the degree of interconnectedness amongst the players of an industry. Communication stirs the interconnectedness and concurrently spurs the diffusion of information for a new system or internet application. According to Rogers (1995), diffusion in the original diffusion model was largely based on the physical and geographic proximity of individuals, but in contrast, communication via electronic mail which uses internet technology allows information to spread more quickly in a geometric manner because of the breadth of interconnectedness between individuals and groups (Wilson, 2000).

Therefore while diffusion and adoption behaviours are separate concepts that could be examined independently, they must nevertheless be examined simultaneously to obtain a complete understanding the complexities of internet applications use within organizations. Past examples of studies that have integrated the two include Ginzberg's (1981) use of the diffusions of innovations model to examine the adoption of information systems and Lucas et. al (1990) referred to the TRA and diffusion models when describing their adoption model. More recently Sigala et. al. (2000) integrated both innovation and adoption theories in the investigation of the diffusion and application of multimedia technologies in the tourism and hospitality industries, where it was discovered that the diffusion of the medium were rampant across the two industries.

Evidence of the complexity in understanding the adoption of information, communication and technology (ICT) by small medium sized hotel enterprises (SMHE), was further strengthen in Murphy's (2004) attempt to build a model portraying the diversity of diffusion of information and communication technologies in the hospitality sector. She confirms that the adoption of technology is 'far from being a simple stage by stage progression'. As her new model reveals in Table 4.1, the adoption of ICTs by SMHE is not

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only influenced by internal factors, but by uncontrollable external factors. At each stage of the computer era, an estimate of the time frame is presented together with examples of more common IT applications of the era, and an indication of what the general external environment was like, in terms of marketing, funding and human resource issues. This supposition is in line with Ajzen's (1985) Theory of Planned Behaviour – the element of 'perceived behavioural control.

With Rogers' model, the effects of these factors (internal and external) on the communication rate and the rate of adoption are examined. According to Ellsworth (2000), Rogers' model is an excellent general practitioners' guide as it provides guidelines for change initiators to learn about the features they can build on with the provisions of innovation, and to facilitate its acceptance by the targeted adopted category.

Table 4.1: Murphy's (2004) Model of Diversity of Diffusion for small medium sized hotel enterprises

<i>Stages of Gamble's model</i>	<i>Time Frame</i>	<i>IT applications and infrastructure</i>	<i>Markets and customers</i>	<i>Funding & Finances</i>	<i>Channels of distribution</i>	<i>Human resources</i>
Stage 0 Pre computer	1985	PMSs, word processing, accounting	Mass markets. Customers not connected	Economic recession	Fragmented & lengthy	Lack of training; poor strategic skills; no IT training; low entrepreneurship Manager's aversion to technology
Stage 1 Clerical hotel computer	1990	GDSs & CRSs		Little capital investment; low govt. funding		
Stage 2 Administrative computer	1995	Outsourcing application software; rise of the DMS	Digital customers and marketplace evolving	Growth of EU funding	Disintermediation, Reintermediation	
Stage 3 Tactical computer	2000	Web based applications, ASPs, destination management systems				
Stage 4 Creative connected computer			Customised and niche products; connected/ mobile	Continued EU support; UK initiatives	Direct channels; customer choice	

4.2 Exogenous antecedents

4.2.1 Entrepreneurship

Although this study acknowledges that entrepreneurship as an antecedent can also be considered endogenous, it is deemed more suitable for the antecedent to be classified as exogenous for this study on the following grounds. Entrepreneurship is a multidimensional concept where its definition could be subjected to an array of determinants because, the definition adopted is dependent upon the focus of research undertaken (Audretsch, Thurik, Verheul and Wennekers, 2000). A universally accepted definition of entrepreneurship does not exist, although a closer examination of academic literature seems to reveal two camps of thought in relation to how entrepreneurship can be defined (Getz & Petersen, 2005). The first camp expounded that the definition of entrepreneurship focuses on the entrepreneur's personality traits (e.g. Lambing & Kuehl, 2003), however more commonly many authors have disputed the personality traits approach as studies have failed to identify a common set of traits for entrepreneurs or differentiate these traits from managers (Getz & Petersen, 2005).

Furthermore, Bridge, O'Neill and Cromie (2003) discovered, while examining the theories of entrepreneurship that various antecedents, were found to influence the level of entrepreneurship. Interestingly, these possible influences were described as being micro, meso and macro and are a combination of 'cultural and demand factors, external supply factors, external intervention and equilibrium rates' (ibid: 106).

For this study, the focus of the research is on technology adoption, therefore the context of entrepreneurship assessed, is in relation to the extent of reaction to the external environment. It is not only about the personality traits of an individual (Lambing & Kuehl, 2003) but it is about a trait that is pre-dominantly influenced by the external environment.

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Thus far, there have been little studies on how entrepreneurship can affect a hoteliers' propensity to adopt internet applications although internet technology adoption by SMEs have been well documented with many literatures focusing on the level of entrepreneurship possessed by enterprise managers or owners (Sparkes & Thomas, 2001; Fillis, Johansson & Wagner, 2004; Taylor & Murphy, 2004). Most studies had focused on the adoption of technology or the development of technology use in smaller enterprises but had seemed to neglect the investigation of entrepreneurship as a legitimate factor for consideration. In Martin's (2004) study of internet impacts on small UK hospitality firms, it found that knowledge attributes possessed by owners were required for the successful implementation of the internet, and presumably because small hospitality firm owners are generally labelled as entrepreneurs, their entrepreneurship has not been questioned. Similar studies of SMEs have also considered other factors and determinants of internet adoption and most seem to presuppose that entrepreneurs possess entrepreneurship. However, Getz and Petersen's (2005) examination of entrepreneurship orientation of business owners in tourism and hospitality concluded the problem of defining entrepreneurship rather succinctly, when they associated 'true' entrepreneurship with innovative management skills. Given that many studies link 'innovation' with technology use, it will therefore be appropriate to assume that innovative use of technology could be attributed to entrepreneurship. Therefore the use of technology or the major factors for adoption are a combination of a motivated individual (the owner) and good business management. A study by Cragg et. al. (2001) confirms this view, as they discovered that owners of SMEs with a keen interest in information technology and innovation would adopt technology more readily.

However, as Simpson and Docherty (2004) laments, academic literature provides very little information on why SMEs adopt e-commerce. Fillis, Johansson and Wagner

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(2003:336) concluded in their study that the 'key to understanding the reasons behind acceptance and dismissal of e-business in small firms is through the uncovering of owner/manager related factors such as attitudes, behaviour, competencies, cultures and values'. According to Cameron and Freeman (1991), these are the factors that can be organized into a common set of dimensions on both psychological and organizational levels. According to Igarria et. al.'s (1996: 235) study on the use of computer technology, it discovered that 'perceived ease of use plays a major role in affecting the use of computer technology, mainly indirectly through its influence on perceived usefulness...'. The following section will discuss the two elements of customers' pressure and competitive marketing intensity and their relevance to the study.

4.2.2 Customers' pressure

Customers' internet habits examined in Garces' et. al. (2004) study on the importance of dealing with the difficulties experienced in the use of e-commerce, discovered that customers' habits were important considerations by an organisations' decision makers when deciding to adopt electronic commerce. According to Premukumar and Roberts (1999) and Ha (2000), both their studies showed that customers' pressure is an important factor when decisions were made about whether internet technologies should be adopted. Iacovou (1995) similarly discovered in his study that external pressure to adopt is a significant factor in the adoption of IT. This finding is also supported in Slade and Van Akkeren's (2002) study, as pressure from customers, competitors and suppliers were found to influence e-commerce adoption by SMEs.

Combining technology adoption and enhanced customer service experience, Froehle & Roth (2004) suggested in their study that customer satisfaction derived from an effective adoption of technology by organisations, could enhance the overall customer experience.

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According to Chen (2005), the phenomenon of customers relying on the internet is just the beginning, as the numbers are set to grow rapidly. The growth of internet usage worldwide between 2000 and 2007 was 214%. Furthermore, organisations are compelled to adopt the internet to improve customer service and product knowledge, as the successful integration of the two has been found to be crucial to a firm's overall performance (Zeithaml, Parasuraman and Malhotra, 2002).

Past research on the relationships between the adoption of internet technology and improved customer service have often found that they are directly correlated (Kumar and Petersen, 2006). This occurrence suggests that the use of internet technology is changing the way in which businesses are conducted, and all organisations regardless of their size will have to adopt such technologies accordingly to remain competitive, as basic internet technology will no doubt become a benchmark for customer satisfaction (Rust and Kannan, 2003).

4.2.3 Competitive marketing intensity

Competitive forces and the number of competitors have been emphasized in Porter's (1980) strategic framework of the five forces of competition. Intensity of industry rivalry is perceived as an important internet competitive strategy given that competitor prices can now be accessed online easily, enabling online consumers to use these sites to compare online prices (Song & Zahedi, 2006). For organisations to remain competitive and relevant, it is necessary to incorporate e-commerce strategies into all organisations' business strategies (Kumar and Petersen, 2006). Similarly, Gounaris, Dimitriadis and Stathakopoulos (2005) suggested that although internet users may be growing rapidly, the growth of online buyers are much slower, creating a competitive need for companies not just to acquire capital to invest in technology but to be able to strategise their use including

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creating traffic to their websites. A study conducted on 78 small businesses by Premkumar & Roberts (1999) reported that both external and competitive pressure was significantly related to the range of technology adopted. Pringle (1995) also suggested that hotels' adoption of internet technology to conduct e-commerce is due primarily to external pressure, a simple situation of, if everyone else has it why not us? Nonetheless, Hamill and Gregory's (1997) study on internet marketing and internationalisation discovered that a high proportion of UK SMEs were keen to adopt effective internet use to achieve international competitiveness. Similarly, O'Connor and Frew (2004) discovered in their study of hotel electronic channels of distribution, that the highest scoring factor (i.e. rated highest priority adoption factor) was marketing oriented, in contrast to other factors such as operational, financial, technical and managerial.

A comprehensive review by Chircu and Kauffman (2002) revealed a very strong case of how competitive intensity as a factor has an impact on the adoption of technology amongst businesses. Of particular relevance is Kocas's (2003) examination of price evolution in electronic markets, where the diffusion of technological innovations was found to have been influenced by the dynamics of inter-firm competition. Iacovou et. al. (1995) too confirmed that competitive pressure is one of the many factors that have a bearing on technology adoption by businesses.

As argued by Guthrie and Austin (1996), the pressure of greater competition through the internet has resulted in lower costs and higher quality. However, Lee's (2004) study on internet technology adoption in small businesses found competitive pressure to be insignificant, although the study did conclude that 'small businesses are more concerned with other aspects of technology than its contribution to the competitive power of the firm' (ibid: 64). While many studies have acknowledged and confirmed that small businesses

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are facing increased competitive pressure, the group often lacks the resources or the experience to fully exploit technology (Raymond and Lorrain, 1992). One of the objectives of this study is therefore to investigate if competitive pressure is indeed a significant factor in hoteliers' technology adoption decision making process.

4.3 Summary

Hotelier characteristics examined above, have in essence highlighted the key antecedents that were found to influence hoteliers' decision making process. Studies have found age and education to be significantly correlated to technology adoption while few studies have proven otherwise. An important antecedent found to be similarly important is entrepreneurship. Research has also linked 'innovation' with technology use, therefore the study will assume that innovative use of technology could be attributed to a hoteliers' degree of entrepreneurship.

It can be seen from this review that some of the most significant exogenous antecedents found to influence technology adoption decisions, include the cost of adopting technology, customers' pressure and competitive marketing intensity. Aiding in the development of a conceptual framework for the study, Davis's (1989) Technology Acceptance Model (TAM) was introduced to form the basis of this study's investigation. Together with Rogers' (1995) diffusion of innovations construct, Davis's TAM and the combination of antecedents reviewed to be significant in influencing the adoption of technology, will aid in the development of the conceptual framework for this study. As a background to the approach this study has undertaken, to achieve its primary research aim of constructing a taxonomy, the next chapter will explain both the contextual and practical issues surrounding its development.

CHAPTER 5

CONCEPTUAL FRAMEWORK

5.0 Introduction

One of the aims of this study is to construct a taxonomy of internet technologies adopted by independent hotels, and at the same time identifying the characteristics that influence the types and range of internet technology adopted by decision makers and hoteliers. A proposed conceptual framework for the study of the antecedents influencing internet technology adoption by independent hoteliers is presented in Figure 5.1. The framework draws on the two key literatures of hotels and their internet marketing challenges, this then leads to an illustration of the three categories of antecedents influencing the adoption of internet technologies for marketing (depicted in Table 5.1): hotel characteristics, hotelier/ decision maker characteristics and the external environmental features. External environmental factors have also been shown to affect the hotelier's decision on technology adoption. The first and third categories of hotel and external environmental features are drawn from past empirical investigations into technology adoption characteristics, while the second category, hotelier/ decision maker characteristics are drawn primarily from technology acceptance models and the theories of reasoned action and planned behaviour.

5.1 Developing a framework for analysis

According to Lee (2004), various approaches have been used to measure internet technology adoption. These include measurements of pre-adoption, present adoption and post adoption levels. This study retrospectively investigates the types and range of internet applications adopted by the independent hoteliers today. Based on past behaviour, the research identifies the characteristics of hoteliers who adopt internet applications at various levels, because past behaviour has been found to significantly improve the prediction of

later behaviour, over and above the effects of intentions and perceptions of behavioural control (Ajzen, 1991; Fredricks & Dossett, 1983; Bamberg et. al., 2003). Avison and Horton (1988 in O'Connor and Frew, 2004) referred to a multi-dimensional methodology that involves qualitative and quantitative elements should be conducted, so that a broad range of factors are taken into account ensuring that the evaluation process is more likely to be valid. However, when the business environment changes with new innovative methods of conducting businesses and trade, it will inevitably affect the decisions makers. Fiedler's (1967) theory, therefore suggests that these businesses must be able to adopt an effective operational paradigm and strategise accordingly, so that a desired performance level can be achieved. While the concepts of marketing and electronic commerce within the construct of independent hoteliers' behavioural dimensions, in discussing adoption, it is important to understand how core antecedents of both the endogenous and exogenous types influence the use of marketing and electronic commerce. Figure 5.1 illustrates the proposed research framework focusing on four major stratum of antecedents, decision makers' perceptions, internet applications adopted and perceived performance. The components of the research model shown in Figure 5.1 are described below.

Various models utilizing trans-disciplinary concepts were developed to form a theoretical synthesis, explaining the use of technology in relation to operational strategies within the tourism and hospitality sectors. Past examples of such studies include Murphy's (2004) model of diversity of diffusion was based on Gamble's (1984) model of IT diffusion in the hotel industry (presented in Chapter 4) together with Sigala et. al.'s (2000) investigation into the adoption of multimedia technology and Buhalis's (1998) examination of the strategic use of technology. The latter's work focused on destination management systems in the re-engineering processes of tourism companies. Murphy et. al. (2003) examined hotel websites and email management, acknowledging that the 'diffusion of innovations' model helped to explain the likelihood that hotels who initiate technological applications,

Figure 5.1: Conceptual Framework

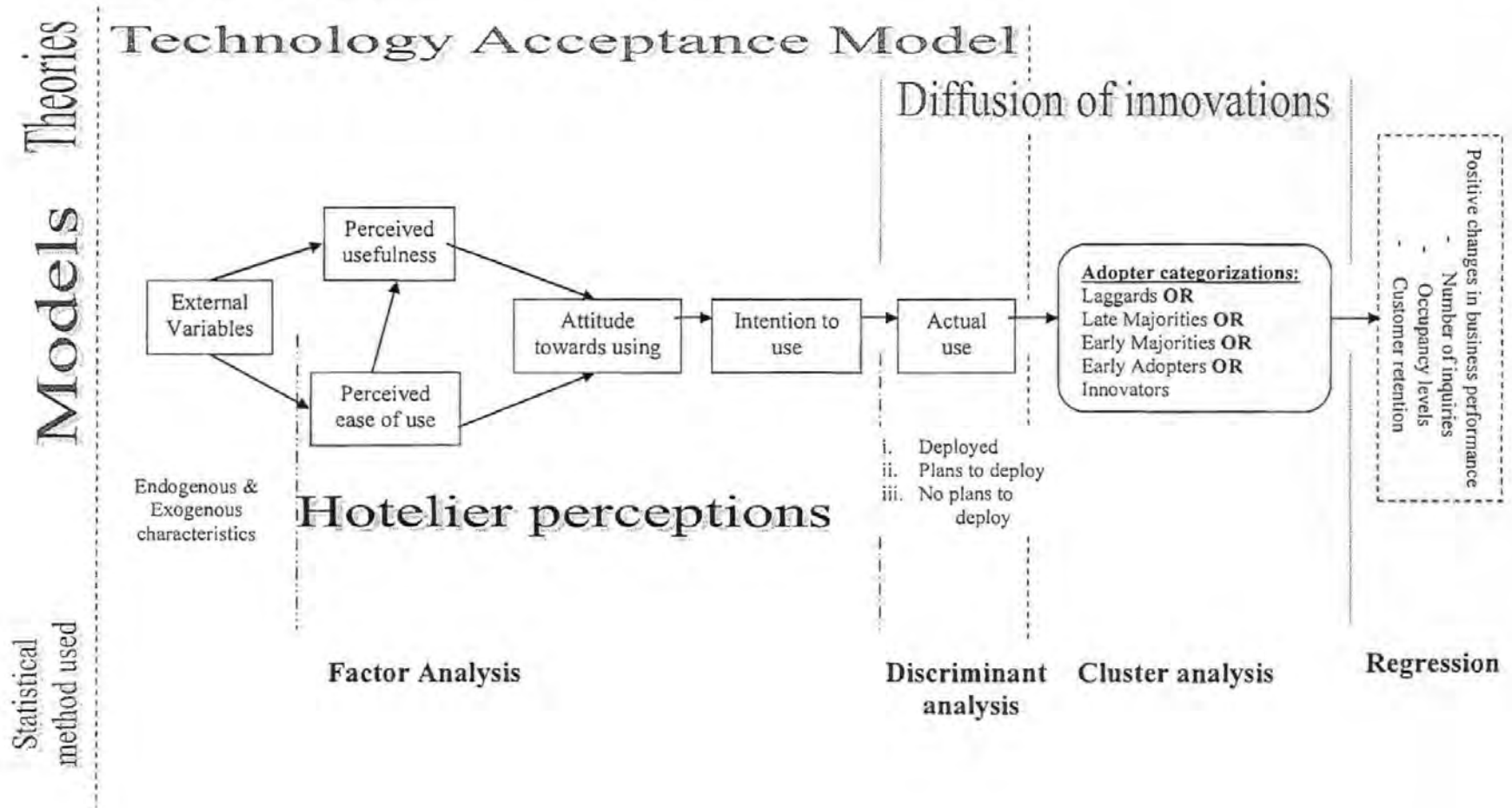


Table 5.1: Key antecedents affecting online usage identified in literature review.

Antecedents	Supporting references	Found in section
ENDOGENOUS FACTORS		
Hotel Characteristics		2.1
Hotel star classifications	Ingram (1996); Kozak & Rimmington (1998); Callan & Lefebvre (1997); Wei et. al. (2005)	2.1.1
Hotel location	Marvel (2001); Martin & Matlay (2003); Mistilis, Agnes & Presbury (2004); Travel & Tourism Intelligence (2004)	2.1.2
Hotel size	Smith (2006); Marvel (2001); Dahles (1999); Medlik (1990)	2.1.3
Hotel numeric business performance	Haktanir & Harris (2005), Phillips (1999b); Imrie & Fyall (2000a); Sharma & Upneja (2005); PKF report (2004)	2.1.4
Hoteller/ Decision-maker characteristics		3.3 & 4.1
Awareness/ Dependence	Dholakia & Kshetri (2004); Lituchy & Rail (2000); Jeong (2004); Martin & Matlay (2003); DTI (2004); Mistilis, et. al. (2004); Christian (2001)	3.3
Demographics: Age and Education	Ching & Ellis (2004); Buhalis & Main (1998); O'Connor, (2001); Main (1995)	4.1.1
Perceived cost	Ellsworth and Ellsworth (1995); Javalgi & Ramsey (2001); Griffin (1997); Ching & Ellis (2004); Ranchhod & Hackney (1997)	4.1.2
Attitude	Martin & Matlay (2003); Tamilia, Senecal & Corriveau, (2002)	4.1.3
Perceived ease of use and usefulness	Davis (1989); Poku & Vlosky (2004); Foley & Samson, 2003	4.1.3
EXOGENOUS FACTORS		
Environmental features		4.2
Entrepreneurship	Getz & Petersen (2005); Lambing & Kuehl (2003); Martin (2004); Cragg et. al. (2001)	4.2.1
Customer's pressure	Jeong (2004); Dholakia & Kshetri (2004); Lituchy & Rail (2000); Martin & Matlay (2003); Hymas (2001)	4.2.2
Competitive Marketing intensity	Lituchy & Rail (2000); Pringle (1995); DTI (2004); Gounaris et. al. (2005)	4.2.3

Instead of examining information technology use generically, this study specifically investigates the range of internet technology adopted, so that different exogenous and endogenous impacts on perceived performance measures can be quantified. The extent to which internet applications are adopted is empirically observed, as a potential intervening feature in the relationship between the range of internet technology use and perceived performance. In essence, both hotel and hotelier characteristics are tested for their influence on the strength of the association between internet applications' diffusion within the industry and the perceived improvement in performance.

The antecedents influencing a hoteliers' adoption of internet applications are made up of both endogenous and exogenous factors. The endogenous factors consider the inherent characteristics of both the hotel and the decision maker. Therefore, the key questions addressed in this study are:

(a) is there a relationship between hoteliers' perception of the internet and their experience of each of the changes in business performance? (Objective 4 in Chapter The following hypotheses have been developed to establish if relationships between perceptions and perceived business performance exist,

- H1: There is no significant difference between hoteliers' perception of internet marketing and the changes in net profitability experienced by hotels
- H2: There is no significant difference between hoteliers' perception of internet marketing and the changes in customer retention experienced by hotels
- H3: There is no significant difference between hoteliers' perception of internet marketing and the changes in the number of inquiries experienced by hotels
- H4: There is no significant difference between hoteliers' perception of internet marketing and the changes in occupancy levels experienced by hotels

(b) what is the intermediate effect of hoteliers' perception to the deployment or non-deployment of internet technologies (Objective 5 and 3 in chapter 1). Factor analysis conducted in the earlier stages assisted in the development of further hypotheses, enabling discriminant analysis to be performed. This helped to determine the perception variables that discriminate between those who have deployed, plan to deploy or are not deployed

(c) do these effects vary by type or the accumulated number of internet applications adopted? (Aim B in chapter 1) Cluster analysis will examine the types of internet technologies adopted in a taxonomy by organizing the data into meaningful structures. These answers will obtain an exploratory, albeit empirical, perspective in internet applications effect on perceived performance.

5.2 External antecedents

This section will explain several possible external variables (in line with Davis' TAM) that could have contributed to the cognitive awareness of hoteliers in their perception and attitude towards adopting available internet applications. There are essentially 3 main categories of external variables, these are: characteristics of the hotel, other characteristics such as perceptions and attitude of technology use and exogenous variables such as marketing intensity, customers' pressure and entrepreneurship influenced by environmental factors. See Table 5.1 for supporting literature references and their location within this study.

It is estimated that small businesses represent up to 70 per cent of the hotel and restaurant market (Sharma and Upneja, 2005). The evidence which was obtained from small businesses conclude that financial performance is strongly influenced by an entrepreneur's objectives and characteristics (Cragg & King, 1998). As statistical studies done by major

hotels show characteristics, such as the number of rooms and the location of the hotels (Barros & Mascarenhas, 2005) are important in determining the type of online strategies used (TNS Travel & Tourism, 2004; DTI, 2004). Both diffusion of innovation research and hotel specific research has shown that larger organizations tend to adopt new innovations faster than small organizations (Schegg et. al., 2002). The location of a hotel is an important competitive factor, as it provides distribution advantages amongst the independent hotel sector (Imrie & Fyall, 2000). These studies, together with several others indicate that online adoption strategies tend to vary with number of rooms (Wei et. al., 2001; Ching & Ellis, 2004; Buhalis & Main, 1998; Main, 1995), location (Martin & Matlay, 2003; Mistilis, Agnes & Presbury, 2004) and the number of employees (Dholakia & Kshetri, 2004; Marvel, 2001). Star ratings were also included as the variable was found to have a significant effect on hotel performance (Wei et. al., 2001; Pine & Phillips, 2005; Israeli, 2002), response rate, response time and information quality (Matzler et. al., 2003). Star ratings also play a role in understanding the level of service quality provided, and quality in relation to star ratings and the provision of accessible information and booking source. A study by Ingram (1996) revealed that while definitions of quality are complex, star ratings are nevertheless considered by consumers prior to making a reservation. Consumers would therefore expect that higher star rating establishments would provide a wider range of reservation options (providing ease and convenience of booking).

According to an extensive study by Ching & Ellis (2004), decision maker characteristics are important in determining the likelihood of online adoption. While this was a generic study based on adoption drivers for marketing in cyberspace, other specific studies for the hospitality industry, found adoption correlations with the decision-maker's age and education (Buhalis & Main, 1998; O'Connor & Frew, 2004, Main, 1995). These studies also found that decision-maker awareness and knowledge of new tools had an effect on the hotel's online adoption strategy (Dholakia & Kshetri, 2004; Lituchy & Rail, 2000; Olsen &

Connolly, 2000). More recently, a wide range of hospitality specific studies consider the perceived cost (O'Connor & Frew, 2004) and the importance (Martin & Matlay, 2003; Tamilia, Senecal & Corriveau, 2002) of internet impacts on adoption modes.

In addition to those endogenous factors covering inherent hotel and decision-maker's features, it is imperative that exogenous environmental factors are dealt with. These are important catalysts and have the propensity to affect electronic commerce adoption. Martin & Matlay's (2003) study construed that 'what customers' want' was one of the key considerations that affect the use of the internet in SMEs. While Jeong (2004) concluded that pressure from the customer perspective had an effect on how the hospitality sector conducted their business on the internet.

A hotel's external environment on the other hand was found to have an effect on technology adoption-performance relationships. However, researchers have predominantly described the external environment in terms of uncertainty (Phillips, 1999). One of the environmental characteristic examined is competitive marketing intensity, which is based on Ha & Ellis's (2004) culmination of competitive intensity and customers' pressure. According to Gatignon & Robertson (1989), the inclination to adopt technology was found to be correlated with intense competition within industries, as inter-firm rivalry produced an incentive to adopt innovations which could be a source of competitive advantage. Competitive intensity was also found to have a profound effect on adoption levels in research by Litchy & Rail (2000) where respondents highlighted key issues such as increasing business exposure and gaining a competitive edge over larger businesses, as core reasons for adoption.

5.3 Hoteliers' perception and attitude towards internet technology adoption

Based on the technology acceptance model (TAM), an individual's decision to adopt one or a series of one internet application is a function of their attitude towards its use (Moore & Benbasat, 1995). The two key facets of hoteliers' attitudes are 'perceived usefulness' and the 'perceived ease of use' of the internet for marketing and distribution purposes. Both these perceptions are frequently used to measure the various constructs pertaining to technology adoption. Examples include Malhotra & Galletta's (1999) study in which they have asked a series of questions about Microsoft exchange and schedule adoption. A similar series of questions were also used in Legris et. al.'s (2003) study on why people use information technology. These studies concurred that the two perceptions measured had an effect on the attitude and intention to adopt a technology (or specific technology studied). Not unlike these studies and the countless studies before (Legris et. al., 2003), questions to measure perceived usefulness and perceived ease of use by hoteliers were selected and re-adapted for this study.

King & Gribbins (2002) suggest that managerial perspectives on the types and number of uses of an application were also paramount to the analysis of the behavioural intentions of the adopter. Questions were therefore adopted and re-adapted from their study to examine 'perceived usefulness' of the tool in this study.

The second set of perceptions measured the 'ease of use' construct. Similar questions adopted from Davis's (1989) Technology Acceptance Model were used in Yang & Yoo's (2004) study of spreadsheet software and also in Malhotra & Galletta's (1999) study.

Davis's (1989) TAM examines the above three elements as the foundation of the model, no other mention of perceptions were in examined in the original model. However, perception of costs in relation to technological adoption was found to have a positive relationship with

adopting/ implementing technology and performance but the relationship has not been entirely accepted by some researchers (Barua et. al., 1995).

5.4 Perceived hotel performance

This section provides an insight into the rationale for the performance measures selected for this study. Hoteliers' perceived good performance with the use of internet technology because it can be difficult to obtain an absolute value of performance measures based on such an unquantifiable variable. Given the problems of finding useful definitions for performance concepts and measuring them, Phillips (1999) defined performance (within a theoretical construct) as the accomplishment or outcome of the entity. As reiterated by O'Brien (1998), almost 75% of all IT investments have no easily calculated business value and this was also validated by Pringle's (1995) study which found that while many hotels use electronic channels, that to-do-so decision may not be due to a carefully thought out strategy but more to do an external pressure, However, in Poku & Vlosky's (2004) study on the internet adoption of the U.S. lumber industry, they found no relationship between the perceived company effectiveness of internet adoption, and various other adoption factors. Will there be a similar finding within the hotel industry?

According to Phillips' (1999) performance measurement systems for hotels, 'outcomes' are reflected in relation to finance, customer, human resources and organisational and learning. These outcomes can only be derived from factors from the external environment, inputs and processes and the strategic orientation of the hotel.

Two of the four measures of hotel performance are customer retention and number of inquiries. These measures are about the perceived state of customer relations, as the internet is identified as a pertinent relationship-marketing tool. Murphy et. al. (2003) believes that the internet provides opportunities for building a customer base, improving

after-sales service and enhancing customer relations. Superior products and services may be offered by profitable businesses, but when these products are similar, customer service is the decisive factor (Bitner, 2001). Customer satisfaction is derived from good customer service, which then leads to customer loyalty (customer retention) and long term profitability (McKenna, 1991). Imrie & Fyall's (2000) study found that hotels view a profitable customer as one who returns to the hotel regularly each time he/she returns to the vicinity of the hotel. Customer retention is therefore an important measure of the effectiveness in the hotel's marketing strategies.

In this study, the third measure of perceptions of improved hotel performance relates to change in net profit. Profitability is one of the most popular performance indicators used to study the success of a firm's chosen strategy (Garrigos-Simon et al., 2005; Yeung & Lau, 2005), and is a variable that has been consistently used as a performance measure in the study of hotels (Sharma & Upneja, 2005; Pine & Phillips, 2005; Ham et al., 2005). Asking hoteliers' to identify the what they felt are the most important dimensions of financial performance, Atkinson & Brown's (2001) discovered that profitability received the highest rating.

Based on the above findings and investigations, this study considers these factors and characteristics as antecedents and looks for correlations between a hotel's decision to adopt varying levels of web technology and the effect on the hotel's performance. In common with most hotel specific studies which measure performance, the focus on performance will be based on the number of inquiries, customer retention, occupancy levels and profitability (Mistilis *et al.* 2004; TNS Travel & Tourism, 2004; Christian, 2000; Marvel 2001; O'Connor & Frew, 2004; DTI, 2004).

5.5 Actual usage of selected internet technology

Initial investigations of a hotel's online marketing and distribution strategy, it is better understood once available internet options for hotels have been classified. Drawing from both semantic and evidential evidence, there are two core perspectives to the provision of internet adoption levels. First, Dholakia and Kshetri (2004) identified and examined the factors impacting the adoption of the internet in SMEs, the research revealed three levels of adoption: i) the pre-adoption stage, where an SME owns at least a computer but no web site; ii) the adoption stage, where an SME owns a website but does not sell on the internet and (iii) the routinization stage, where the SME sells on the internet. In terms of internet marketing, the 'adoption' and 'routinization' stage seems to be equivalent to the 1st/2nd and 3rd generation classification of internet marketing respectively (Duffy, 2003; Ossenbruggen Geurts, Cornelissen, Hardman & Rutledge, 2001). According to Duffy (2003) the 1st generation of internet marketing is simply another variety of a brochure, but in a static electronic web format while the 2nd generation of internet marketing enabled communicative interactions with customers online. The 3rd generation introduces transaction processing. This classification of 'generations' on the level of internet adoption by independent hotels support the phased adoption approach of Dholakia and Kshetri (2004). This approach could help define independent hotels' antecedents of endogenous and exogenous factors which affect the level of internet use.

As noted by Ham et. al. (2004: 283), 'the types of ...technologies used within lodging segments vary significantly. Internet, intranet, e-mail connections, electronic trade, central reservation systems, and web applications are some examples...that have been broadly implemented throughout the industry'. Similar detailed studies on the uses of the internet have also suggested that the main component or application of the internet is the world-

wide-web and electronic mail. In the latter study titled the 'Uses of the Internet in the global hotel industry', only the use of the world-wide web and electronic mail by hoteliers was examined, although these were separate attempts to examine 'reservations from the internet'.

The internet applications selected on the basis of secondary research were mainly based on four studies; not in any chronological order, the first is King & Gribbin's (2002) model depicts the categories of technology uses; these three categories are, transactional, relational and communicative. Transactional technologies are used in the hotel industry to enable payment and reservations online, while relational technologies are a means of informing potential guests what the hotel has to offer. For example, the hotel's own web site. Finally, communicative technologies help the hotel to interact with potential guests via electronic mail and/or a website booking or ordering form.

Receiving reservations from third party online travel intermediaries was one other form of internet application that was included in the study. This mode was added because new online travel intermediaries are growing steadily as a sector and are gradually perceived to be a necessary presence in the distribution and marketing of hotels, despite the possible disintermediation of bricks and mortar travel agents (Tse, 2003).

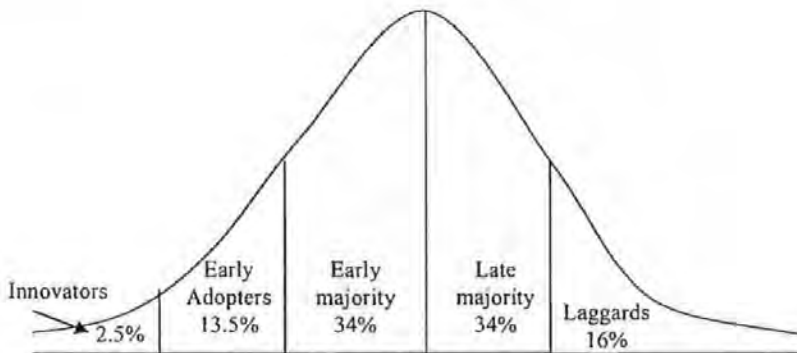
The second study is Gamble's (1984) framework on the diffusion of IT in the hotel industry. This demonstrates that the use of technology has four stages. The framework of categorization was derived from the stages of technology adoption by the hotel industry where characteristics were defined in each of the four stages by systems used. For instance, Stage 0, also known as the pre-computer stage was characterised by the paper based office system, which includes machines like photocopiers, typewriters, electric registers etc.

Stage 2, also known as the administrative hotel computer stage was characterised by integrated front office and food and beverage control. Stage 3, also known as the tactical hotel computer stage was characterised by a totally integrated system, allowing business functions to access external information on markets and consumer behaviour and have the capability to link to travel agents and tour operators.

Weltevreden et. al.'s (2005) typology was developed by examining and summarising five other studies of internet strategy classification. The authors' concluded that the classification of organizations could be exhaustively grouped into a typology of three strategies, namely; pre-internet strategies, information strategies and online sales strategies.

It is important to note that many authors have tried to classify the type of internet technology users according to the industry studied. According to Dholakia & Ksheteri's (2004) study, many internal and external factors contribute to technology adoption, and several studies have suggested that adoption behaviour may also be described as phased development. As with Roger's (1995) diffusion of innovations model, it includes an adopter categorization which suggests that the innovativeness dimension is measured by the time at which an individual adopts an innovation and that innovativeness is continuous. On the basis of innovativeness, the following figure 5.2 depicts the adapted version of Rogers' adopter categorization.

Fig. 5.2 Rogers' (1995) adopter categorization (adapted)



This study will adopt a similar categorising technique to identify stages of internet technology adoption. By applying this method, the study will profile the characteristics of adopters in each of the categories.

A summary of the above can be found in table 5.2.

Table 5.2: Timeline of technology adoption by various authors

	King & Gribbins (2002)	Gamble (1984)	Wellevreden et. al.(2005)	Duffy (2003)	Dholokia & Kshteri (2004)	Rogers (1995)
Time Line		Stage 0 Pre-computer	NO website			
	Communicative	Stage 1 Paper based office system			Pre-adoption Computer no website	-Laggards -Late majority -Early majority -Early adopters -Innovators
		Stage 2 Administrative computer usage				
	Relational	Stage 3 Tactical computer usage	Website, no online sales	1st generation 2nd generation	Adoption	
	Transactional		Online sales	3rd generation	Routinization	

5.6 Proposed framework for the categorisation of internet technology adopted

The categories discussed previously are frequently encountered in academic literature, but are not necessarily classified as taxonomies or typologies. Previous studies of the internet or technology adoption classifications across multi-disciplines were generally linked to Rogers's diffusion theory (Hall et. al., 2003; Ching & Ellis, 2004; King & Gribbins, 2002; Davis, 1989). Many of these classifications examined adoption categories of information technology use and seldom focused on the extent of internet applications adopted. In Hall et. al.'s (2003) study, the various stages of diffusion began by categorising farmers without access to a personal computer as 'non-adopters', and farmers who use the internet for conducting farm business as 'innovators'. In Cragg's (1996) study of internet adoption by small firms, he looked at Cooper & Zmud's (1990) six stage model of internet technology (IT) implementation process which include, awareness, initiation, adaptation, acceptance, routinization and infusion. The six stage model focuses on the what, the why and the how of using or adopting technology. Law and Jogaratnam's (2005) study on the other hand, relies on personal interviews to examine different technical and behavioural aspects which lead to IT use. These aspects were neither classified nor developed into a taxonomy, but were discussed in relation to technical and behavioural aspects which featured in the decision of whether a technological application should be adopted or not.

More importantly, Levenburg et. al. (2002) suggest that while many of these classification schemes propose that technology adoption and use follow an evolutionary path, they have often not developed into a taxonomy. However, several studies including that of Levenburg et. al (2002) proposed new models based on such literature and have also tested and verified their new model, instead of those proposed in scrutinised literature.

5.7 Summary

Unlike previous studies, this research adopts a twofold variation. Initial work will focus on identifying the key antecedents that influence independent hoteliers' decisions to adopt or not adopt internet applications for marketing and distribution purposes. These antecedents obtained from the factor analysis help in the hypotheses testing of the collapsed variables relationship with the hoteliers' adoption and non-adoption decisions. Investigations of current actual usage of internet applications by hoteliers and how usage has influenced perceived business performance will then be explored. A regression analysis is performed to tests the four perceived business performance hypotheses.

The study incorporates the viability of having the collected data, superimposed on Rogers's (1995) diffusion model and subsequently, using the same data provide a rationale for a new conceptualised variant model which could conceivably add relevance to the UK independent hotel sector. This variation of interpretation is not unique, as a similar *modus operandi* can be found in Griffin's (2002) study where a similar approach was undertaken. This study acknowledged that communication has traditionally been classified as a basic model, comprising of a sender, a receiver, the medium and the message (Johansen et. al., 1991). Griffin (2002) then went on to develop a new framework for categorising internet applications based on two other theoretical foundations. This method presented a clear advancement from Griffin's (2002) study progressing from conception to developing the completed taxonomy. This study therefore takes on a similar style of investigation by launching a series of data analysis (in the following chapters), to conceptually develop a taxonomy of UK independent hoteliers' propensity for adopting internet enabled distribution and marketing applications.

CHAPTER 6

METHODOLOGY

6.0 Introduction

The selection of an appropriate methodology must be guided by theoretical, philosophical and methodological principles. This chapter will provide details of the research methods used to develop the conceptual framework set out in Chapter 5. The chapter will first examine the two principal branches of how the research methodology was derived; the research philosophy will initially be discussed, followed by the research design itself. Within the research design, two distinct stages were conducted to ensure a systematic attainment of information and data, to develop a taxonomy of hoteliers' characteristics and operational profiles based on the range of internet technology they adopt for marketing and distribution. The first stage of the research began with a qualitative pilot study consisting of face-to-face interviews with twelve independent hoteliers in the South West of England. The second stage employed a quantitative research method also described as the main survey. This involved administering a survey to approximately 2,580 independent hoteliers in the UK. All hoteliers were administered the survey via both an e-mailed web link and by post.

6.1 Research philosophy

Based on Burrell and Morgan's (1979) identification of four sets of assumptions namely, ontology, epistemology, human nature and methodology, there are two conceptions of social reality that are loosely categorised as subjectivist and objectivist (Cohen, Manion & Morrison, 2002). This section will critically evaluate the philosophical assumptions and theoretical underpinnings of the four assumptions that form the methodological basis of this study.

Mason (2003) suggested that the researcher's ontological view of the social world should be recognized and understood, instead of simply accepting a position that is obvious or appears to be the universal truth and so is taken for granted. The knowledge and explanations of the ontological position of the social world or the central research field could be generated, aided by the researcher's epistemological position.

The fundamental ontological perspective of this study is particularly challenging to conceptualize, as it is a general framework involving the study of independent hoteliers and their propensity to adopt internet technology for marketing purposes. The broad spectrum of internet technology available for adoption, together with the empirical comprehension of marketing compels the study to undertake both a positivistic and phenomenological paradigm framework. In the first assumption of the ontological kind, the research seeks to examine the role of the internet in the marketing of independent hotels.

The paradigm adopted in the first of the two phases of research was however, of a phenomenological stance, where an understanding of the how, and the why of the initial ontological position could be facilitated. This allowed the notion of a socially constructed reality to present itself, rather than an externally determined one (Easterby-Smith et. al., 1991). A phenomenological framework encourages the projection of human imagination, as the individual's mind is not separate from its social world (Morgan & Smireich, 1980), such that the ontological position of the study is largely interpretive, where the reality consists of relationships between individuals. The epistemological position adopted was therefore anti-positivistic, as this initial stage of the study recognises the subjectivity of the knowledge provided. It is also acknowledged that since interaction is required (face-to-face interviews), values and opinion sought could potentially reconcile and change what was originally understood from the secondary research conducted. The method of inquiry at

this preliminary phase is inductive in nature, and will therefore undertake a qualitative approach.

With the provision of a holistic view of the phenomena under investigation (Patton, 1980), the study seeks to understand human behaviour from the hoteliers' own frame of reference (Easterby-Smith et. al., 1991). However, the anti-positivistic approach does not identify causal connections and fundamental laws. According to Acton (1970:23) 'the knowledge of things can only be advanced by framing hypotheses, testing them by observation and experiment, and reshaping them in the light of what these reveal'. Therefore it was deemed necessary that the qualitative phase, should lead to the adoption of the positivistic paradigm where the main concerns of measurement are reliable, valid, and generalizable providing a clear prediction of cause and effect (Cassell & Symon, 1994). Discovering the roles played by the internet requires a realist approach to ontology, because there are only a fixed number of roles the internet can play (particularly within marketing). To acquire this real, objective and actual knowledge, the second assumption of positivist epistemology is adopted. Given that decision makers decide what the internet can do for their hotel, the element of deterministic human nature explains the third assumption where 'human beings (decision makers) are conditioned by their external circumstances' (Burrell & Morgan, 1979:34). Being deductive, a quantitative research is adopted, based upon formulating the research hypotheses and verifying them empirically on a specific set of data (Frankfort-Nachmias & Nachmias, 1992).

While there are advantages and disadvantages associated with both the positivistic and phenomenological paradigm, there are no right or wrong ways to interpret theoretical ideas and turn them into research designs, because the 'philosophical foundations of research are full of complexities and misunderstandings anyway' (Hart, 1998:51). It should also be

reiterated that social scientists have often encouraged the use of both qualitative and quantitative methods to facilitate the broader understanding of a social reality being studied (Fielding & Fielding, 1986).

Having discussed the principal philosophical theories, the next section will introduce the research designs translated from these paradigms.

6.2 Research design

Research can be conducted by an assortment of means for a variety of reasons. According to Bouma & Atkinson (1995) research is both a process and a discipline where ideas could be tested and questions can be answered. Traditionally, research has been generally differentiated into three streams, namely exploratory, descriptive and explanatory (Brunt, 1997). Exploratory research is used when the goal of a research is to develop hypotheses and propositions (Yin, 2003), or when a research area has not been extensively studied resulting in the need to identify, and discover important issues or elements that otherwise may not have surfaced. Descriptive research is conducted when there is a need to illustrate what has been previously examined and documented, so as to present a consolidated perspective of the research question or problem. Explanatory research is, however, carried out to clarify patterns in relation to the research area and to discover if there are associations or relationships within the research area (Marshall & Rossman, 1999).

In view of the fact that there are few empirical studies conducted on internet technology adoption levels for marketing and distribution in the hotel sector, particularly within the independent hotel sector, the research began by being exploratory. Although there are existing theories in the field of internet technology describing a manager's perspectives and attitudes towards their adoption within their organisations, there are no similar

theoretical bases for the independent hotel sector. Therefore, the case research method is most appropriate for an exploratory study, because the study is aiming to explore a contemporary event where the subjects or events do not have to be controlled and there is no prior theoretical underpinning (Day, Yoong, Huff, 2005). The case research method is a suitable technique also because it gathers data using direct observation and systematic interviewing (Cavaye, 1996).

The following sections will discuss how the interview schedule was developed, designed and administered. This will include discussions of how the interview schedule was formulated, how the sample was selected, the type of interview that was conducted, the expected duration of interviews and how the interviews were analysed.

6.2.1 Interview schedule operationalised

Cohen et. al. (2002:270) recognised that there are many different types of interviews and to determine the type of interview most appropriate for a given piece of research lies with the 'degree of structure in the interview'. Based on Cohen et. al.'s (2002) rendition of 'fitness for purpose' interviews, this research sought to discover the factors that had an impact on how hotel decision makers perceived and eventually adopted or did not adopt the internet as a tool. A major objective of this initial stage of inquiry was exploratory and therefore developed to obtain a preliminary understanding of hoteliers' perceptions and understanding of the issues as there have been little published in the area previously. Having decided upon and specified the primary objective of the questionnaire, the second phase identified and itemized subsidiary topics that related to its central purpose (Cohen et. al., 2002). Subsidiary issues identified and itemized included:

- i) awareness; knowing the extent of internet distribution options in the industry today
- ii) striving for sustained growth in occupancy figures

- iii) having a role to play in establishing the South West as a tourist destination for domestic/overseas guests
- iv) business performance measures of profit and occupancy levels
- v) strategically adopting a variety of distribution channels.

The above terms were drawn up based on the literature review and aimed to identify hoteliers who are likeliest to act as role models for other hoteliers with similar hotel characteristics if not region.

This qualitative research design selected is similar to the model described by Berg (1989) as one that includes both the research-before theory and theory-before-research model. Instead of adopting a step-by-step approach to obtaining findings, a spiralling approach was used. In the midst of gathering theoretical information, designing the next series of interview schedules and data collection, the research process underwent phases including 'initiation', 'reformulation', 'deflection' and 'clarifying theories', these are the four major functions which is claimed by Merton (1968) to aid the construction of theory.

6.2.2 Exploratory sampling strategy

In the first instance, twelve of South-West hospitality industry's leading authorities, identified by way of title, membership affiliation and years within the industry were asked to identify a handful of independent hotels in the South-West whom, in their expert opinion, exhibited the most potential as innovators, in relation to internet technologies adoption.

This mode of theoretical sampling aimed to augment the theory that was being developed. Instead of using abstract methodological criteria, case groups described above were selected based on concrete criteria found within their content. This method enabled the

researcher to reconstruct subjective theories, since a semi-standardized interview approach was subsequently adopted. The rationale lies in the possible fact that the interviewee may have a complex stock of knowledge about the topic under study, where it then becomes necessary for the researcher to aid the interviewees in articulating their answers with a series of different types of questions including open or confrontational questions.

A qualitative method of study was selected for this initial exploratory project because the findings should be broadly contextual, descriptive and generative. As Ritchie (2003) confirmed, an important attribute of qualitative research includes a researcher's capacity to 'describe and display phenomenon as experienced by the study population' (within this study, the independent hoteliers of the South West region) in greater detail and in the research area's own terms.

The success of this exploratory study led to a quantitative exercise involving a considerable number of participants to substantiate the conceptual framework of the study. From this exploratory study, a series of more compelling and sound questions were developed for a questionnaire to be administered.

To establish the significance of any social science research, Lincoln and Guba (1985) proposed four characteristics that were measured against the study. They are credibility, transferability, dependability and confirmability. These characteristics were used as core guidelines in the methodology design for both the exploratory stage and main data collection. Credibility of the study was enforced by setting parameters in terms of the source of sample, the criteria that the selected sample must further fulfil and boundaries from which the theoretical framework was obtained. Findings from the exploratory study also aided in the structure of the questionnaire in the main study, with information and

feedback obtained and channelled into its preparation, covering not only a bigger geographical area but also a wider category of hotels. This is in line with the overall research aim, because frameworks developed from this study should be able to explain the relevant occurrences within the hotel industry.

6.2.2.1 Exploratory interviews

In view of the fact that there was little or no research carried out in the area of internet adoption by UK independent hoteliers, a preliminary understanding of these independent hoteliers' perception and knowledge of internet technologies' influence on marketing were sought. Face-to-face interviews were selected as a viable method. A generic perspective of hoteliers were required at this initial stage of understanding, therefore these interviews have been deliberately formulated to be exploratory in nature (Oppenheim, 1999). Data collected accessed various narratives through which respondents described their world (Silverman, 2003) of operational concerns relating to online matters. The researcher was then able to make a first attempt at looking for common ground and issues since the interviews conducted enabled 'question areas relating to the objectives of the research (to be) asked, but (where) the respondents are at liberty to freely recount their experiences' (Brunt, 1997:24).

Twelve independent hoteliers agreed to participate in the study. They were amongst a total of 30 independent hoteliers identified by two key representatives from two respective professional bodies (the Internet and Marketing campaigns executive of South West Tourism Board and the Chairman of the Devon and Cornwall branch of the then Hotel and Catering Institute of Management Association, HCIMA) who considered the thirty identified to be at the forefront of online marketing and distribution issues in the South West. The interview schedule (Appendix 1) was designed in relation to theories acquired

from various literature sources and built with the primary objective of conceptualizing the research problem. It is made up of two sections; awareness (including channels of marketing and distribution) and dependence (issues pertaining to it, such as specialization, routinization, complexity and conflicts) based on Stern's (1969) study of the Theory of Behavioural Dimensions in distribution. Interviews were designed to be highly structured with a similar format of questions for each respondent. However, as Scheurich (1995, in Cohen et. al. 2002: 121) suggests, 'due to the complexity and open-endedness of social interaction', interviews conducted could not follow a similar sequence of questions. Although interview schedules were adhered to in all the twelve pilot interviews, it was discovered that each interview was unique in terms of how interviewees relate to the questions posed and how some interviewees were much more responsive without question prompts. Consequently, the interviews not only helped to uncover the respondents' views where many issues of common concern were broached, but also respected how the respondent framed and structured their responses (Marshall & Rossman, 1999). Since the interview schedule was very open ended in nature, the outcome of each interview differed as a deliberate effort was made to allow each of the interviews to take the form of a discussion (Blaxter, Hughes & Tight, 1996).

All twelve interviews conducted were in line with the 'interview guide approach' (Patton, 1980) because the topics and issues to be dealt with were spelt out in advance, and the researcher had the opportunity to decide on the sequence of the questions in the course of the interview. Like all other interview methods, this mode of data collection has its flaws. The largest was the variation in responses from the subjects despite them being asked the same questions and a similar amount of time being allocated for each interview.

Length of interviews varied from 45 minutes to 90 minutes, while most averaged 60 minutes. The main reasons for the variety in length were:

- (a) some questions made more sense to, or were more meaningful to certain interviewees
- (b) some questions related more closely to an interviewee's circumstances and experiences
- (c) some questions needed to be rephrased or added to help the flow of the interview interaction when interviewees seemed to have little to say

(adapted from source: Mason (2003))

6.2.2.2 Exploratory interviews analysed

Before the start of each interview, hoteliers were asked if the interview could be taped or digitally recorded, no objections were raised. Recorded interviews were subsequently transcribed and coding was carried out by evaluating each of the twelve interview transcript, where each interview transcript was analysed using Seidman's (1991) two approaches: developing profiles and developing themes. These approaches were deemed relevant as they involved emergent and theoretical sampling (Glaser and Strauss, 1967) of literature and trade reviews from various sources.

Seidman's (1991) first approach of developing profiles is particularly appropriate for this exploratory stage of the research as the interview schedules were deliberately designed to be less structured. This enabled the unique experiences of each participant to guide the interview creating their own profile. Each interview transcript were read in detail, where the most useful and important text were highlighted, particularly noting the different topics that were addressed (OERL, 2007).

The second approach described by Seidman (1991) is developing themes. This approach bears some semblance to cross-case analysis commonly used by researchers (Yin, 1994), because the theme approach calls for interviewee perceptions on similar topics to be compared, by looking across different interviews. The attempt to classify and evaluate the different perceptions can then lead to the development of themes to advance understanding (OERL, 2007).

The completion of a qualitative exploration at this stage further enabled the study to discover a sample of core concerns, experienced by the independent hoteliers that would otherwise not have been discovered. For example getting the hoteliers to talk about what they did, how they felt and what their thoughts were. While a substantial amount of new and important information were gleaned from these interviews, possibly producing 'more questions than answers' (claimed to be a healthy research practice in Whitehead (2004)) it would be incorrect to think that these findings run parallel and apply to all independent hotels in the UK. These interviews enabled the conceptualisation of questions for the next stage of the study where a quantitative data collection was planned by administering questionnaires.

6.2.3 Main survey

Bryman & Cramer (2005) claimed that the starting point in quantitative research is the development of a theory. The preliminary theory of this research proposed that the level of internet technology adoption in independent UK hotels is dependent upon a series of core antecedents endogenously and exogenously, identified from both literature and the exploratory interviews. A descriptive research survey was designed given that the research was concerned with how the internet (what exists) has influenced and affected the way hoteliers perceive and adopt it as a new marketing and distribution tool (Best, 1970).

Hypothesis development and the operationalisation of concepts then followed (Bryman & Cramer, 2005). Initial examination of the completed qualitative findings, allowed the establishment of the type and length of questionnaire. A survey of this nature was appropriate for this research because it:

- a) represented a wide target population
- b) relied on large scale data gathering from a wide population in order to enable generalizations to be made about given factors or variables
- c) ascertained correlations (e.g. to find out if there was any relationship between antecedents and adoption level)
- d) observes patterns of response and gathers data which could be processed statistically.

Source adapted from Cohen et. al. (2002:171)

To achieve this, a sample strategy had to be selected. The following section will discuss how the sample of the main survey was developed.

6.2.3.1 Survey sampling strategy

While it is not sufficient just to have an appropriate methodology, the sampling strategy adopted will also have an impact on the quality of the research (Cohen et. al., 2002). The following key factors in sampling will therefore be discussed:

- 1 the sample size
- 2 the representativeness and parameters of the sample
- 3 access to the sample
- 4 the sampling strategy to be used

(Source: Cohen et. al., 2002)

While it is almost impossible to determine the correct sample size, examining the rationale of the study and the nature of the population under study could help to provide a good estimate of a reliable sample size.

We have established that there are about 21,000 hotels in the UK, and further research has revealed that only about 11,000 hotels are registered with national tourist boards, of which an approximated 20% are group owned (BHA, 2005). Due to Data Protection Act issues, the National Tourist Boards (NTBs) and Visit Britain were not able to provide a list of registered hotels, therefore the next most representative list that we could obtain was from the latest *AA Hotel Guide 2005*, a publicly available list of about 5,000 subscribed and registered hotels in the UK. While the list does not precisely distinguish between independent and non-independent hotels, it does include the logo of the group, chain, consortium or association linked to each hotel, therefore enabling the researcher to clearly classify the independence or non-independence of each hotel.

Although a large sample size does not seem to agree with Krejcie and Morgans' (1970:608) suggestion that 'as the population increases the sample size increases at a diminishing rate and remains constant at slightly more than 380 cases'. The use of such a large sample is justified because:

- a) there are many variables
- b) the sample has to be broken down into a subgroup (independent hotels)
- c) reliable measures of the dependent variable are unavailable (level of internet use in the UK independent hotel sector).

(Borg and Gall, 1979: 195)

The parameters of the sampling frame will therefore adhere to the following:

- a) the hotel must not belong to an international or national chain
- b) the hotel must not belong to a privately owned group of 5 or more hotels
- c) the hotel must not be part of a franchise.

However it must be reiterated that consortiums of an international (e.g. Relais & Chateaux, Small Luxury Hotels of the world, Best Western etc.) or national (e.g. The Independents, The Circle and Minotel Great Britain etc) nature are acceptable within the boundaries of the sample frame.

A probability sampling strategy was initially adopted but difficulties obtaining an accurate and reliable sample very quickly arose, making this approach almost impossible. Although the NTBs had their own website allowing for accommodation search, accommodation listed under hotels often appeared with guest houses or another accommodation type such as Inns or bed & breakfasts (B&Bs). While some NTB sites had star ratings and diamonds next to the hotel search, most did not. The difficulty was further compounded by the fact that even if the researcher is able to identify a bona fide hotel by its star ratings, she was not able to tell if the hotel belonged to a group, chain or franchise unlike the *AA Hotel Guide 2005* where a logo suggesting affiliation is placed next to the hotel in its listing.

Therefore, given that a straightforward list of hotels in the UK was unattainable, a non-probability sampling (or convenience sample) strategy was opted. Nonetheless, the researcher targeted only independent hotels, 'in the full knowledge that the sample does not represent the wider population; it simply represents itself' (Cohen *et. al.*, 2002).

The final sample of independent hotels was obtained from the AA's (Automobile Association) Hotel Guide 2005. The reasons for adopting the AA Hotel Guide were due to the following constraints:

- i) there were no compulsory registration schemes for accommodation establishments in England (BHA, 2004), therefore no such lists existed
- ii) looking at the Yellow Pages under the category of Hotels, there was a mix of bed and breakfasts, hotels, hostels and lodges, making it impossible to distinguish a *bona fide* hotel- as some bed and breakfasts name themselves 'ABC hotel' even though they are not operating as one. This made the task of distinguishing an *independent* hotel even more unattainable;
- iii) a check with ten of England's tourism district councils¹ revealed that, due to the data protection act, most were not able to provide the researcher with a list of *bona fide* hotels. The rest of the councils redirected the researcher to their website where classification of hotels and bed and breakfasts were not clear
- iv) the one and only alternative Hotel grading organisation, RAC (Royal Automobile Club) did not produce a commercial list of hotels, unless a location search of hotels is performed on their website.

A total of 2,580 independent hotels (out of about 4,000 hotels) were manually extracted from The AA Hotel Guide 2005. These figures suggest that approximately 65% of all hotels were independent.

The next section describes how the questionnaire was designed and eventually administered.

¹ Cumbria Tourist Board; Northumbria Tourist Board; North West Tourist Board; Yorkshire Tourist Board; Visit Heart of England Tourist Board; East of England Tourist Board; Visit London; South West Tourism; Southern Tourist Board; South East England Tourist Board.

6.2.3.2 Questionnaire design

There are no widely accepted theories of questionnaire design or even administration (Oppenheim, 1992), but these are often very important components in many research projects (Frazer and Lawley, 2000). Beginning with how the survey questionnaire was designed; it has been suggested that a questionnaire should only have questions which answer the aim of the study, otherwise respondents are less likely to answer all of them (Poynter, 1993). The questionnaire was made up of six sections (Appendix 2). The first section consisted of 14 questions relating to the hotels' demographics and operational details such as clientele type, reservations modes adopted and internet technologies adopted. These questions were developed from the initial exploratory interviews so as to enable the study to obtain operational data from the hoteliers. The second section consisted of 22 questions pertaining to the hoteliers' perceptions of the internet as a marketing tool. The third section consisted of 13 questions relating to the extra organisational factors that have an effect on how the hoteliers perceive internet technologies. From the exploratory interviews, key elements and factors that appear to impact on a hoteliers' choice of internet marketing adoption were noted, questions from past studies that have tested these elements and factors were then used in the questionnaire. The fourth section of the questionnaire consisted of four questions about the intensity of changes in business performance measures experienced. To quantify the hoteliers' perception and attitude towards internet technologies for marketing, sections 2 to 4 were made up of closed questions using the Likert scale, as the tool has been suggested by John and Lee-Ross (1998) as the most common type of tool used to measure attitudes and expectations. Moreover, according to Oppenheim (1992), closed questions can be attitudinal and factual and are reliable. As in most Likert scale study measures, subjects are asked to select between five degrees of relative agreement, of 'Strongly disagree', 'Disagree to some extent', 'Uncertain', 'Agree to some extent' and 'Strongly agree' (Hayes & Kontzer, 2004). Czaja and Blair (1996) and

Oppenheim (1992) also suggested that closed questions should be utilised as such questions allow respondents to reply quickly with a choice of possible replies. In addition, more questions can also be solicited, where coding is simpler and group comparisons could also be obtained.

Section 5 consisted of questions relating to the hotelier, the objective of the section is purely for comparative purposes. Section 6 requested more in-depth information about the hotel and consisted of questions that are more sensitive, such as occupancy levels and annual turnovers. In the last section of the questionnaire, hoteliers were then asked to leave their name and address if they wished to receive a summary report of the research's findings.

6.2.3.3 Questionnaires administered

All postal questionnaires administered included a uniform resource locator (URL) address to the web survey giving participants a choice of whether to fill in the questionnaire online or via the post. This did not create a disparity or bias since e-mailed hoteliers were similarly given the option to request a postal questionnaire. Moreover, various writers have concurred that response rates may be increased as a result of offering different survey formats to participants (Cole 2005).

Using SPSS's random case selection, the 2580 hoteliers were divided into two groups. The questionnaires administered to both groups began and proceeded concurrently. 1,300 hoteliers were randomly assigned as the postal group, Group A. This group was sent postal questionnaires with pre-paid envelopes but were also provided with a URL address which they could decide to use if they wished to fill in the questionnaire online. A paper

questionnaire, a pre-paid envelope and a personalised cover letter (Appendix 3) were sent to 1,300 hoteliers in late January 2006.

The remaining 1280 hoteliers were assigned as an e-mail group. Unlike the postal group, they were first administered the questionnaire via electronic mail with the option of receiving the questionnaire in hard copy, should hoteliers prefer that mode. The email message is similar to the cover letter sent to the postal group, but with a URL address to the web survey included in the message (Appendix 4). Since it has been acknowledged by academics that web surveys register a faster response time than postal surveys (Sheehan and McMillan 1999; Cole 2005) the second wave of e-mail message (Appendix 4.1) with a link to the web survey were sent to those who did not respond 7 days after the first wave. Due to budget constraints and the near negligible costs of e-mail sending, this group were administered a third wave after another 7 days. This decision of sending an e-mail notice after 7 days was also based on Yun and Trumbo's 2000 study. After the third wave, this group of hoteliers were also administered the paper format of the questionnaire by mail.

The overall research aim was to ascertain not only the range of internet technology adopted but also to discover how and why the internet is adopted, because the process of operationalisation is critical for effective research (Cohen et. al., 2002). It was also important to translate the rather general aim into more precise terms. Based on the key antecedents affecting the range of online usage, the three core environmental features were each deconstructed into a few components. For example the term 'customers' pressure' could be deconstructed to include availability of a forum for customers' feedback and a catalogue of customers' reservation methods. Further investigation into each of the discussed features helped in the formulation of specific questions to be administered.

Since there were also a significant number of endogenous factors based on a series of attitudinal based dimensions, a substantial percentage of the survey was applied with the Likert scale (Brace, 2004). 'The technique is easy to administer in self-completion paper questionnaires...and the data will be used in factor analysis in order to identify groups of attitudinal statements that have similar response patterns and that could therefore represent underlying attitudinal dimensions' (Brace, 2004: 86).

6.2.3.4 E-mail methodology

Given that the root of this research was about the level of internet use by hoteliers for marketing, it was initially thought appropriate to conduct the second stage of the main survey via e-mail attaching a web link to the survey. However, past literature seems to indicate that there were a number of anomalies in relation to the response rates of e-mail surveys. There were obvious advantages such as e-mail surveys being more cost effective, more efficient to administer (Schonland & Williams, 1996) and having a time advantage over postal methods (O'Connor, 2001). Nevertheless doubts remain over whether e-mail surveys yield an adequate response rate- an issue which continues to be a key debating point when selecting a data collection method. As documented by Sheehan and McMillan (1999), Ranchoud and Zhou (2001), Porter and Sallot (2004), e-mail surveys have consistently reported lower response rates. While studies of e-mail surveys varied from one industry to another, these studies have found that the response rates for email data collection appears to be lower than for the traditional postal method. At the other end of the spectrum, Sheehan (2001) suggested that the use of e-mail as a survey mode with a relevant subject group tends to produce a higher response rate than paper surveys. In a more recent study administered to leisure travel retailers, Cole (2005) confirmed that the response rate to the web-based survey was lower than that to mail surveys. According to Cole, response rates may improve if the target population has access to the web. However,

Couper, Traugott and Lamais (2001) suggested that the mixed findings in response rates could be due to differing web survey formats and layouts.

The approach used in this study's e-mail survey was similar to Shannon and Bradshaw's (2002) study of the use of electronic surveys. This survey also included the explanation of the study's objectives within the e-mail (Appendix 4) attached with an URL address and a link where respondents could click, whereupon a new screen containing the questionnaire survey appeared. The online survey has a single screen, where respondents were able to scroll up or down, and do not force participants to complete each question to continue. According to Cole (2002) the above mentioned design factors could have a marked effect on response rate. Web sample came from the same sampling frame where the mail sample was selected. In essence, the study's sample was extracted from the 2005 AA Hotel Guide, hotel names in the list were then sorted in an alphabetical order. Since there were a total of 2580 hotels extracted, it was randomly decided that the first 1290 hotels on the list will first be administered postal surveys, and the rest e-mail surveys. This was deemed acceptable for the reason that although Cole's (2005) study found respondents of both her web and postal group to have differing profiles, it was impossible to obtain similar profiles from our sample.

Participants in both offline and online sample groups were also given the choice of two different survey modes (similarly applied in Shannon and Bradshaw's (2002) and Yun and Trumbo's (2002) studies). The online group that were administered e-mail surveys were informed that they could complete a postal questionnaire instead if they would e-mail the researcher the request. Similarly, the offline group were informed that they could complete the questionnaire online if they choose to do so, as the URL address of the questionnaire was provided in the letter. Unfortunately, there were no mechanisms that could be put in

place to monitor how many of the respondents in the offline group responded via the online questionnaire at this stage. No hoteliers requested for an alternative questionnaire delivery mode, regardless of the modes administered.

Questionnaires administered via the electronic mail mode consistently returned a much lower response compared to questionnaires administered via the post. More interestingly, in the e-mail group where e-mails with URL links to the questionnaire were administered first, only 11 responded to the web survey, but the subsequent administering of postal questionnaires yielded only a response of 129. This is in contrast to responses from group A, where hoteliers were administered the postal questionnaires first, which generated a response of 203, but with a subsequent e-mail send out, only 65 responded via the web. A plausible explanation for this discrepancy could stem from the variation in days where the different modes were administered.

The e-mail group had consistently lower responses despite using the same methods. It was possible to keep track of the web surveys by the two different groups because the web link questionnaire for the e-mail group had an added notation (specifically 'I') to the top right hand of the web page while the postal group do not have any such notations. As the web surveys were returned (anonymously), the researcher was therefore able to note if the returned surveys were from the e-mail group or the postal group. Nevertheless, a total of 408 questionnaires in postal and web format were returned and were useable.

Ranchhod and Zhou (2001) had identified the four most important factors in determining the low response rates of e-mail surveys. They are:

- lack of anonymity
- lack of cosmetic features

- lack of formal image
- lack of incentive.

The lack of anonymity refers to the infringement of privacy and security of the respondents while the lack of 'cosmetic' feature relates to the inflexibility of response input and varying formats. These two factors were not problems in relation to this study, on two counts. Firstly, subjects received an e-mail explaining the practicality and nature of the study, whereupon they decided if they wished to participate. If yes, they would be asked to click on a link that brought them to the questionnaire website. The questionnaire was designed using commercial questionnaire software enabling ease of response input- most of which were 'point and click'. Since a regular website is used, regardless of the operating platform a subject is using the possible lack of standardization pointed out by Smith & Leigh (1997) did not exist. Secondly, the problem of respondents revealing their personal identity through their e-mail addresses, possibly causing the lack of anonymity is removed, since respondents clicked on a submit button at the end of the web questionnaire that was directly be mailed back to the researcher anonymously.

Problems pertaining to the lack of a formal image (affecting response rates) was lessened since the study was being sponsored by the researcher's university rather than a corporation (Sheehan *et al.* 1999). University sponsorship was made prominent and explicit via the headings on the first page of the web questionnaire and a cover letter indicating association with the educational institution.

The last factor, the lack of a tangible incentive, remained a complex issue although the researcher of this study promised to make final reports available to all participants. In relation to costs, it may be possible to offer tangible benefits since the e-mail mode of

surveying had saved the project a considerable amount of money. However, Ranchoud and Zhou (2001) have stated that many individuals would be sceptical of receiving any benefits due to a lack of confidence in e-mail surveys. This remains to be seen as this study will provide a web link from the e-mail sent to respondents, therefore confidentiality issues were not be breached unless participants willingly reveal their particulars.

While there are many more factors that could affect response rates, Kaplowitz, Hadlock and Levine (2004) have discovered in their research that, in a population in which each member has web access, the response rate for either a web survey or postal survey is comparable if the web survey is preceded by a postal mail notification. In general, there are mixed findings to both the response rates and turnaround time for both web and postal surveys. A reason for this could be a result of the lack of research on the layout and format of the web surveys (Couper et. al., 2001).

6.3 Summary

Both qualitative and quantitative methods of data collection were used for this study. A qualitative study by way of face-to-face interviews was first conducted in the exploratory stage of the research, because the method is deemed most appropriate when exploring an evolving phenomenon (such as internet technology use), where the control of both subjects and events is not possible (Day et. al., 2005). Using Seidman's (1991) two approaches of analysing interview transcripts led to the revelation of hoteliers' profiles and themes, enabling the conceptualisation of questions for the next stage of quantitative data collection.

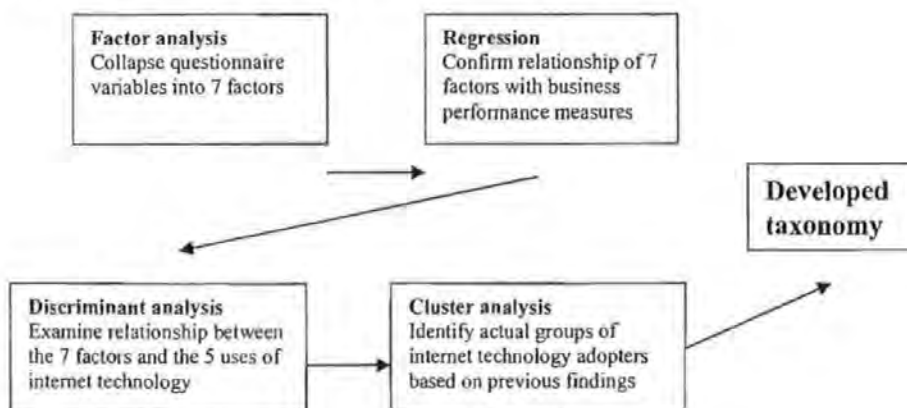
Data obtained from the quantitative survey were a mixture of ordinal, nominal and interval, but in order to turn the raw data into factual information, the questionnaires were coded for data entry into SPSS. Five different types of statistical analysis were performed in order to

meet the objectives of the research. They are carried out in the following order: descriptive statistics, factor analysis, regression, discriminant analysis and cluster analysis.

To present the data, descriptive statistical tools were used to compute frequency charts and cross tabulation tables on a cross section of the data to explore the respondents' profiles in relation to their perception and attitude towards the use of internet technologies. These can be found in the following chapter on describing data.

Figure 6.1 below, summarises the various analysis and methods deployed to develop a taxonomy of hoteliers internet technologies deployment. As denoted in the table, factor analysis was first performed on the 32 Likert scale item from section 2 and 3 of the questionnaire. The 32 variables were collapsed in the factor analysis and a total of 7 factors were found, four of which were classified as endogenous antecedents affecting the usage of internet technologies, they are: (1) Perceived benefits from using internet technology for marketing, (2) Perceived ease-of-use and affordability, (3) attitude, (4) perceived usefulness. Three factors were classified as exogenous antecedents that affected usage of internet technologies, they are (1) Entrepreneurship, (2) Customers' pressure and (3) Competitive marketing intensity.

Figure 6.1 Research's sequence of quantitative analysis



Multiple linear regression was subsequently conducted to test if the 7 factors uncovered from the factor analysis, helped to explain the various measures of business performance and if there are correlations between the two. Subsequently, discriminant analysis was then conducted to examine if each of the 7 factors had any correlations with the hoteliers' level and types of internet technologies adopted. This process enabled the study to ascertain the overall classification accuracy of the sample and also revealed if loadings on each of the 7 factors support the types of internet technologies deployed.

Cluster analysis was the last analysis undertaken. To ascertain if hoteliers could be clustered similarly to Rogers' adopter categorization model based on innovativeness (1995), but on the basis of significant factors and demographic variables found from earlier analysis conducted in the study.

Finally, the culmination of the above analyses was anticipated to help develop a taxonomy revealing the corresponding significant characteristics of hoteliers by way of using one-way ANOVAs with the ordinal data, Kruskal Wallis and a Mann Whitney test to examine significance on nominal data. Only a significance level of 0.05 and below ($p < 0.05$) based on a 95% confidence level were accepted as significant throughout this study.

The next chapter presents and examines the findings of the exploratory interviews conducted.

CHAPTER 7

EXPLORATORY FINDINGS

7.0 Introduction

The purpose of this chapter is to describe the responses obtained from the twelve hoteliers, including the hoteliers' perception and understanding of providing and using internet technology to market and distribute their rooms. It is important to reiterate that these interviews were exploratory; the main aim being to obtain a first hand appreciation of what the independent sector feels about internet technology, and is experiencing with their deployment or non-deployment of internet technology. Data collected from the twelve interviewees were analysed using Seidman's (1991) two approaches of developing profiles and developing themes. Profiles were developed of each hotelier as each interview transcript was closely analysed as a separate entity. Themes were however, developed by examining the hoteliers' responses to topic specific questions, enabling a common set of categories, patterns and themes to present themselves (OERL, 2007). By also using inductive reasoning to interpret the data and construct the meanings that were derived from the interviews, the data compiled was subsequently used to generate ideas for further research (hypothesis testing) (Thorne, 2000).

This chapter therefore highlights the profile and the themes that emerged, amalgamating to form the basis of our insight into the hoteliers' perception of internet technology use. The structure of the chapter begins with the developed profile of independent hoteliers' characteristics, and business practices in relation to its marketing and distribution strategies. Thereafter, the themes developed and discovered through the evaluation of the interview transcripts are presented. The themes that emerged include, the hoteliers' dependence on distribution channels based on the reservation modes they adopt, together

with the internet technology they rely on. This is followed by an examination of whether the hoteliers' customers' type and pressure had influence their perception of internet technology in any way.

7.1 Developed profile of independent hoteliers

The twelve hoteliers who were willing to participate in the exploratory study were located in the Devon and Cornwall area. They were made up of six coastal hotels, two country hotels and four suburban/ town hotels. Under ideal circumstances, the author would also have interviewed city hoteliers, but none of the city hoteliers who were contacted agreed to be interviewed. Prior to each scheduled interview, a web search of the hotel was performed to obtain some basic background information. Not surprisingly all hotels who agreed to the face-to-face interviews had their own website and a range of information was obtainable from them prior to the interviews. This information included, star classifications by the RAC, AA or regional tourism bodies, the location of the hotel, whether they were coastal, suburban, town or country, the number of rooms, the average room rate (ARR), number of hotel properties owned, associations affiliated with and the type of web facilities adopted by the hotel. These latter facilities included online payment facilities, web booking forms and e-mail addresses. The researcher also managed to examine whether the hotels utilise online intermediaries by performing a simple search engine search (e.g. Google and Yahoo). Background information of the hotel that was not available online was obtained during the interviews. A summary of the 12 hoteliers' profile is shown in table 7.1.

Table 7.1: Summary of interviewed hotels and hoteliers' profile from exploratory study

	Hotelier											
	AA	BB	CC	DD	EE	FF	GG	HH	II	JJ	KK	LL
Respondent characteristics												
Gender*	F	F	F	F	F	M	M	F	M	M	F	F
Age*	1	3	2	3	3	4	2	3	2	3	2	2
Qualifications*	5	2	5	1	1	5	4	2	2	5	1	2
Position*	3	1	3	2	1	1	1	3	3	3	3	1
Hotel characteristics												
Location*	1	3	1	3	4	1	2	2	1	2	1	2
Number of hotels	2	1	1	1	2	1	1	3	2	1	1	1
Number of rooms	29	23	71	23	19	12	43	145	33	140	67	27
Family business	N	Y	Y	Y	Y	Y	Y	Y	N	N	Y	Y
AA star ratings	None	3	3	2	3	2	2	3	4	4	3	3
Number of years running hotel	2	>10	1	6	>10	2	3	30	1	5	5	25
Occupancy level (%)	80	66	65	70	60	75	67	80	70	85	95	60
Annual turnover*	5	4	5	3	4	3	4	5	4	5	5	4
Internet technologies												
Online payment	N	N	N	N	N	N	N	N	N	Y	N	N
Online forms	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
E-mail	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y
Online intermediaries	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	N	Y
Website	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y

Legends*:

Gender: F=Female; M=Male

Age: 1=<30; 2=31-40; 3=41-50; 4=>51

Qualifications: 1= O/A levels=; 2= G/NVQ; 3= HND; 4= Prof. qualifications; 5= Degree & above

Position: 1= Owner/Manager; 2= General Manager; 3= Manager

Location: 1=coastal; 2= country; 3= suburbia; 4=city centre

Annual turnover: 1=<200k; 2=201-300k; 3=301-400k; 4=401-500k; 5=>501k

Key areas raised by the hoteliers were noted, in particular;

- (a) types of internet technologies considered or not considered for online marketing;
- (b) current reservation practices;
- (c) general perceptions of internet marketing and other information these hoteliers were comfortable sharing.

7.2 Developed themes

7.2.1 Hoteliers' online and offline dependence on distribution channels

The objective of this section is to understand the various types of offline and online intermediaries utilized by hoteliers in the distribution of rooms and reveals if independent hoteliers rely on any particular type of offline or online intermediaries. Additionally online

distribution is examined, in order to identify whether with the proliferation of internet technology, it is a growing concern.

It was interesting to note that ten out of the twelve hoteliers interviewed worked with some kind of channel- traditional or online. More specifically, most hoteliers worked with tour operators on an ad-hoc basis, but not online distribution channels. Two hoteliers worked only with one or more online distribution channels but no traditional distribution channels. The other hoteliers relied on direct business to consumer (B2C) trading- where guests reserve and transact with the hoteliers directly. Although all hotels acknowledged that they have inevitably been recommended by the Tourist Information Centres in their respective areas, or do get an occasional booking from travel agents or tour operators, the hoteliers are not dependent on these channels to fill their rooms as they are few and far between.

From the interviews, two new types of dependence (with intermediaries and web developers) appear to emerge which are not within the context of distribution that has been broadly discussed by channel analysts such as Bowersox *et. al.* (1980) and Stern (1965). Firstly, this is because the hoteliers seem to be heavily dependent on various forms of marketing channels to provide their properties with sufficient exposure, with the support of intermediaries. Traditional forms of marketing may include (repeated frequently in all interviews) brochures, national tabloids, destination marketing materials and local guide books. Whilst online marketing modes are mainly travel and hotel directories and portals, destination focused search engines and initiatives. One interviewee claims that her hotel is featured in many tourist or tourist board type websites without her consent or knowledge, although she does not mind because she does not see how they can be detrimental to the business (Hotelier BB).

Second, there were four hoteliers interviewed who are totally reliant on their webmaster when it comes to design, search engine placing and advice on linking their website to other portals and directories. Clearly, these hoteliers were inactive with the development of channel strategies or website. While there were only four hoteliers out of the twelve in this study who remains quiescent over the development of online channels, the majority of them are active in deciding which sites they would go on, how many hits they have on each of them, how much it costs, what the site looks like, and if the site appeals.

The four hoteliers who worked with online distribution channels claim to enjoy a good working relationship with their intermediaries. One (Hotelier CC) commented that their hotel was one of the first hotels to enlist the services of an intermediary (a new start-up) who is now a nationally popular and successful travel site. She also added that it was important to establish a good relationship, and to ensure that there is consistent communication. It must however be noted that this particular hotelier does not update her room availability status online, as it is done manually over the phone, electronic mail or fax. A second hotelier who works with an online distribution channel updated its property's availability online, and contact with its intermediary is minimal and only occurs when necessary.

Interviewed hoteliers lamented that they do not know where the majority of web business comes from (i.e. which portals/ directories) and claimed that if they did, they would invest more towards that business stream. However it is also interesting to note that they were not making any attempt to collect such information from guests, claiming a variety of reasons- from 'they don't know how' to 'perceiving it as not yet necessary'.

Given that half of these hoteliers interviewed did not consistently work with any form of distribution channel in the first place, it is hardly surprising that online distribution has not begun to be an issue for them. While these hoteliers appear to have effortlessly transitioned from traditional marketing modes, to adopting the internet for online marketing purposes, further research encompassing a bigger sample should confirm if this assumption is accurate. It will also be interesting to examine if hotels perceives online marketing and distribution as inexorably intertwined.

The interviewer went on to probe about reservation modes used by their guests. One of the main aims of this research was to establish the extent of internet use in the hotels' marketing and operational strategies particularly online availability and payment facilities. It came as no surprise that hoteliers were highly reliant on traditional modes of marketing and despite all of them having their own website, they were either not convinced that online availability and payment facilities were necessary or the facilities were too costly to adopt. The following discussion provides some evidence of marketing modes used by some of the hoteliers interviewed, and particularly the first piece of evidence from Hotelier GG indicating that there was a definite shift in advertising choice.

'the old way of selling hotels facing Torquay which is through the English Riviera guide, the main tourist guide which has been running for hundreds of years, and it costs but also pays to have a page of advert in it. It costs about £4000 a year and it is not cheap. We have reduced the size of our advert because we do not need it anymore and more and more stuff is coming through the internet.... The traditional types of guest we have I mean in Torbay they are not that PC (personal computer) literate at the moment, but as we are going down the line, they are getting more PC literate.'

While *'traditional centuries old'* methods such as the hard copy destination guide are heavily depended upon by some, Hotelier KK, as an example, has a website but does not believe or ever want to deal with the internet nor traditional 3rd parties. However this hotelier acknowledges that a lot of their guests are e-mailing bookings to them.

Question: So do you obtain information about what booking methods your guests prefers?

Hotelier KK: *Yes, yah. A lot of our people, we do a lot of e-mail bookings. We do respond by e-mail too if not we will return inquiry by telephone.*

Question: How many of these e-mail inquiries from your website actually transforms into confirmed reservations?

Hotelier KK: *About...30%...*

(After ascertaining that the hotel does not work with any form of 3rd parties,)

Question: So you deal directly with all your guests; dancing tour groups and conference groups?

Hotelier KK: *Yes. The only time we deal with agents is when companies want to book their employees in for one night.*

Question: Does your hotel give them a commission?

Hotelier KK: *No we don't. That's why we don't deal with them because they all want commission and we don't pay it. We don't need the business from them you see, so we don't bother.*

This is perhaps one extreme example, but this hotelier reported the highest annual occupancy figure of 95% amongst those interviewed.

Another interviewed, Hotelier JJ who has 140 rooms does not seem to want or like working with agents either.

Question: Do you use any traditional travel agents, tour operators etc.?

Hotelier JJ: *Not as a policy unfortunately....the so called, agents are a pain in the neck, because, yes, we traditionally will handle conferences that are coming in. Within the conference trade, there is nothing more irritating then a conference inquiry being placed by an agent, and therefore attracting 8% cut to whoever we are charging. There is nothing thereafter, and we deal with direct clients all the time, and we will do and we are still paying out a chunk of commission to the agent at the end of the day. But many companies though are tied into the corporate company...all they are doing is making the phone calls and handing it back to the company's personnel to deal with. Also, it does create a lot of work, agencies....Of our conference placement here, I would say well over 75% conference business are with agencies in some shape or form. Be it the very first inquiry or the very rare one who will take it all the way through and handle the whole booking.'*

As for 3rd party, internet travel agents, Hotelier JJ provides an insight into why he is reluctant to allocate rooms for sale by internet agents.

Hotelier JJ: *...almost all back bedroom agencies...these agencies can operate anywhere you can't. Most of our business does come from an agency...*

Question: Do you consciously allow internet travel agents to sell your hotel?

Hotelier JJ: *No, we don't give allocations out at all, we don't sell that way at all. On application only.*

Question: At the moment, do you have applications of these sort?

Hotelier JJ: *Well no.....because we have got such a diverse business here, and with a conference, we cannot afford to block out rooms. We are not like a London hotel where...that agent has got 10 rooms a night...that means you need close out charts, everything and its very intensive. So no one at all has a pre-allocation in this hotel. Its all free sale.*

Hotelier II who has 33 rooms expressed similar sentiments as Hotelier JJ in relation to working with 3rd parties. *'I will not go down the route of saying to somebody, there are 5 rooms, sell them online, I can't afford to take 5 rooms out of the inventory. I have to have all my rooms available at the reception to sell. I can't afford financially or economically for the hotel with only 33 bedrooms, 1 room, 2 rooms permanently kept for a 3rd party to sell. And only having released to me to sell 5 hours before it is used...I have to sell off every room at a second's notice.'*

Hotelier HH appears to suggest that they too are not keen on working with intermediaries online or off.

Question: Do you work with any travel agents, tour operators, coach operators etc.?

Hotelier HH: *A few but you are probably looking at about, travel agents business is at about less than 5%. We don't like paying commission.*

Question: Do you work with internet 3rd parties?

Hotelier HH: ***silence** erm...*

Question: for example like expedia.com, lastminute...etc.?

Hotelier HH: *A limited number at the moment. The difficulty that we have is that to give and offer them a fixed rate, which is what an awful lot of them wants, its not easy for us to do at this current situation. I think we have probably got links with about 2 or 3 at the moment.*

Question: Reservations coming in from them?

Hotelier HH: *No, negligible. I mean you have to bear in mind probably 80-85% of our overall business is repeat and recommended.*

Asked if Hotelier LL worked with any travel agents and tour operators, her response was 'No...not...maybe a few but they are not our main business. The few business that come, comes from booking agents...CHBS its called. Central Hotel Booking Service.' How many percent of her reservations arrive via CHBS? 'Very low...1%.' One reason why the word 'intermediary' was not used in most of the interviews was because of the following interview exchange experienced with Hotelier LL.

Question: Would you consider them (CHBS) 3rd party....like an intermediary...?

Response: *Err.....*

Question:could they be considered as your suppliers?

Response: *Yeah...yes*

(Strangely, she understood internet 3rd parties.)

Question: You do not work with tour operators, what about internet 3rd parties? Do you have internet suppliers?

Response: *A couple, but....Smoothhound (an online destination portal) we use. Not very successful.*

Question: In percentage terms?

Response: *Oh very low, 20% on an annual basis.*

Compared to the other respondents, 20% from an online source is considered a relatively high percentage.

The majority of these hoteliers are evidently 'not convinced' and sceptical of the services provided by online 3rd party intermediaries, but are deploying various other modes of internet technology, like developing their own website and receiving reservations from guests via electronic mails. The next section will therefore explore what exactly are the other modes of internet technology being adopted and the range of internet technology adopted.

7.2.2 Deployment of internet technologies

Most of the interviewees saw the internet as a clear marketing and distribution tool and clearly stated that the internet encompasses such functions (including communication) for their hotels. They were also aware of the various online channels that existed such as the various travel, hotel directory and destination focused portals although their hotels may not have utilised more than one online portal.

It was also evident that bookings through the hotel website with real time online payments were the exception rather than the norm as pointed out by Hotelier HH '*...there is obviously some people who love to use online, and they are doing so, and we are dealing with them cause they don't know any other way of doing it...so we are not pushing it, we are not selling it. We are not actually going out to the market because we have this problem of how to control the business of the hotel on a day to day basis*'. Amongst the 12 hoteliers interviewed, only one had such a system running at the time of the interview and one other hotelier had plans to adopt such a system. An internet channel via a travel intermediary on the other hand is rather more common as the majority of hoteliers interviewed indicated that they were using one or more online travel intermediaries.

Respondents who commented that going online was simply to provide more information to guests and potential guests were less prone to adopt various other channels whether for marketing or distribution. Three interviewees in particular commented that set up costs of having online payment and availability were too high, but on the other hand, two other interviewees were aware that it was not necessary to spend huge amounts of money to install new systems, but '*costs only US\$3 per room per firm reservation....that went through a 3rd party provider who consolidated room availability and bring them online*'.

Hotelier CC had clearer market niches she wanted her hotel to reach out to, *'No the hotel is not working with any other 3rd party intermediaries...we have relationships with other websites in niche markets for example, we are on 'for parents by parents' website and similar small scale associations....but you can definitely see trends in what advertising work well...'*

It is also worthy to note that while the majority of hoteliers interviewed were generally not convinced about the effectiveness of online intermediaries, having online availability and booking facilities, some of them had acknowledged that their inquiries from their online inquiry form or e-mail inquiries have materialised into confirmed reservations. Hotelier II provided a synthesised response in relation to the above.

Question: On your website you have an inquiry form, how many of those inquiries actually turn into reservations?

Hotelier II: *'We will get probably 30 or 40 inquiries a week, some days you'd get none, other days you'd get half a dozen, a dozen....at the moment we convert at least 60% of those inquiries into confirmed reservations.'*

For Hotelier EE: *'Reservations are mainly received through telephone calls, inquiries from the website also over the phone, but the actual physical booking will be either online (e-mail) or on the phone.'* Hotelier KK who claims 95% occupancy acknowledges that 'about 30%' of their e-mail inquiries materialised into firm reservations.

Only two interviewees had an online distribution channel with the full facility to provide online availability and booking. It was also noted that two other interviewees had plans to install such systems. Of those who do not have such a system in place or who had no plans to adopt such a system, only one interviewee felt very sure that the convenience of having

online availability and reservation was important for her customers, another suggested that it may be helpful in reaching out to clients who may otherwise not bother to call or e-mail to find out about availability. The rest simply felt that it is not necessary to have that function yet, because they felt that their guests:

- a. felt better assured speaking to someone on the telephone
- b. were not yet prepared to reveal banking information online because of vulnerability
- c. were mostly retired and repeat guests, therefore they were familiar with the hotel's personnel and would prefer to speak to them instead
- d. were not familiar with such reservation methods yet, therefore not likely to use it.

Upon evaluating the responses of Hotelier AA, who felt certain that online availability and reservation is important for her hotel's customers, the interview revealed that the hotel had a fairly wide profile of international guests currently and while she was keen to increase occupancy levels with international guests, she felt that they were in general, a difficult market to attract and sustain. She had therefore decided to concentrate on her current market of professionals from London, whom she believed were more likely to want and need the use of the hotel's online distribution function. Hotelier AA had a very small percentage of retired guests.

On the other spectrum of the analysis, respondent FF who felt that having online distribution was helpful, thinks that such a function would inevitably become a necessity for her hotel because her guests were mostly young families. She believed that this type of guests were not only increasing, but more are also becoming internet savvy, and would want the luxury of knowing availability and booking anytime. For the rest of the hoteliers who felt that an online distribution function was not yet necessary, their customer profiles were a majority of retired and repeat guests, although the only exception lies with one

hotelier (respondent CC) who was targeting business guests. Her rationale was that her current business guests had special requirements, such as a meeting room, and usually required more than five rooms at a time. Having an online distribution function would not bring about convenience for her business guests as they would still have to discuss special requirements, needs and rates.

Finally, none of the interviewees mentioned adopting any online strategic plan/s for their hotels. All the hoteliers interviewed appeared to be somewhat aware of what they hope to achieve with online adoption and how important having online channels is, none has a drawn up list of online strategic mission statement for their hotel.

In summation, the interviewed hoteliers:

1. felt that an online strategic plan was unnecessary
2. perceived online availability provision as being dependent on current customer profile
3. were not aware of what distribution entailed
4. preferred to subcontract web design and development to a 3rd party contractor
5. adopted more than three marketing channels (offline and online).

A few of the interviewed hoteliers were able to elaborate on their hotel's internet development based on extra organisation factors like industrial trends and perceived customer and competitor pressure.

'When we first developed a presence on the internet, we looked at it and say it will never take off but we need to be there, but that was six years ago, and then we very soon realised that no, in fact we need to be more sophisticated in what we were doing... The first one (website) was very very basic... We are aware that we are getting more and more business

via the internet...trade publications are indicating that so many people now are building their own independent holiday package and using the internet more and more, and its not only younger people who have got access, you know its pretty noticeable that the number of older people who are also online and using the internet as a resource for researching holiday information...the majority of people at the end of the day still likes to pick up the phone and have personal contact...they could surf the site in really great detail, they still like to know that there is a real person at the end of the proceedings.' Hotelier HH.

Hotelier II saw that 'it (online presence) is important for our current guests. A lot of businessmen we attract to the site (web) come to us wanting to know what facilities we have, same as leisure guests, they want to know what we have and they find this out via the website...It's a necessary cost. The world today is becoming more and more computer based. We need to have an internet presence if not we will not be able to do the amount of business we want to do...'

'A lot more of our guests are becoming more aware, even the older guests are using the internet themselves as a way of life now. ...I would have thought they (4 or 5 star hotels in Devon) have all got it (online booking). They should all have access to online booking for 4 and 5 star hotels in Devon and Cornwall I would think.' Hotelier JJ

'I think we don't want to be left behind. If we have got two hotels in Dartmouth on the internet, it is important we are on the internet as well...we have been here 25 years, a lot of guests have been coming...I think they like the fact that you are keeping up with the current trends really.' Hotelier LL

About competition and the frequent subject of the internet being able to level playing fields, Hotelier II's comment summarised the general sentiments of most hoteliers interviewed '*... it (the internet) is accessible to every business, I don't think it necessarily levels the playing field completely, the bigger the establishment, theoretically the more money you have to optimize your website link to other websites or to 3rd parties. A smaller family run business won't have the available finances, if you can't look after your website and try to optimize it, you'd end up slipping down the search results...So yes, it gives you the opportunity for everything to be levelled, but realistically, those who have the money would have a better position on the websites.*'

When asked if Hotelier JJ perceives having an online presence and booking facility puts his hotel at the forefront of competition, his reply was '*I don't think so. Certainly not in the forefront...I mean the facility will grow, as people start to use it more. But we had it there for 6 months (online availability and booking), there has not been a demand, no one knocking on my door 6 months ago, wanting to place online booking with me....Maybe in London hotel et cetera, I can understand all that, corporate type organisations I can understand them more, but for us as a family, privately run hotel located in the south west coast, no one knocked on my door demanding to buy online.*'

Hotelier AA commented that she '*was getting comments, feedback from people that the original website was dreadful and revamping the website was my (her) first job with the hotel.*'

In relation to the perceived ease-of-use of internet technologies, Hotelier FF who had recently started learning how to 'surf' the internet for information '*thinks that my current website is very basic compared to other similar grade hotels in the region, but it is good*

enough as a start. I do not look upon other hotels as direct competitors but hotels that offer different values and services...the internet is a good communication tool, because I refer a potential guest or an inquiry to the hotel website instead of sending the usual brochure which could take a few days before it gets to the guests- where the guests may then have lost interest.'

More interestingly, Hotelier KK reflected that *'...it is a good thing the internet. There is so much you can do with it, find out about things....The downside of the internet is that everybody assumes everybody else has got it.'*

All interviewees had their own hotel website, of which most were managed and designed by a contracted company. A few of them work with webmasters who had enabled them to make amendments with ease independently. All interviewees knew what search engines were and acknowledged the importance of the hotel name appearing as the first few search results after a specific key word search. Only hotelier CC decides her own key words without the help of web contractors. In her own words,

'...having a selected word as a key word in a search engine can cost more than what we have budgeted for. I prefer to decide on those key words within my budget instead of...having someone else decide it for me...there has to be substantial financial investment, not only on the hotel's own website but also in the way of how search engines work'

Hotelier II only performs search engine optimisation *'in specific key words, association and the website itself. We know a lot of key phrases that a lot of search engines look for. We try to make sure that they are there, in exactly the right way on the first page so they are found quickly which requires a higher position.'*

While a majority of the interviewees saw the internet as mostly an enhanced communication tool for electronic mailing, one pointed out that the internet is *'more than an advertising or marketing tool'* (Hotelier FF). This is rather surprising as they all had a website that marketed their property in substantial detail, although they saw it as an effective medium where their pool of customers or potential customers could quickly *'see what is happening...instead of ringing up for the brochure that takes 2 or 3 days (to arrive)'* (Hotelier BB), while she is also aware that *'they (customers) can be doing that to 20 other hotels at the same time'*.

It was also interesting to note that some hoteliers interviewed thought that the brochures or the telephone were still the most effective marketing tool and *'never thought of the internet as better marketing above the brochure'* (Hotelier CC). They claim to be aware that more people are using the internet to obtain information about their hotels and some even prefer their customers to use the internet rather than calling them to inquire or asking for a brochure. As one of them stated, it is quite a logistical problem especially during the summer months. All the hoteliers discovered that although they had provided e-mail addresses on their website, the majority of their customers preferred to make the reservation offline, and even if they had further inquiries about the property, they still preferred to pick up the phone rather than e-mail.

While this seems to be a common phenomenon in all hotels interviewed, five of them were currently oriented towards the retired market, although none could provide an estimate of what percentage of the retired market uses the internet. However, one of these five hotels was aiming to target what they perceive to be a niche market- the business market, and she felt that a more precise marketing channel would help her achieve this aim.

Having identified that online intermediaries, online inquiry form, websites and electronic mail inquiries are some of the more common internet technologies deployed by hoteliers, it is also worthy to note that the perceptions and attitudes of the hoteliers appear to factor into the choice of technology deployed. However, the responses provided by the hoteliers seem to indicate that deployment decision could also have been influenced by their impression of customer type and customer pressure.

7.2.3 Customer type and competitive pressure

This section reveals the types of customers received by the hotels and the methods used by these hotels to receive reservations. Eleven of the hotels interviewed had a majority of either leisure guests or group guests. There were no clear indications of any link between the types of guests in relation to hotel location or the number of hotel rooms. Leisure guests for most of the hotels interviewed were either classified as repeat leisure guests or retired leisure guests, but upon examining the transcripts, it was difficult to tell if repeat leisure guests could also have meant retired leisure guests. For this reason, the issue of repeat and leisure guests was left out of the main survey instrument.

Throughout the 12 interviews, the types of guests were referred to as business, leisure or group guests. There was the occasional mention of overseas guests and domestic guests, but Hotelier BB sums up the sentiments of most hoteliers when referring to overseas guests in relation to having an online presence. *'Even if the day comes when the hotel desires to see more overseas guests, I do not agree that an online presence will help the hotel to reach that goal, just because the hotel strongly believes in the personal touch, and dealing with people on the telephone. I would like more overseas guests but I don't see how going online is going to bring me more business...I would rather do the personal telephone call,*

and that's what independent hotels are – not just a faceless hotel, that is what most people don't like in this country.'

Additionally Hotelier DD shares that *'all my guests are locals. There is the occasional European or American who is driving by and looking for a rest stop. I think they account for less than 1% of my annual guests. I would like to keep my guests local or my type of guests as it is because I do not see a need to expand our market and I think the regional market is big enough for my hotel to survive....I do not see the hotel having an online booking facility even in the near future because I strongly believe in the personal touch of the hotel....my premise is that we (independent hotels in the area) hotels in the area have survived for this long without it with our regular tour groups and repeat guests.'*

Dependence on regular groups did not seem to be an issue with Hotelier BB who said *'we are quite different from other hotels, coz (because) we have a lot of wedding receptions and weekend business (leisure)'*. Unlike Hotelier EE who made it quite clear that her *'proportion of retired guests is about 80%, the rest would be business guests'*. Some hoteliers distinguished their grouped clientele into seasons, for example Hotelier CC, *'our customer profile is predominantly family, mum, dad and 2 kids. They form the core of our market during school holidays. Outside school holidays, we, like everyone else as a tourist destination are chasing other niches, other sectors of the market, other regions of the market. So we would expect to see empty nesters, and we also actively market to parents with below school age children. These are her main market groups. The hotel is also a wedding destination because they have a civil wedding licence and like everyone else we are courting the corporate market to fill up rooms with conferences, out of seasons, but our focus remains in families and the shoulder season, its older people and couples with young children.'*

For five other hoteliers, the majority of their guests are leisure guests, beginning with Hotelier JJ (140 rooms) the only hotelier to have a large percentage of conference guests (25%) followed by 75% leisure guests but only 8 or 9% of guests are tour groups. Hotelier HH, the only other hotel with more than 100 rooms in this exploratory study revealed that leisure tour groups are their main market (40-50%) followed by conference guests. Another hotelier with large leisure tour groups is Hotel KK, with 80% tour groups followed by 10-15% of corporate or conference guests and 5-10% of FIT (free and independent) leisure. Hotelier LL, a suburban hotelier has 98% of leisure tour groups and just 2% of corporate or conference guests. Finally, Hotelier GG reports 60% of leisure tour groups with 10% conference guests. Hotelier AA on the other hand *'has only 5% of repeat visitors, it doesn't sound much. These repeats actually know the names of the receptionist etc. My market is London without a doubt'*.

7.3 Summary

In conclusion, three key areas were highlighted throughout the course of the interviews. Firstly, the interviewed hoteliers revealed that online distribution appears to have taken on a new angle. Hoteliers saw new online channels as essential for marketing purposes and are crucial for creating general public awareness of their hotels' existence, but do not necessarily perceive the internet as a tool for distribution (the ability to sell online). For independent hotels, the concept of a distribution channel is not necessarily reserved for online intermediaries but online marketers and webmasters too.

This initial research has brought to light that independent hoteliers seem to be relatively aware of what online marketing channels are and what is currently available although they may not be adopting more than one of them. They recognise the growing importance of not only having an online presence but also the need to understand how online channels can

possibly enhance their scope of business. Most of the independent hoteliers interviewed, expressed in various ways that they had adopted a range of online technology for distribution, marketing or communication purposes. Most were to a certain extent adopted hesitantly because *'every other decent hotel have a website, and moreover it is not excessively expensive'* (Hotelier AA), although their guests were still made up of *'mostly retired or repeat guests who are not internet savvy'* (Hotelier EE). These hoteliers were aware however that it was only a matter of time, before hotels cannot operate without some kind of online presence.

All hoteliers interviewed had their own website and at least one online marketer (e.g. destination portal), but only one hotelier had an online distributor who provided online room availability, booking and payment functions. What seems to be hindering the rest (or at least two) of the hoteliers were the financial costs and additional staff required for setting up such functions. Hotelier CC was keen to have online real time distribution and had inquired with her current front office system provider who was also her web developer, she was quoted £7000-£10000 to re-align her current front office system to enable online distribution. Hotelier AA had a front office system, not connected to her online distributor and she paid them US\$3 for each booking that materialised.

Upon closer examination of all interview transcripts, they suggested that there was also a degree of influence from hoteliers' perception and attitude towards internet technology deployment. These factors appear to facilitate the push for hoteliers to adopt certain types of internet technology for marketing. The possible factors influencing a hoteliers adoption decision are wide and varied but they seemed to follow the two themes of endogenous (hotelier's personal perceptions and attitude; e.g. perceived ease of use, perceived usefulness, attitude, perceived benefits of internet marketing) and exogenous factors

(hoteliers' perception influenced by external forces; e.g. customers' pressure, competitive marketing intensity and entrepreneurship). Furthermore, the hoteliers appear to suggest in their interviews that their types of guests had an effect on their choice of internet technologies deployed. This suggestion led the researcher to query if the reservation methods used by their guests had an effect on the extent of internet technologies adopted.

The conclusion of the exploratory interviews led to the development of the questionnaire, which was administered to a sample population of independent hoteliers in the UK. To obtain external validity, the research utilised the understanding from the exploratory findings, so as to enable the generalization of the population. As stated by Girden (2001:65), 'surveys are conducted with the specific intent of generalizing the results...to the population of interest.' The next chapter will describe the survey data, highlighting information that are particularly worthy of note, relevant and distinct to the research agenda.

CHAPTER 8

SURVEY ANALYSIS I: DATA DESCRIBED

8.0 Introduction

One of the many reasons for conducting the survey is to investigate the range of internet technology adoption for marketing, and at the same time examine the characteristics of hotels and the hoteliers in relation to their current range of internet technology use. The survey was also designed to expand on the exploratory findings and to test the accuracy of the primary and secondary research on a more representative sample. As highlighted in the methodology chapter, postal and e-mail surveys were administered in late January 2006 and the second wave a month later in February 2006. These dates were deliberately chosen as they were right after the summer followed by the build-up to Christmas and the New Year. A total of 2,580 independent hotels were manually extracted from the 2005 AA Hotel Guide, ensuring that non-independents were not included in the survey. 408 responses were considered useable by the deadline of March 2006. The survey was four pages in length, primarily obtaining hotel operational characteristics, followed by the hoteliers' endogenous and exogenous perception of the internet as a marketing tool and the hoteliers' or decision makers' characteristics.

In this chapter, descriptive statistics of the sample illustrate the responses from the survey conducted, providing relevant summaries of averages, standard deviations and frequency data. The main objective of this chapter is to describe the profile of the hoteliers who responded to the survey and to offer a glimpse to the characteristics of the hotels they are running. In view of the vast amount of such information that could be presented here, cross tabulations was used, as they facilitate the illustration of frequency distributions of

responses on two or more sets of variables collected (Hair et. al., 2007). In the first section, a general profile of the hoteliers is illustrated with particular orientation to the characteristics of the hoteliers and the hotels they run. This is followed by a description of the types of guests and how the percentages vary in relation to the hotel's AA ratings, location, and number of rooms. Finally, the third section will describe the types of internet technology deployed, cross tabulated with the hotel ratings, its location and number of rooms.

8.1 Non-response bias

To determine if there is a difference between respondents and non-respondents, independent t-tests and a Mann-Whitney test were conducted to ensure that non-response bias is absent. From the first wave of e-mails and postal questionnaires administered, a total of 268 (203 [from postal group]+65 [from e-mail group]) responses were received, on the second wave of e-mails and postal questionnaires administered, a total of 140 (11 [from the postal group]+ 129 [from the e-mail group]) was received.

A sample of key hotel and hotelier characteristics tested with the appropriate tests revealed that responses from the two waves were not significantly different at the 0.05 level. This non significance satisfies the concerns of non-response bias as suggested by Armstrong and Overton (1977). A summary of the tests results are depicted in table 8.1. A detailed SPSS output can be found in Appendix 5.

Table 8.1: Summary of test results for non-response bias

<u>Hotelier characteristics</u>	<u>Test conducted</u>	<u>Significance</u>
Age	T-Tests	0.109
Qualifications	Mann-Whitney	0.973
<u>Hotel characteristics</u>	<u>Test conducted</u>	<u>Significance</u>
Size (no. of rooms)	T-tests	0.672
AA ratings	T-tests	0.239
Hotel Location	Mann-Whitney	0.053
Family/ non-family	Mann-Whitney	0.713
Occupancy levels	T-tests	0.316

8.2 General characteristic of hotels and hoteliers

Before examining the core characteristic of hotels and hoteliers, table 8.2 illustrates the survey response modes used by the hoteliers who had responded.

Table 8.2: Survey response mode

Survey mode Survey group	Postal mode	E-mail mode
Postal group	203	11
E-mail group	129	65

The sample population was divided equally into two survey groups. The first group was labelled as the postal group and the second, the e-mail group. In the first instance, 1,300 questionnaires were posted to the postal group on the 23rd of January 2006 and 1,280 e-mails with web links to the survey were sent to the email group on the 25th of January 2006. To minimise non-response bias, the e-mail group of 1,280 hoteliers were sent a 2nd wave of e-mail exactly 7 days later, and a 3rd wave of e-mail 7 days after the 2nd wave. The total response obtained from the e-mail group was 65, while the postal group obtained a response rate of 203.

To ensure that there was consistency in the format of questionnaire delivery for the sampled hoteliers, and also to reduce the possibility of a non-response bias, the postal group were administered e-mail questionnaires on the 10th of March 2006, however only 1,239 e-mails were sent because 71 of the hoteliers do not have e-mail addresses. The e-mail group of 1,280 hoteliers were posted questionnaires on the 08th of March 2006. Like the e-mail group who were sent 3 waves of e-mails (with 7 days gap in between each wave), the same format was adopted for the postal group. Questionnaires that were posted to the e-mail group had a response rate of 129, while the postal group who were administered e-mail questionnaires had a total response of 11 hoteliers. 171 out of the 1290 of the e-mail surveys were undeliverable, but so as to not pass up on even a single opportunity of a possible response, the 171 e-mail surveys that were undeliverable were sent out as postal surveys instead. The administering schedule for both e-mail and postal surveys were therefore somewhat skewed. This resulted because 1290 postal surveys required more preparation and pre-planning in relation to logistics, 2nd class stamps were used to mail out the postal questionnaires, and a two day time lapse was deliberately built in to maximise the probability that the entire sample population would receive the questionnaire (postal or e-mail) on the same day so as to reduce any possible element of bias. The web group was therefore e-mailed with the URL based questionnaire two days after the postal mail out. It was hoped that the simplicity in the process of assessing the online questionnaire would encourage response and sure enough, on the very same morning that the e-mails (25 January 2006) were sent, the first responses were received.

The direction of the arrows in table 8.2 therefore indicates the sequence in which questionnaires were administered. 81% of the respondents responded via the postal mode while only 19% responded via the e-mail web link mode.

8.2.1 Hotelier attributes

This section highlights the gender, qualifications, age and job titles held by hoteliers who had responded to the survey.

Table 8.3 illustrates that the majority of respondents were male and between the ages of 46 and 55 (19.7%), while females accounted for 39.7% of respondents with the majority from the 35 years or less age group. It is also important to note that there is a rather balanced spread in age groups amongst male respondents although there is a substantially bigger proportion of male respondents than female respondents beyond the age of 46.

Table 8.3: Gender and Age of hoteliers

			Gender		Total
			Male	Female	
Age	35 years and below	Count	46	51	97
		% within Age	47.4%	52.6%	100.0%
		% within Gender	18.7%	31.5%	23.8%
	36 - 45 years	Count	73	61	134
		% within Age	54.5%	45.5%	100.0%
		% within Gender	29.7%	37.7%	32.8%
	46 - 55 years	Count	75	34	109
		% within Age	68.8%	31.2%	100.0%
		% within Gender	30.5%	21.0%	26.7%
	56 years and above	Count	52	16	68
		% within Age	76.5%	23.5%	100.0%
		% within Gender	21.1%	9.9%	16.7%
Total		Count	246	162	408
		% within Age	60.3%	39.7%	100.0%
		% within Gender	100.0%	100.0%	100.0%

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Table 8.4 indicated that respondents generally held a GCE/GCSE/HND/HNC (41%) or a degree/ postgraduate qualification (40.7%). Though the margins are small, the spread of qualifications across all age groups are rather balanced. It may also be of interest to note that only 1% of all respondents have a specialist ICT qualification. The majority of respondents (37.9%) have less than 5 years of experience in the hotel.

Table 8.4: Qualifications and Years in hotel

Qualifications		Years in hotel				Total
		Less than 5 years	6-10 years	11-20 years	21 years and above	
None	Count	3	2	2	2	9
	% within qualifications	33.3%	22.2%	22.2%	22.2%	100.0%
	% within 'years in hotel'	2.0%	2.3%	2.0%	2.7%	2.2%
GCE/GCSE/HND/HNC	Count	60	35	38	29	162
	% within qualifications	37.0%	21.6%	23.5%	17.9%	100.0%
	% within 'years in hotel'	40.8%	40.7%	37.3%	39.7%	39.7%
Specialist ICT	Count	2	0	1	1	4
	% within qualifications	50.0%	.0%	25.0%	25.0%	100.0%
	% within 'years in hotel'	1.4%	.0%	1.0%	1.4%	1.0%
Vocational and others	Count	14	16	22	13	65
	% within qualifications	21.5%	24.6%	33.8%	20.0%	100.0%
	% within 'years in hotel'	9.5%	18.6%	21.6%	17.8%	15.9%
Degree or Postgraduate	Count	68	33	39	28	168
	% within qualifications	40.5%	19.6%	23.2%	16.7%	100.0%
	% within 'years in hotel'	46.3%	38.4%	38.2%	38.4%	41.2%
Total	Count	147	86	102	73	408
	% within qualifications	36.0%	21.1%	25.0%	17.9%	100.0%
	% within 'years in hotel'	100.0%	100.0%	100.0%	100.0%	100.0%

Table 8.5 shows the job positions held by respondents. The introductory letter sent out with the survey clearly indicated that the survey should be filled in by the owner or manager of the hotel. The numbers in this table indicate that the request is adhered to.

Table 8.5: Gender and Job position

Gender		Job position				Total
		Sole trade/ director/ partner	Family member of owner/ partner or director	Manager employed by the business	Others	
Male	Count	135	38	70	3	246
	% within Gender	54.9%	15.4%	28.5%	1.2%	100.0%
	% within Job position	68.9%	61.3%	52.6%	17.6%	60.3%
Female	Count	61	24	63	14	162
	% within Gender	37.7%	14.8%	38.9%	8.6%	100.0%
	% within Job position	31.1%	38.7%	47.4%	82.4%	39.7%
Total	Count	196	62	133	17	408
	% within Gender	48.0%	15.2%	32.6%	4.2%	100.0%
	% within Job position	100.0%	100.0%	100.0%	100.0%	100.0%

8.2.2 Hotel attributes

This section examines the characteristics of the hotels in relation to the hotel location (coastal, country, suburban/ town or city), type of business (family or non-family run), the number of full time employees and the star ratings obtained. Similar to describing hotelier characteristics, a series of cross tabulations are conducted between the variables to obtain an enhanced profile of the hoteliers who responded.

Respondents were from a spread of hotel locations with 29.7% from coastal hotels, 24.8%

from suburban/ town and the biggest number of respondents from country hotels (36.8%). However, respondents from city hotels appear to be under-represented with just 8.8% of them. The figures also showed that the majority of businesses are family businesses (87%), owned and managed by member of one family or families of key partners/ directors.

The majority of country hotels have less than 16 rooms (48.7%), while a majority of suburban / town hotel (31.7%) and city hotels (50%) have more than 47 rooms. These figures appear to concur with previous research that independent hotels are generally located in the coastal and country areas with less than 46 rooms.

In line with the cross-tabulation between hotel location and number of rooms, only 30.6% of city hotels employ more than 50 employees. It should be noted that 60% of hotels regardless of their location employ less than 29 employees. The number of full time employees has been grouped to reflect micro, small and medium sized hotels based on EU definitions of small and medium sized enterprises, while the number of rooms has been grouped in quartiles based on responses. The balanced spread of figures in both the number of full time employees and number of rooms seem to indicate that there are no deviating cases in this comparison.

The AA ratings of respondents were as follows; 58.6% of hotels who responded were AA 3 star rated hotels, while 29.4% were 2 star rated hotels, followed by 10.3% of 4 star hotels. Respondents of 1 and 5 star hotels were low, at only 0.7% and 1% respectively. 3 star hotels who responded were mostly located in the country (37.7%), followed closely by coastal (29.3%) and suburban/town hotels (28.5%). 2 star hotels had a similar type of respondents where a majority of the respondents were country (39.2%) hotels followed by

coastal (34.2%) and suburban hotels (18.3%). Only 27.8% of respondents were from 2 star city hotels.

Describing the type of business, 56.9% of all hotels who responded were family run businesses possessing 3 star ratings, followed by 2 star hotels (33.5%). Non-family run hotels skew more towards 3 star rated (69.8%) and 4 star rated hotels (22.6%), more significantly there were no respondents for 1 star non-family run hotels. It should be noted that a majority of respondents operating 3 star hotels, are family run establishments and are from an equivalent spread of locations. Respondents' figures appear to suggest that non-family run hotels are more likely to have higher star ratings.

69% of the 4 star hotels have 47 rooms and above, while the majority of 3 star hotels have between 27 to 46 rooms (37.2%). 59.2% of 2 star hotels have 16 rooms and below. These figures suggest that a hotel with less rooms tend to have lower star rating.

In relation to the number of employees a hotel is inclined to have, 4 star hotels are most likely to have 50 employees or more (61.9%), while 3 star hotels tend to have between 1-29 employees (46.4%), and 59.2% of 2 star hotels have less than 9 employees. Figures appear to suggest that, the lower the star rating, the fewer the number of full time employees are hired by the hotel.

72.6% of family run hotels had less than 29 employees while 62.2% of non family run hotels were operated with more than 30 employees. The number of rooms ranged from 6 to 286, the average number of rooms in each property ranged from 32 to 46 rooms. The number of full time employees also appeared to proportionately increase with the number of rooms a hotel has. 62.8% of all hotels with 16 rooms or less employ less than 9

employees and conversely, 58% of all hotels with 47 rooms and above employed over 50 employees.

Non-family run hotels operated a greater number of rooms compared to family run hotels. 54.7% of non-family run hotels operated more than 47 rooms while 31.8% of family run hotels operated less than 16 rooms. A summary of hotel attributes is illustrated in table 8.6.

Table 8.6: Summary of hotel attributes

	AA ratings	No. of FT employees	Type of business	No. of rooms
Hotel location	Most 2 & 3* hotels are country hotels; while 4* are mostly city hotels	68.1% of all hotels employ less than 29 employees; 30.6% of city hotels employ more than 50 employees	87% of all hotels are family run; 30.6% of city hotels are non-family run.	Country hotels operate the least number of rooms while 50% of city hotels operate more than 47 rooms.
AA ratings		The lower the star ratings, less full time employees are hired.	56.9% of family business are 3* hotels; while 33.5% are 2* hotels.	The lower the star rating, the less rooms a hotel operate.
No. of FT employees			Family run hotels hire less full time employees compared to non-family run hotels	The more rooms a hotel has, the more full time employees are hired.
Type of business				31.8% of family business operate less than 16 rooms; while 54.7% of non-family business operate more than 47 rooms.

8.3 Profile of guest types

Regardless of a hotel's location, hotels did not seem to receive a lot of group guests. 70.8% of hotels had 10% or less of group guests. Coastal (45.7%) and country (46.6%) hotels receive more than 71% of leisure guests. Conversely, coastal (49.6%) and country (43.6%) hotels received the least business guests (less than 10%). Suburban/ town hotels were on

the other hand attracting more than 56.4% of business guests and much fewer leisure guests or group guests. It appeared that city hotels, unlike hotels in other locations, were more likely to receive more business guests, and less leisure and group guests.

When cross tabulating the types of guests and the AA ratings, another set of phenomenon seems to result. Due to the lack of respondents in 1 star and 5 star rated hotels, there was very little to describe about them. However, when looking at 2, 3 and 4 star rated hotels, there appeared to be an emerging trend. 59.1% of the 2 star hotels received more than 50% of leisure guests and proportionately less business (55.8% received less than 30% of business guests) and group guests (83.4% received less than 10% of group guests). Amongst the 239 cases of 3 star hotels, there was no indication of any distinct group of clientele but there was a rather balanced spread between business and leisure guests and definitely much fewer group businesses (43.9% with less than 5% of group guests). Within the 4 star hotels, although there were a smaller number of respondents compared to the 2 and 3 star hotels, it was quite clear which guests types they catered to. Their clientele seemed to be made up of more business guests where 64.2% of 4 star hotels caters to more than 31% of them, while having less of leisure clientele (66.7% catering to less than 50%) and even fewer group guests where 66.6% of the 4 star hotels cater to less than 10% of group guests.

Table 8.7 below, summarises the guest types of hotels in relation to hotel location and AA ratings and size of hotel in relation to the number of rooms. A detailed SPSS of the relevant cross tabulations conducted can be found in Appendix 6.

Table 8.7: Summary of guest types

	Hotel location	AA ratings	Size (no. of rooms)
Leisure guests	77.3% of suburban/town hotels have less than 50% of leisure guests; while country and coastal hotels receive the most leisure guests.	2 & 3* hotels receive the most leisure guests; 4* hotels receive the least leisure guests	Hotels with less than 26 rooms receive the most number of leisure guests; Hotels with more than 46 rooms receive the least leisure guests.
Business guests	Suburban/ town hotels receive the most business guests closely followed by city hotels; while coastal and country hotels receive the least business guests.	2 & 3* hotels receive the least business guests; 4* hotels receive the most business guests	Hotels with less than 16 rooms receive the least business guests; Hotels with more than 17 rooms generally receive between 31-60%
Group guests	All hotels receive less than 10% or less of group guests	49% of all hotels have less than 5% of grouped guests; although 3* hotels appear to cater to more group guests.	73.5% of hotels with less than 16 rooms receive less than 5% of group guests; Hotels with more than 47 rooms receive the greatest number of group guests.

It is evident from the cross tabulations performed that hotels with more than 47 rooms received the greatest number of group guests and the least number of leisure guests. The smaller the number of rooms a hotel has, the lower the percentage of group guests received. The same appeared to be true of business guests, but the differences are less stark. It appeared that the more rooms a hotel has, the higher the percentage of business guests received. The reverse is true for leisure guests, hotels with less than 26 rooms receives the most number of leisure guests while hotels with more than 46 rooms receive the least number of leisure guests.

8.4 Profile of reservation modes

The cross tabulations of reservations acceptance methods against hotel location reveal that there was little variation in the modes used to receive reservations regardless of location. A detailed SPSS output of the cross tabulations performed can be found in Appendix 7. 50% of country, 48.9% of coastal and 45.5% of suburban hotels received telephone reservations as their main mode (ranging from 66% and above). The other less frequently used

reservation modes were e-mail and intermediaries. More than 26% of e-mail reservations were received by 28% of country hotels. However, across all hotel locations, 9.1% of all hotels did not provide or facilitate e-mail reservations. 76% of coastal hotels, 83.4% of country hotels and 70.3% of suburban hotels received less than 20% of their reservations from intermediaries. Amongst suburban and town hotels, the majority of them seemed to receive more telephone reservations than any other modes. Although e-mail reservations were used, 60.4% of suburban/town hotels had less than 15% of e-mail reservations. 43.5% of suburban/town hotels had less than 10% of reservations via intermediaries. 55.1% of all hotels received no web reservations. Telephone reservations seemed to be the most common mode of reservations received by all hotels, although 47.2% of all city hotels received less than 45% of telephone reservations. As for e-mail reservations, the percentages spread out rather evenly from none to more than 26%. This phenomenon was repeated in the case of reservations via intermediaries, web reservations and other reservation modes. Amongst country hotels like the coastal hotels, it was evident that the majority of these hotels received telephone reservations as the main reservation mode (more than 66%). If one is to attempt analysing the complete picture across these cross tabulated results of hotel location and reservation modes, it is evident that besides telephone reservations, the next most popular reservation mode seems to be by e-mail, as the total tabulation spreads most evenly across the percentages.

As summarised in table 8.8, there were 55.9% of 2 star hotels receiving more than 66% of telephone reservations, while 77.5% of them received less than 10% or no reservations from intermediaries. However, only 21.7% of 2 star hotels received reservations via the e-mail. Amongst the 3 star hotels, 60.3% of them received between 46 to 85% of telephone reservations, but a healthy 57.5% of 3 star hotels obtained more than 26% of reservations

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DATA DESCRIBED

via e-mail. 41.8% of received more than 11% of reservations via intermediaries. The 4 star hotels on the other hand appeared to display reservation trends that were quite the opposite with the 2 star hotels in particular. 64.3% of the 4 star hotels receiving less than 65% of the telephone reservations, while 71.4% of them received web reservations and 73.8% received more than 6% of e-mail reservations. Most interestingly, 54.3% of all 4 star hotels received more than 11% of reservations from intermediaries.

Table 8.8: Summary of reservation modes received by the respondents

	Hotel location	AA ratings	Size (no. of rooms)
Telephone reservations	All hotels except city hotels receive more than 66% of telephone reservations.	55.9% of 2* hotels receive more than 66% of telephone reservations; 40.5% of 4* hotels receive less than 45% of telephone reservations	41% of hotels with more than 47 rooms receive less than 45% of reservation via the telephone; most of the other hotels receive between 46-85% of telephone reservations.
E-mail reservations	More than 50% of country and coastal hotels receive more than 16% of email reservations	Across all AA ratings, all hotels have an almost equivalent usage.	Hotels with less than 26 rooms are more likely to receive more than 26% of e-mail reservations; Hotels with more than 27 rooms are more likely to receive less than 25% of email reservations.
Web reservations	Only 44.9% of all hotels use web reservations; 30.6% of city hotels receives more than 11% of reservations via the web.	73.3% of 2* hotels do not receive reservations via the web; while 33.3% of 4* hotels receives more than 11% of reservations via the web.	Hotels with more than 47 rooms are most likely to receive web reservations; the smaller the number of rooms a hotel has, the more likely it does not receive web reservations.
Intermediaries reservations	Majority of coastal and suburban/town hotels receives less than 10% of reservations from intermediaries; 41.7% of city hotels receives more than 31% reservations from intermediaries.	The more star ratings a hotel have, the more reservations from intermediaries are received.	Regardless of the number of rooms a hotel has, more than 64% of hotels have less than 20% reservations from intermediaries.

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All suburban/ town and city hotels who responded had their own websites, while all coastal hotels had their own website bar one who had plans to deploy a website. More interestingly albeit less significantly, only four country hotels had no plans to deploy their own website.

45.8% of respondents had online forms on their website while 26.5% planned to deploy one, but 27.7% had no plans to deploy. The biggest group of hotels who have no plans to deploy were coastal hotels, while city hotels saw the highest percentage (69.4%) currently deployed with online forms. There are also an almost equal percentage of all hotels who have plans to deploy (24.6%) as well as having no plans to deploy (28.4%).

City hotels have the highest percentage which had an online payment facility currently deployed (41.7%) and this group had the lowest percentage of hoteliers in terms of hotel location to have no plans to deploy an online payment facility. Very curiously, with coastal, suburban and country hotels, the reverse is true. More than 55% of these hotels have no plans to deploy their own online payment facility and less than 30% are currently deployed, although an average of less than 20% had plans to deploy, the figures have very clearly indicated that city hotels are more likely to have an online payment system than any other hotels. This phenomenon could however be due to other factors apart from location.

Figures also seem to indicate that hotels who are not already using online intermediaries had no intention of using them, as there are less than 5% who were planning to use them. City hotels were the most likely type of hotels to be using intermediaries (94.4%) and coastal hotels were the least likely at 63.8%. Similarly while the city hotels were least likely to have no plans to deploy intermediaries, coastal hotels were most likely to have no plans to deploy intermediaries. Findings for both suburban/town hotels and country hotels

were rather similar in terms of percentages of current deployment and having no plans for deployment.

Almost all hotels use e-mail for communication with clients, the most unusual deviant arose from country hotels, with 7.3% having plans to use e-mail communications and 4% having no plans to use it at all. Also interesting to note are the city hotels who recorded 100% in terms of deployed electronic mail use.

Variations of reservation modes in relation to the hotel's number of rooms were more distinct. Hotels with more than 47 rooms appeared to receive less telephone reservations while hotels with smaller number of rooms received more telephone reservations. Interestingly, the reverse appears to be true with email reservations, as hotels with less than 26 rooms receive more than 26% of email reservations, and hotels with more rooms than that tend to receive less than 25% of email reservations. Not surprisingly, however, the more rooms a hotel has, the more likely it is to receive web reservations, but the smaller number of rooms a hotel has, the less likely it is to receive web reservations. Finally, 64% of all hotels receive less than 20% of reservations via intermediaries.

8.5 Profile of internet technology adoption

Cross tabulations of internet technologies use or non-use with star ratings (table 8.9), appear to indicate that the possibility of utilization of online intermediaries seems to increase as the star rating of the hotel increases. The SPSS output of the cross tabulations can be found in Appendix 8. Starting from a 2 star hotel, 55.8% were currently using online intermediaries, while 79.9% of 3 star hotels, 92.9% of 4 star hotels and 100% of 5 star hotels were doing the same. A reverse phenomenon was noted, when the star rating

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decreases, the bigger the possibility of the hotel having no plans to utilize any online intermediaries. 66.7% of 1 star hotels had no plans to utilise online intermediaries while 40% of 2 star hotels, 14.6% of 3 star hotels and 7.1% of 4 star hotels had similar plans.

With the inclusion of online forms, higher star rated hotels seemed to be more likely to add online forms to their websites. 30.8% of 2 star rated hotels, 48.1% of 3 star rated hotels, 76.2% of 4 star rated hotels were currently utilizing online forms. Conversely the possibility of having no plans to deploy online forms reduced with higher star ratings. 66.7% of 1 star rated hotels, 46.7% of 2 star rated hotels, 21.8% of 3 star rated hotels and 4.8% of 4 star rated hotels did not have plans to utilise online forms. Plans to utilise online forms appeared to be the highest amongst 3 star hotels where 30.1% of them were planning to do so.

The majority of hotels across the different star ratings were utilizing e-mail communications with clients, with the seeming exception of 1 star hotels, as there were much fewer respondents in the category. 94.2% of 2 star hotels, 91.6% of 3 star hotels, 92.9% of 4 star hotels and 100% of 5 star hotels are currently using e-mail communications. The majority of those who were not currently using e-mail communications had plans to do so with a negligible figure of those who had no plans at use the mode.

As evident from the figures tabulated, close to 100% of hotels in all category of star ratings had their own websites, with a negligible percentage of 1% or less who had no plans to do so.

SURVEY ANALYSIS I:
DATA DESCRIBED

The possibility of a hotel adopting the online payment mode seems to increase if they possess a higher star rating. None of the 1 star hotel adopted it, while 10.8% of 2 star hotels, 21.3% of 3 star hotels, 45.2% of 4 star hotels and 75% of 5 star hotels have currently adopted the online payment mode. Figures also appeared to indicate that the majority of hotels who had not already adopted the online payment mode, had no plans to do so except perhaps for 3 star hotels at a low of 25.9%. The figures also seem to indicate that the lower the star rating of the hotel, the more likely they would have no plans to deploy the online payment mode. 70.8% of 2 star hotels, 52.7% of 3 star hotels and 38.1% of 4 star hotels and 25% of 5 star hotels had no plans to adopt the online payment mode.

Cross tabulating internet technology deployment and the size of the hotel (based on the number of rooms), revealed that the fewer rooms a hotel has, the less likely it is to have plans to include an online form. Therefore a hotel with more than 47 rooms is most likely to have already deployed an online form.

It appears from computed cross tabulations that the majority of hotels had no plans to deploy online payment as an internet technology for marketing, regardless of a hotel's size. However, 38% of hotels with more than 47 rooms had deployed the technology. This is in line with earlier findings that the more rooms a hotel has the more likely it is to receive reservations via the web. 38.1% of hotels with less than 16 rooms were most likely to have no plans to use online intermediaries. In contrast, more than 75% of hotels with more than 17 rooms were already using online intermediaries.

Table 8.9: Summary of internet technology deployment phases

	Hotel location	AA ratings	Size (no. of rooms)
Online website	98.5% of all hotels have their own website.	98.5% of all hotels have their own website	Regardless of size, an overwhelming majority of hotels have their own website.
Online Form	69.4% of city hotels deployed online forms; 33.9% of coastal hotels have no plans to deploy it.	76.2% of 4* hotels deployed online forms; 46.7% of 2* hotels have no plans to deploy it.	42.5% of hotels with less than 16 rooms have no plans to deploy online forms; 67% of hotels with more than 47 rooms have already deployed online forms.
Online payment	41.7% of city hotels have deployed online payment; Between 55-60% of other hotels have no plans to deploy it.	45.2% of 4* hotels have deployed online payment; 70.8% of 2* hotels have no plans to deploy it.	Regardless of the size of the hotel, the majority have no plans to deploy online payment; Hotels with more than 47 rooms (38%) have deployed online payment.
Online intermediaries	94.4% of city hotels use online intermediaries; 30.6% of coastal hotels have no plans to deploy it.	40% of 2* hotels have no plans to deploy; 92.9% of 4* hotels uses online intermediaries.	Hotels with less than 16 rooms (38.1%) are most likely to have no plans to deploy; More than 75% of hotels with more than 17 rooms have already deployed.
Electronic mail	92.4% of all hotels use the electronic mail.	92.4% of all hotels use the electronic mail	Regardless of size, an overwhelming majority of hotels use the electronic mail.

8.6 Summary

Based on the responses provided by the hoteliers, a *précis* of their attributes and of the hotel they operate can be found below. These attributes will enhance the understanding of the following chapters, as they culminate to meet the aims and objectives set out for this study.

1. The majority of respondents were family run business (86.9%)
2. The majority of respondents were located in country hotels (37.1%)
3. The majority of respondents were 3 star AA rated hotels (54.3%) followed by 2 star hotels (32.4%) and 4 star rated hotels (11.4%)
4. The majority of respondents were 3 star rated hotels and were family run (45.4%)

5. If measured based on EU's definition of SMEs, 52.9% of hotels who responded were small enterprises and 29.6% were micro enterprises, based on the number of full time employees
6. City hotels catered to more business guests compared to leisure and group guests
7. Coastal and country hotels catered to more leisure guests compared to business and group guests
8. Reservations received via the telephone was the dominant mode in all hotel locations except city hotels
9. 4* hotels and hotels located in the city were much more likely to have online intermediaries and online forms
10. 98.5% of all hotels who responded had a website; while 92.4% of all hotels used the electronic mail.
11. Hotels with more than 17 rooms were more likely to be using online intermediaries
12. Hotels with more rooms were more likely to receive reservations via the web rather than the telephone
13. The more rooms a hotel had the more likely it is to receive more group guests and less leisure guests.

Having obtained and examined the profiles and characteristics of the hoteliers who have responded, the next chapters will focus on developing a statistically reliable portrait of hoteliers' perceptions based on the established conceptual framework. Specifically, the next chapter will investigate the perceptions of the hoteliers (whose attributes and characteristics has been introduced in this chapter) by breaking down the 32 Likert scale questions on the hoteliers' perceptions and attitudes. This provides a clearer demarcation of significant and manageable number of factors, so as to facilitate an exhaustive

understanding of the factors that influence
deployed by hoteliers.

CHAPTER 9

SURVEY ANALYSIS II: FACTOR & REGRESSION ANALYSIS

9.0 Introduction

The objective of this chapter is to analyse the range of influences affecting the adoption of internet technology. This is achieved by carrying out a series of analysis, beginning with factor analysis where factors that are important to the understanding of an independent hotelier's adoption or non-adoption of internet technologies for the marketing and distribution of their hotel are discovered. It will go on to describe the two analyses conducted, where the first investigation conducted is factor analysis. It confirms that the 32 likert scale items are grouped in the same way as factors derived in previous studies, and it will also develop new factors from the list of variables, relevant to the independent hotels sector in this study. It is important to note that the first 20 likert scale items were used to measure the endogenous perception of the internet as a marketing and distribution tool, while the next 12 likert scale items were used to measure the exogenous perception of the internet as a marketing tool. This resulted in two separate factor analyses as there was no overlap between the two domains studied, therefore allowing variables from each domain to be grouped into valid and meaningful factors.

Following factor analysis, multiple regression analyses were performed on four hypotheses examining the relationship between the new found factors and each of the perceived changes in business performance variables measured over 2 years. These changes in business performance variables measured were, (1) profitability, (2) customer retention, (3) number of inquiries and (4) occupancy levels.

The conclusion of this chapter serves to inform the following chapter, detailing further statistical analysis of the data, namely discriminant and cluster analysis. Following this, a conceptual model derived from these analyses is presented.

9.1 Factor analysis

According to Tabachnik & Fidell (2001) there are two major types of factor analysis: exploratory and confirmatory. Exploratory factor analysis seeks to explain and review collapsed responses to variable items that are correlated into factors. Confirmatory factor analysis is a more complicated tool (often used with structural equation modelling) for developing hypotheses by bringing variables together. For this study's survey, a series of 3 or 4 likert scale questions were obtained from past studies, measuring for example, a single factor such as the perceived ease-of-use of a technology and other external factors found in Davis's Technology Acceptance Model (TAM). This study's factor analysis therefore aims to group the variables into distinct factors, to enable relevant further analysis to be conducted to develop the conceptual model.

It has been noted that the correlation coefficients tend to be less reliable when estimated from smaller samples (Tabachnik & Fidell, 2001), therefore having a sample size of 408 for this research survey is considered to be between good and very good (Comrey & Lee, 1992). In line with the conceptual framework, there are essentially two key sets of factors from Davis's TAM to be examined, one of which is endogenous, where perceptions of technology use is measured, the second is exogenous where external variables are considered. Specifically, section 2 of the survey (20 likert scale questions) measures the endogenous perceptions of decision makers and section 3 of the survey (12 likert scale questions) measures the exogenous assessment of decision makers. The factorability of

both variable sets is tested with Kaiser's measure of sampling adequacy. Since the two sets of variables have values of 0.87 and 0.816, it can therefore be assumed that both sets are suitable for a good factor analysis (Tabachnik & Fidell, 2001).

9.1.1 Endogenous factors

The use of factor analysis is to determine the main dimensional factors based on the KMO (Kaiser-Meyer-Olkin) and Bartlett's test of sphericity, a scree plot which extracted a total of 4 factors and the amount of variance the variables account for (eigenvalue>1). A Direct Oblimin – an oblique rotational method with the default Delta value of 0 was used in the Principle Component Analysis (PCA). This was to ensure that a rotation requiring the factors to remain correlated is performed, because the oblique rotational method as opposed to the orthogonal rotation method often achieves greater simple structure (Darlington, 2006). The PCA also allows a large set of variables to be replaced by a smaller set which best summarizes the larger set. Following the extraction of principle components, principle factors extracted were able to estimate the number of factors, the absence of multicollinearity, and the favourable factorability of the correlation matrices. The pattern matrix is used for interpretative reasons as 'it contains information about the unique contribution of a variable to a factor' (Field, 2005: 660). Stevens (1992) suggested that for a sample size greater than 300, a loading of greater than .298 can be considered significant, and in the case of this study, the lowest factor loading without any cross loading is .449 (Table 9.2). More precisely, Tabachnik & Fidell (2001) stated that as a rule of thumb, only variables with loadings of .32 and above are interpreted, where the greater the loading, the more the variable is a pure measure of the factor. The factor analysis using SPSS aggregated the 20 hoteliers' perception of internet marketing variables into four new factors, they are assigned new labels, (1) Perceived marketing benefits of internet

technologies where the factor loadings of the 6 variables varied between .554 and .873, (2) Perceived ease of use and Affordability had 4 variables of factor loadings ranging between .609 and .846, (3) Emotional attitude is a collapsed factor made up of 3 variables with factor loadings between .817 and .912, and (4) Perceived usefulness as a factor is made up of 7 variables with factor loadings ranging from .449 to .789. The strongest factor loadings were found in the factor 'Emotional attitude' as it has the highest average factor loadings compared to the rest. While the weakest factor loadings were found in 'Perceived Usefulness' with the lowest average factor loadings. The above findings could help to explain some of the stronger or non-existent correlations and associations in further analyses conducted later.

The means and standard deviations of the 20 intra-organisational factors are summarised and illustrated in table 9.1 below, providing a good estimation of population parameters for interactions. As shown in table 9.2, the Rotation Sums of Squared Loadings (Eigenvalues) of 7.421, 2.493, 1.543 and 1.361 respectively, accounting for 64.09% of the total cumulative variance. The loadings are not a correlation but are a measure of the unique relationship between the factor and the variables. Detailed SPSS data results of the factor analysis can be found in Appendix 9.

Table 9.1

Hoteliers' perception of the internet as a marketing tool

	Mean*	SD
1. The internet has changed the way I market my hotel	4.36	.914
2. The internet has changed the way I think about markets	4.14	.953
3. The internet helped me to know more about the guests needs and wants	3.17	1.11
4. We use internet technologies in our hotel as a form of advertising and promotion	4.03	1.10
5. We use internet technologies in our hotel as a means of providing customer service	3.48	1.21
6. We use internet technologies in our hotel to generate revenue	3.67	1.27
7. We use internet technologies in our hotel to make decisions	3.31	1.23
8. We use internet technologies in our hotel because our competitors use them	3.28	1.40
9. Using the internet for marketing enhances the overall effectiveness of advertising for the hotel	4.09	1.01
10. Interacting with the internet requires a lot of mental effort	2.58	1.21
11. I find it takes a lot of effort to become skilful at using the internet	2.76	1.27
12. Using the internet for marketing the hotel makes me happy	3.40	1.12
13. Using the internet for marketing the hotel makes me feel positive	3.63	1.02
14. Using the internet for marketing the hotel makes me feel good	3.63	1.10
15. Internet marketing is a wise marketing tool for the hotel	4.28	.91
16. Internet marketing is a beneficial tool for the hotel	4.28	.94
17. Internet marketing is a valuable tool for the hotel	4.15	.92
18. Internet marketing is an expensive tool to adopt	2.77	1.16
19. Internet marketing is an expensive tool to maintain	2.91	1.22
20. The benefits of adopting internet marketing outweighs the costs	2.02	1.04

Note: SD = Standard Deviation. *1 = Strongly disagree, 5 = Strongly agree

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Table 9.2 Results of Pattern Matrix: Endogenous factors

Qn No		Factors			
		1	2	3	4
32	Internet marketing is a beneficial marketing tool for the hotel	.873			
31	Internet marketing is a wise marketing tool for the hotel	.850			
33	Internet marketing is a valuable tool for the hotel	.815			
36	The benefits of adopting internet marketing outweigh the costs	.693			
24	Using the internet for marketing enhances the overall effectiveness of advertising for the hotel	.556			
15	The internet has changed the way I market my hotel	.554			
35	Internet marketing is an expensive tool to maintain		.846		
34	Internet marketing is an expensive tool to adopt		.818		
27	I find it takes a lot of effort to become skilful at using the internet		.664		
26	Interacting with the internet requires a lot of mental effort		.609		
28	Using the internet for marketing the hotel makes me feel happy			.912	
30	Using the internet for marketing the hotel makes me feel good			.893	
29	Using the internet for marketing the hotel makes me feel positive			.817	
19	We use internet technologies in our hotel as a means of providing customer service				.789
20	We use internet technologies in our hotel to generate revenue				.708
17	The internet helped me to know more about guests needs and wants				.675
21	We use internet technologies in our hotel to gather information to make decisions				.606
22	We use internet technologies in our hotel because our competitors use them				.548
18	We use internet technologies in our hotel as a form of advertising and promotion				.459
16	The internet has changed the way I think about markets				.449

Reliability (Cronbach's Alpha)	.901	.736	.928	.814
Eigenvalue	7.421	2.493	1.543	1.361
Cumulative % of variance	37.104	49.569	57.286	64.090

Kaiser-Meyer-Olkin Measure of

Sampling Adequacy: 0.870

Bartlett's Test of Sphericity:

Approx. Chi-Square 4938.559 Sig.: .000

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Table 9.3 Endogenous factors derived

Dimensions	Qn	Variables	Reliability (Cronbach's Alpha)
Factor 1: Perceived marketing benefits of internet technologies	15	The internet has changed the way I market my hotel	0.901
	18	We use internet technologies in our hotel as a form of advertising and promotion	
	24	Using the internet for marketing enhances the overall effectiveness of advertising for the hotel	
	31	Internet marketing is a wise marketing tool for the hotel	
	32	Internet marketing is a beneficial tool for the hotel	
	33	Internet marketing is a valuable tool for the hotel	
	36	The benefits of adopting internet marketing outweigh the costs	
Factor 2: Perceived ease-of Use & affordability	26	Interacting with the internet requires a lot of mental effort	0.736
	27	I find it takes a lot of effort to become skilful at using the internet	
	34	Internet marketing is an expensive tool to adopt	
	35	Internet marketing is an expensive tool to maintain	
Factor 3: Emotional Attitude	28	Using the internet for marketing the hotel makes me feel happy	0.928
	29	Using the internet for marketing the hotel makes me feel positive	
	30	Using the internet for marketing the hotel makes me feel good	
Factor 4: Perceived Usefulness	16	The internet has changed the way I think about markets	0.814
	17	The internet helped me to know more about guests needs and wants	
	19	We use internet technologies in our hotel as a means of providing customer service	
	20	We use internet technologies in our hotel to generate revenue	
	21	We use internet technologies in our hotel to gather information to make decisions	
	22	We use internet technologies in our hotel because our competitors use them	

As indicated by the reliability measure of Cronbach's Alpha, all factors were consistent and well defined by the variables. Since the recommended value for Cronbach's Alphas is at least 0.7 (Ahire, Golhar and Waller, 1996) and the lowest of the Cronbach's Alpha for the constructs was .736, the variables are therefore well defined by this factor solution. Community values were relatively high, with a cut of .449 for inclusion of a variable in the interpretation of a factor. In relation to the hoteliers' perceptions of internet marketing, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) is .870, a strong value indicating that patterns of correlation are compact, yielding distinct and reliable factors in factor analysis (Field, 2005) and are greater than .06.

Four factors were obtained from the 20 collapsed variables. These factors were determined by the way the variables had grouped together. For instance, Factor 1: Perceived benefits of internet technologies for marketing, represents all variables that were in direct relation to positive marketing perceptions of the internet and internet technology. With factor 2: Perceived ease-of-use and affordability, two of the variables measured a respondent's ease of internet use, while other two variables that grouped with the previous two variables measured the perception of costs in relation to the internet. Three variables measuring attitudinal perception of internet use grouped to create Factor 3: Emotional attitude. Finally, Factor 4: perceived usefulness arise from six variables, of which four was in relation to how and why internet technology is being used in the respondent's hotel.

9.1.2 Exogenous factors

This section will examine the 12 likert scale questions of exogenous variables in determining the primary dimensional factors based on the KMO and Bartlett's test of sphericity, a scree plot, extracting a total of 3 factors and the amount of variance the

variables account for (eigenvalue>1). Table 9.4 shows the mean and the standard deviations of the 13 variables to be collapsed into variables. Using SPSS, the Principle Component Analysis with Oblimin Kaiser Normalization rotation was conducted. Like the earlier factor analysis of the hoteliers' endogenous intra-organisational perceptions, an oblique rotation was also used here because relationship between the factors could exist. From the results of the pattern matrix (table 9.5), loadings of a minimum of .576 and a high of .892 were recorded, the findings can therefore be deemed significant. The factor analysis aggregated the hoteliers' 13 perception of internet technologies variables into three new variables, (1) Customers' pressure- is made up of 4 variables recording the lowest factor loading at .576 and the highest loading at .838, (2) Competitive intensity is made up of 6 variables with the weakest loading of .601 and strongest at .803 and finally (3) Entrepreneurship is made up of 2 variables of two equally strong factor loadings of .887 and .892. The three factors have eigenvalues of 1.278, 4.728 and 1.450 respectively, accounting for 62.137% of the cumulative variance.

In relation to the hoteliers' perception of technological impacts on the industry, the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy (MSA) is .816 and a significance of .000 indicating that there are distinct and reliable variables found in the new factors of the factor analysis. The reliability measure of Cronbach's alpha (table 9.6) revealed that the breakdown of the 13 variables into 3 factors were sufficiently reliable where Customers' pressure had a cronbach alpha of .758, followed by the second factor of Competitive Intensity at .833 and the last factor of Entrepreneurship at .811. Detailed SPSS data results can be found in Appendix 10.

Table 9.4: Hoteliers' perception of exogenous factors in relation to internet marketing

	Mean	SD
1. We believe that we will lose our customers to our competitors if we do not adopt the internet for marketing	3.90	1.17
2. We believe that we will fall behind our competitors if we do not market ourselves online	3.97	1.13
3. Our current customers demand that we communicate with them via the internet	3.10	1.26
4. Our current customers demand that we use the internet for conducting transactions with them	2.95	1.27
5. The technology in our industry is changing rapidly	4.03	.98
6. Technological changes provide big opportunities in our industry	3.88	.99
7. It is very difficult to forecast where technology in our industry will be in the next 2 to 3 years	3.62	1.00
8. A large number of new service ideas have been possible through technological breakthroughs in our industry	3.70	.94
9. Technological developments have had a major impact on the hotel industry	3.92	.97
10. We believe that due to the nature of the market, wide-ranging acts are necessary to achieve our business objectives	3.52	.94
11. Our hotel makes aggressive and intensely competitive decisions	3.08	1.07
12. In general we have a strong tendency to be ahead of others in introducing new technology	3.00	1.10

Note: SD = Standard Deviation. *1 = Strongly disagree, 5 = Strongly agree

Table 9.6: Exogenous factors derived

Dimensions	Variables	Reliability (Cronbach's Alpha)
Factor 1: Customers' Pressure	37 We believe that we will lose our customers to our competitors if we do not adopt the internet for marketing	0.758
	38 We believe that we will fall behind our competitors if we do not market ourselves online	
	39 Our current customers demand that we communicate with them via the internet	
	40 Our current customers demand that we use the internet for conducting transactions with them	
Factor 2: Competitive Intensity	41 The technology in our industry is changing rapidly	0.833
	42 Technological changes provide big opportunities in our industry	
	43 It is very difficult to forecast where technology in our industry will be in the next 2 to 3 years	
	44 A large number of new service ideas have been possible through technological breakthroughs in our Industry	
	45 Technological developments have had a major impact on the hotel industry	
	46 We believe that due to the nature of the market, wide-ranging acts are necessary to achieve our business Objectives	
Factor 3: Entrepreneurship	48 Our hotel makes aggressive and intensely competitive decisions In general we have a strong tendency to be ahead of others in introducing new technology	0.811
	49	

2 – tailed significance: ** 0.05

3 distinct factors were obtained from the 12 collapsed variables measured in section 3 of the survey. Factor 1: Customers' pressure was derived from four variables that measured customers' demands in relation to adopting the internet for marketing. 6 variables measuring the industry's competitiveness in adopting technology collapsed to create Factor

2: Competitive intensity. Finally, Factor 3: Entrepreneurship was obtained from the two variables that measured how assertively the hoteliers react or pre-empt to the industry.

In line with the conceptual framework developed, the next section will evaluate the extent to which the 7 established factors are important in explaining the business performance measures. Each of the four business performance relationship with the factors is critical as the strength of the relationship will aid in the profiling of the hotel sector's use of internet technology.

9.2 Multiple linear regression

According to Bryman and Cramer (2005:110), the 'strength of multiple regression lies primarily in its use, as a means of establishing the relative importance of independent variables to the dependent variable'. Prior to conducting a multiple regression, Pearson's correlation was conducted to measure the association of relationships between these variables. Table 9.7 indicates moderately strong relationships amongst the tested variables as almost all reported significance on a 2 tailed significance of $p=.000$ with the exception of factor 2, i.e. Perceived ease-of-use and affordability.

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Table 9.7 Pearson's Correlation of dependent and independent variables

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	BP 1	BP 2	BP 3	BP 4
Factor 1	1	0.94	.554**	.646**	.568**	.542**	.327**	.365**	.297**	.472**	.374**
Factor 2		1	-0.49	-0.7	-0.96	-0.85	-0.8	0.37	-0.45	0.015	-0.34
Factor 3			1	.523**	.412**	.380**	.335**	.256**	.302**	.394**	.329**
Factor 4				1	.552**	.573**	.404**	.286**	.301**	.384**	.340**
Factor 5					1	.520**	.332**	.276**	.332**	.416**	.352**
Factor 6						1	.323**	.276**	.228**	.358**	.305**
Factor 7							1	.298**	.323**	.239*	.260**
BP 1								1	.559**	.549**	.648**
BP 2									1	.449**	.549**
BP 3										1	.667**
BP 4											1

The product moment correlation coefficient can range from -1 (a perfect negative relationship) to +1 (a perfect positive relationship). The significant coefficients obtained from the correlation ranges from a rather weak positive relationship of $r = 0.228$ (between factor 6 and business performance – changes in customer retention) to a strong positive relationship of $r = 0.667$ (between business performance- changes in number of inquiries and business performance – occupancy levels). All the variables tested are therefore correlated with the exception of Factor 2. While the regression analysis to be conducted will satisfy the testing of the hypotheses, most variables were consistently found to have strong relationships that were significant.

Regression analysis was conducted after having obtained 7 clear factors from the factor analysis, because it enables not the relationship between one dependent variable and

several independent variables to be assessed. Also, regression is said to be best (Tabachnik & Fidell, 2004: 116) 'when each independent variable is strongly correlated with the DV but uncorrelated with other independent variables'. The 7 factors obtained from the earlier analysis, together with two control variables of the owner managers' age and the number of rooms the hotel has, were held constant and applied as control variables.

The four business performance variables assessing hoteliers' perception of how internet technology has changed their perception of performance over the last 2 years were then each applied as dependent variables. As explained earlier in Chapter 5, the selected business performance measures were chosen based on extensive secondary search. However, only the respondents' perception of their business performances was obtained, firstly because during the interviews with the hoteliers at the exploratory stage, none of them were willing to provide absolute figures of their performance measures, particularly profit. Secondly, in order to encourage responses to these generally sensitive performance questions, a 'safer' forum for these respondents was incorporated in the guise of seeking perceptions for the business performance, rather than compelling respondents to respond with an absolute value. The regression equation takes the following form:

$$Y' = A + B_1X_1 + B_2X_2 + \dots + B_kX_k$$

Y' is the predicted value on the dependent variable, A is the Y intercept (where all the X values are zero), the X s represent the various independent variables (of which there are k), and B s are the coefficients assigned to each of the independent variables during regression. Based on the four business performance measures obtained from the hoteliers via the questionnaire, the following hypotheses will seek to measure if any of the collapsed seven

factors from the earlier factor analysis conducted will help to explain the changes in (1) net profitability; (2) customer retention; (3) number of inquiries; and (4) occupancy levels.

These findings will be presented in tables displaying the correlations between the variables, the unstandardized regression coefficients (B) and intercept, the standardised regression coefficients (β), R^2 , and the adjusted R^2 . Each of the beta weights displays the number of standard deviations change on the dependent variable that will occur if there is a change in one standard deviation of an independent variable or control variable. The adjusted R-squared value is particularly relevant as it helps to compensate for the model's complexity to provide a more impartial comparison of model performance.

Hypotheses:

- H1: There is no significant difference between hoteliers' perception of internet marketing and the changes in net profitability experienced by hotels
- H2: There is no significant difference between hoteliers' perception of internet marketing and the changes in customer retention experienced by hotels
- H3: There is no significant difference between hoteliers' perception of internet marketing and the changes in the number of inquiries experienced by hotels
- H4: There is no significant difference between hoteliers' perception of internet marketing and the changes in occupancy levels experienced by hotels

9.2.1 Relationship between hoteliers' perception and net profitability

A standard multiple regression was performed between the business performance measure in the changes of net profitability in the last two years of using or not using internet technology as dependent variable and internet technology as an effective marketing tool, perceived usefulness, perceived ease-of-use and affordability, attitude, competitive intensity, entrepreneurship and customers' pressure as independent variables. Analysis was

performed with SPSS regression and SPSS frequencies. The findings of H1 are presented in Table 9.8. Only three of the nine factors contributed significantly ($p < 0.05$) to the prediction of changes in net profitability due to the use of internet technology in the last two years. The multiple correlation coefficients (R) of the 2 control variables and the 7 factors for internet marketing was .427 indicating that there was some correlation between the 9 variables and the hoteliers' perceived changes in profitability while the coefficient of (multiple) determination (R^2) was .182.

The adjusted R square is .163, indicating that the difference with R^2 is minimal. This may be due to the large number of observations compared to the number of predictors. The size and direction of the relationships suggest that positive changes in profitability were attributed mostly to higher levels of perceived benefit of internet technologies for marketing, entrepreneurship and lower age range of the hoteliers.

The ANOVA table reports a significant F -ratio of 9.836 with significant level of $p = .000$ indicating that the model was meaningful in explaining the figures. As a whole, the regression did a good job of modeling hoteliers' perception of the internet as a marketing tool and the hoteliers' perceived changes in profitability. Nearly half the variation in changes in net profitability is explained by the model. Detailed SPSS data results of the test can be found in Appendix 11.

Table 9.8

Multiple Regression (H1): There is no significant difference between hoteliers' perception of internet marketing and the changes in net profitability experienced by hotels

Dependent variable Independent variables	Business performance- Change in net profitability (1) Perceived marketing benefits of internet technologies, (2) perceived usefulness, (3) perceived ease-of-use and affordability, (4) attitude, (5) competitive intensity, (6) entrepreneurship and (7) customers' pressure
Multiple Correlation Coefficient (R)	.427
Coefficient of Determination (R square)	.182
Adjusted R square	.163
Standard error	.7278

ANOVA

	F	Sig.			
Regression	9.836	.000			
	Unstandardized Std. Coefficient B	Std. Error	Standardized Coefficients Beta	T-value	Sig.
(Constant)	1.901	.318		5.981	.000
Factor 1- Perceived marketing benefits of internet technologies	.237	.070	.231	3.406	.001
Factor 2- Perceived ease-of-use & affordability	.026	.042	.030	.636	.525
Factor 3- Attitude	.023	.045	.030	.522	.602
Factor 4- Perceived usefulness	-.026	.065	-.027	-.405	.685
Factor 5- Customers' pressure	.041	.052	.047	.793	.428
Factor 6- Competitive intensity	.079	.066	.070	1.196	.233
Factor 7- Entrepreneurship	.152	.041	.189	3.697	.000
Age	-.007	.003	-.095	-2.048	.041
Number of rooms	.000	.001	-.016	-.336	.737

The coefficient was used to show which independent factors played important roles in explaining business performance changes in profitability. To determine which factors were statistically significant, the standardized coefficient was examined. The result indicated

that three factors contributed significantly to the hoteliers' perception of changes in net profitability at the significant level

In summary, factor 1 was found with a beta value of .189, suggesting that marketing benefits have an effect on changes in net profitability with a significance of $p=.001$. A beta of .189 found with Factor 7 suggests that perceived ease of use has an effect on changes in net profitability with a significance of $p=.095$. Factor 2 implied that the age of the owner manager contributes to changes in net profitability too, with a significance of $p=.041$. Factor 3 and 4 values demonstrating that these factors do not have a significant effect on net profitability. Therefore taken together, hypothesis 1 is supported. The regression analysis conducted, because significant differences were found between internet marketing and the changes in net profitability expected.

9.2.2 Relationship between hoteliers' perception of changes in net profitability

A similar standard multiple regression was performed to examine the relationship between internet technology as dependent variable and internet marketing tool, perceived usefulness, perceived ease of use, competitive intensity, entrepreneurship and customer retention. Analysis was performed with SPSS regression and the results are presented in Table 9.9. The multiple correlation coefficient between internet marketing and 2 control variables is .433 and the coefficient of (multiple) determination (R^2) was .169. The size and direction of the relationships suggest

retention were attributed to higher levels of perceived customers' pressure, positive attitude, a higher level of entrepreneurship characteristics and younger hoteliers. Detailed SPSS data results of the test can be found in Appendix 12.

Table 9.9 Results of multiple regression: hoteliers' perception & customer retention

Multiple Regression (H2): There is no significant difference between hoteliers' perception of internet marketing and the changes in customer retention experienced by hotels

Multiple Correlation	.433				
Coefficient (R)					
Coefficient of Determination (R square)	.187				
Adjusted R square	.169				
Standard error	.6580				
ANOVA					
		F	Sig.		
Regression		10.191	.000		
	Unstandardized Std. Coefficient B	Std. Error	Standardized Coefficients Beta	T-value	Sig.
(Constant)	2.278	.287		7.928	.000
Factor 1- Perceived marketing benefits of internet technologies	.057	.063	.062	.912	.363
Factor 2- Perceived ease of use & affordability	-.018	.038	-.023	-.482	.630
Factor 3- Attitude	.085	.041	.119	2.090	.037
Factor 4- Perceived usefulness	.025	.059	.028	.418	.676
Factor 5- Customers' pressure	.134	.047	.170	2.865	.004
Factor 6- Competitive intensity	-.024	.059	-.023	-.398	.691
Factor 7- Entrepreneurship	.146	.037	.200	3.918	.000
Age	-.006	.003	-.089	-1.911	.057
Number of rooms	.000	.001	-.007	-.150	.881

The ANOVA table reports a significant *F*-ratio of 10.191 with significant level of $p=.000$ indicating that the differences between means are not likely to be due to chance (Bryman & Cramer, 2004) and therefore the model is meaningful in explaining the figures.

Generally, the regression did a good job of modeling hoteliers' perception of the internet as a marketing tool in helping to explain the perceived changes in customer retention. Nearly half the variation in the perception that internet technology has improved customer retention is explained by the model.

The coefficient was used to show which of the 7 independent variables played important roles in explaining the perceived business performance changes in customer retention. To determine which factors were statistically significant, the standardized coefficient was examined. The result indicated that three factors contributed significantly to the hoteliers' business performance in relation to changes in customer retention at the significant level of $p<.05$.

From the coefficients table, factor 7 of entrepreneurship measuring effectiveness of internet marketing, made the biggest contribution because a change of one standard deviation on that variable on that factor produces a change of coefficient beta of .146 standard deviations on the business performance of customer retention, whereas a change of one standard deviation in factor 6 of competitive intensity for example produces a decrease of only 0.024 of a standard deviation in relation to the effectiveness of internet marketing. The largest regressor with the largest beta weight (0.200) is entrepreneurship in this instance as it has the largest association with the dependent variable, followed by factor 5 of customers' pressure with a beta coefficient of .170 and significance of $p=.004$. The third significant factor tabulated was of factor 3 which measured the hoteliers'

attitude, with a coefficient beta of .119 and a significance of $p=.037$ ($p<0.05$). Age has contributed to the model in a less significant but close to the $P<0.05$, with a beta weight of 0.089 where $p=.057$.

In summary, factor 3 was found with a beta value of 0.119 indicating that hoteliers' attitude has an effect on changes in customer retention with a significance of $p=.037$. A beta of .2 found with factor 7 suggests that the entrepreneurship of hoteliers has an effect on changes in customer retention with a significance of $p=.000$. Finally, a beta of .170 suggested that factor 5 of 'customers' pressure' contributed to the changes in customer retention too, with a significance of $p=.004$. Factors 1, 2, 4 and 6 had low beta values demonstrating that these factors do not have any effect on changes in customer retention. For these reasons, hypothesis 2 is therefore not supported by the regression analysis conducted, because significant differences were found between hoteliers' perception of internet marketing and the changes in customer retention experienced by hotels.

9.2.3 Relationship between hoteliers' perception and the number of inquiries

A similar standard multiple regression was performed between the business performance measure in the number of inquiries in the last two years of using or not using internet technology as dependent variable and internet technology as an effective marketing tool, perceived usefulness, perceived ease-of-use and affordability, attitude, competitive intensity, entrepreneurship and customers' pressure as independent variables. SPSS regression and SPSS frequencies were used to conduct the analysis. The findings of H3 are presented in Table 9.10. The multiple correlation coefficients (R) of the 7 factors for internet marketing and the 2 control variables is .533 indicating that there is some correlation between the 7 perception factors and the hoteliers' perceived changes in

profitability while the coefficient of (multiple) determination (R^2) was .284, where the adjusted R squared was .268. The size and direction of the relationships suggest that positive changes in the number of inquiries were attributed to higher levels of perceived customers' pressure, positive attitude, perceived benefit of internet technologies for marketing and younger hoteliers.

The ANOVA table reports a significant F -ratio of 17.580 with significant level of $p=.000$ indicating that the model is meaningful in explaining the figures. The regression did a good job of modeling hoteliers' perception of the internet as a marketing tool helps explain changes in the number of inquiries. Nearly half the variation in the number of inquiries can be explained by the model.

The coefficient was used to show which of the 9 variables played important roles in explaining business performance changes in customer retention. To determine which factors were statistically significant, the standardized coefficient was examined. The result indicated that three factors contributed significantly to the hoteliers' business performance in relation to changes in customer retention at the significant level of $p<.005$. Detailed SPSS data results of the test can be found in Appendix 13.

Table 9.10

Multiple Regression (H3): There is no significant difference bet internet marketing and the changes in the number of inc

Multiple Correlation Coefficient (R)	.533
Coefficient of Determination (R square)	.284
Adjusted R square	.268
Standard error	.7019

ANOVA

	F	Sig.
Regression	17.580	.000

	Unstandardized Std. Coefficient B
(Constant)	2.025
Factor 1- Perceived marketing benefits of internet technologies	.236
Factor 2- Perceived ease-of-use & Affordability	.013
Factor 3- Attitude	.129
Factor 4- Perceived usefulness	-2.71
Factor 5- Customers' pressure	.155
Factor 6- Competitive intensity	.087
Factor 7- Entrepreneurship	.023
Age	-.007
Number of rooms	.000

From the coefficients table, factor 1 of 'Perceived marketi technologies' made the biggest contribution because a cha that variable on that factor produces a change of coefficier deviations on the business performance of number of inqu with the largest beta weight as it has the largest associatio

followed by factor 5 of customers' pressure with a beta coefficient of .173 and significance of $p=.002$. The third significant factor tabulated was of factor 3 which measured the hoteliers' attitude, with a coefficient beta of .158 and a significance of $p=.003$ ($p<0.05$). Finally age also contributed a significantly to the model ($p=.024$) where its beta weight was .099.

In summary, factor 1 was found with a beta value of 0.223 indicating that perceived marketing benefits have an effect on changes in number of inquiries with a significance of $p=.000$. A beta of .158 found with factor 3 suggests that the hoteliers' attitude has an effect on changes in number of inquiries with a significance of $p=.003$. A beta value of .173 was derived for factor 5, signifying that customers' pressure has an effect on changes in number of inquiries with a significance of $p=.002$. Finally, a beta of .099 implied that the age of the owner manager contributes to the changes in number of inquiries too, with a significance of $p=.024$. Factors 2, 4, 6 and 7 have low beta values suggesting that these factors do not have any effect on changes in number of inquiries.

Hence hypothesis 3 is not supported by the regression analysis conducted, because significant differences were found between hoteliers' perception of internet marketing and the changes in number of inquiries received by the hotels.

9.2.4 Relationship between hoteliers' perception with occupancy levels

A similar standard multiple regression was performed between the business performance measure in the changes of occupancy levels in the last two years of using or not using internet technology as dependent variable and internet technology as an effective marketing tool, perceived usefulness, perceived ease-of-use and affordability, attitude, competitive intensity, entrepreneurship and customers' pressure as independent variables. Analysis was performed with SPSS regression and SPSS frequencies. The findings of H4

are presented in Table 9.11. The multiple correlation coefficients (R) of the 7 factors for internet marketing and the control variables is .446 indicating that there is some correlation between the 9 variables and the hoteliers' perceived changes in profitability while the coefficient of (multiple) determination (R^2) was .199, and the adjusted R squared was .181, indicating that a fifth of the variability in occupancy levels is predicted by the 9 variables. Altogether 20% of the variability in occupancy levels was predicted by knowing scores on the nine independent variables. The size and direction of the relationships suggest that positive changes in occupancy levels were attributed to higher levels of perceived customers' pressure, positive attitude and perceived benefit of internet technologies for marketing. Detailed SPSS data results of the test can be found in Appendix 14.

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Table 9.11

Multiple Regression (H4): There is no significant difference between hoteliers' perception of internet marketing and the changes in occupancy levels experienced by hotels

Multiple Correlation Coefficient (R)	.446				
Coefficient of Determination (R square)	.199				
Adjusted R square	.181				
Standard error	.7242				
ANOVA					
Regression		F	Sig.		
		10.986	.000		
		Unstandardized Std. Coefficient B	Standardized Error Coefficients Beta	T-value	Sig.
(Constant)	2.036	.316		6.439	.000
Factor 1- Perceived marketing benefits of internet technologies	.147	.069	.143	2.132	.034
Factor 2- Perceived ease of use & affordability	-.019	.041	-.021	-.451	.652
Factor 3- Attitude	.096	.045	.121	2.155	.032
Factor 4- Perceived usefulness	.026	.064	.027	.406	.685
Factor 5- Customers' pressure	.120	.051	.138	2.340	.020
Factor 6- Competitive intensity	.071	.065	.063	1.082	.280
Factor 7- Entrepreneurship	.074	.041	.092	1.808	.071
Age	-.005	.003	-.069	-1.491	.137

The ANOVA table reports a significant *F*-ratio of 10.986 with significant level of $p=.000$ once again indicating that model is important in explaining the figures. The coefficient was used to show which of the 9 variables played important roles in explaining business performance changes in customer retention. To determine which factors were statistically significant, the standardized coefficient was examined. The result indicated that three factors contributed significantly to the hoteliers'

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business performance in relation to changes in customer retention at the significant level of $p < .05$.

From the coefficients table, factor 5 of 'customers' pressure' made the biggest contribution because a change of one standard deviation on that variable on that factor produces a change of coefficient beta of .138 ($p = .020$) standard deviations on the business performance of occupancy levels. Factor 5 being the largest regressor with the largest beta weight, it demonstrates that it has the largest association with the dependent variable, followed by factor 1 'Perceived marketing benefits of internet technologies' with a beta coefficient of .143 and significance of $p = .034$. The third significant factor tabulated was of factor 3 which measured the hoteliers' attitude, with a coefficient beta of .121 and a significance of $p = .032$.

In summary, factor 1 was found with a beta value of 0.143 indicating that perceived marketing benefits have an effect on changes in occupancy levels with a significance of $p = .034$. A beta of .121 found with factor 3 suggests that the hoteliers' attitude has an effect on changes in occupancy levels with a significance of $p = .032$. Finally, a beta of .138 for factor 5 demonstrated that customers' pressure contributed to the changes in occupancy levels too, with a significance of $p = .020$. Once again, factors 2, 4, 6 and 7 have low beta values demonstrating that these factors do not have any effect on changes in occupancy levels. Therefore, Hypothesis 4 is not supported by the regression analysis conducted, because significant differences were found between hoteliers' perception of internet marketing and the changes in hotels' occupancy levels.

9.3 Collinearity diagnostics

It has often been reiterated that multicollinearity is a problem because its emergence will indicate that the regression coefficients may be unsound (Dimantopoulous & Schlegelmilch, 1997; Bryman & Cramer, 2005) and thus result in the variability of the findings to vary from one sample to another. According to Bryman & Cramer (2005), multicollinearity occurs when the tolerance statistic is low and the multiple correlation is high. The closer the tolerance figures get to zero, the more likely multicollinearity will occur. Another method of diagnosing for multicollinearity is by examining the VIF for each variable. The calculation of VIF facilitates the assessment of the impact of multicollinearity (if it were to occur) on the estimation of the regression equation. The formula for calculating VIF is 1 divided by the tolerance level for that independent level (Bryman & Cramer, 2005). The closer the value of VIF is to 10, the bigger the independent's contribution to a possible multicollinearity. Information about multicollinearity can be found in the following table 9.12 where values for Tolerance and the variance inflation factor (VIF) are tabulated.

The tolerance statistic is the percentage of the variance in a given predictor that cannot be explained by the other predictors. As shown in table 9.8, the tolerances of the seven factors based on dependent variable of changes in net profitability range from 0.445 to 0.947 suggesting that multicollinearity is rather unlikely, as the high tolerances indicate that only a maximum of 55% to a minimum of 5% can be explained by the other predictors (Appendix 11). Moreover, it is only when tolerances are close to 0 that there is high multicollinearity where the standard error of regression coefficients are inflated. This is confirmed by the very low VIF values as none of the independent variables displayed values that are even close to 10. It has been suggested that a VIF greater than 2 suggest a

problem, but there are only 2 variables slightly beyond 2, where the highest is 2.247.

Therefore, multicollinearity does not pose as a problem for the models tested here and all the variables used are essential to the investigation of correlations.

Table 9.12 Collinearity statistics

	Collinearity Statistics	
	Tolerance	VIF
Factor 1	0.445	2.247
Factor 2	0.919	1.088
Factor 3	0.635	1.575
Factor 4	0.455	2.198
Factor 5	0.578	1.731
Factor 6	0.601	1.664
Factor 7	0.783	1.278
Age	0.947	1.056
No. rooms	0.940	1.064

9.4 Summary

This chapter has explained the first two sets of analysis conducted for the study, they were carried out primarily to facilitate the final investigation into the perceptions of hoteliers who deploys internet technologies at various levels.

Factor analysis is the first set of SPSS analysis conducted. The sole purpose of the analysis was to collapse the 32 variables that were originally obtained from various literature reviews as being important issues relevant to the study, into a statistically manageable set of 7 factors. These 32 variables were included in the questionnaire as likert scale questions where the formation of factors derived from the factor analysis also enabled the examination of how well the findings align with previous studies. The results of the factor analysis revealed 7 factors which were used for the rest of the study's analysis, they are:

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1. Factor 1: Perceived marketing benefits of internet technologies
2. Factor 2: Perceived ease-of-use and affordability
3. Factor 3: Attitude
4. Factor 4: Perceived usefulness of internet technologies
5. Factor 5: Customers' pressure
6. Factor 6: Competitive intensity
7. Factor 7: Entrepreneurship

The second set of analysis conducted was to obtain regression coefficients that tell us the extent of correlations between the four perception of effects on business performance measures and the 7 factors derived from the factor analysis together with the two control variables. Table 9.13 presents the summarised findings of Regression.

Table 9.13 Significant factor contributors of business performance

Business Performance	is significantly contributed by:
Profitability	Perceived marketing benefits of internet technology Higher entrepreneurship traits Lower age
Customer retention	Positive Attitude Greater customers' pressure Higher entrepreneurship traits Lower age
Number of Inquiries	Perceived positive marketing benefits Positive Attitude Greater customers' pressure Lower age
Occupancy levels	Perceived positive marketing benefits Positive Attitude Greater customers' pressure

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When all the variables are considered, 18.2% (16.3% adjusted) of the variability of business performance of profitability was predicted by the scores of these variables. The relationship suggests that an increase in profitability was attributed to the owner managers who display higher entrepreneurial traits, positive perceived internet marketing benefits, and are inclined to be younger.

18.7% (16.9% adjusted) of the variability in the business performance measured by customer retention was predicted by the scores of the variables. The direction and size of the relationship suggests that an increase in customer retention was more likely due to owner managers who have a positive attitude towards internet technology, do feel greater pressure from customers, display higher entrepreneurial traits and also tend to be younger.

The third performance measured was the number of inquiries. The scores of the variables explained more than a quarter (28.4%; 26.8% adjusted) of the variability in the number of inquiries. The relationship suggests that an increase in the number of inquiries were due to the owner managers perceived positive internet marketing benefits, a more positive attitude towards internet technologies, feels greater pressure from customers and are also younger in age.

19.9% (18.1% adjusted) of the variability in the business performance measure of occupancy levels were explained by the variables. The relationship suggests that an increase in occupancy levels were explained by the owner managers' positively perceived marketing benefits of internet technologies, a positive attitude towards internet technologies and also feels a greater pressure from customers to use internet technologies.

Collinearity diagnostics were conducted and the VIF and Tolerance statistics reveal that multicollinearity is not a problem for any of the models tested here, as all the variables used are essential to the investigation of correlation.

This chapter has statistically obtained the key factors, tested their significance and relevance that influence the business performance measures of the hoteliers, the study can therefore bring the research forward, by analysing if these factors vary in importance in relation to the range of internet technology adopted by the hoteliers. Hence, an thorough discriminant analysis is conducted in the next chapter to present an accurate illustration of how the factors influence the hoteliers' choice of internet technology range adopted.

CHAPTER 10

SURVEY ANALYSIS III: DISCRIMINANT ANALYSIS

10.0 Introduction

This chapter examines the factors that influence the internet technology deployment decision of hoteliers. According to Lee (2004), discriminant analysis allows for a statistical procedure to identify each independent variable's contribution to a linear function that reveals the best discrimination between the three groups of hoteliers who have deployed, who are planning to deploy and have no plans to deploy. This is the possibility of identifying a composite variable which brings up differences between the three groups, because the categories in which each hotelier belongs to were obtained from the questionnaire survey.

The chapter discusses the method of discriminant analysis, and why it is a suitable analysis to further enhance our understanding of whether the 7 factors found earlier are significant in influencing a hoteliers' decision to deploy or not deploy an internet technology. The findings will help to verify that each of the key factors discovered earlier contributes to the hoteliers' deployment decision. Following that, significant factors found would facilitate the classification of hoteliers, where a cluster analysis is conducted to confirm group membership.

Based on the conceptual framework, to eventually achieve the aims set out for this study, this chapter sets out to predict which of the seven factors of perception (obtained earlier via factor analysis and correlations verified by regression) held by hoteliers contribute to their

decision to adopt, not adopt or plan to adopt an internet technology. At the same time, the accuracy in the predicted classification of the internet technologies is ascertained.

The forums of internet technology examined were (1) Electronic mail; (2) online intermediaries; (3) online forms; (4) own website; and (5) online payment. The hypotheses conducted to ensure that these objectives are met are as follows:

H5: There is a direct relationship between the hoteliers' perceived effectiveness of internet technologies as a marketing tool and the adoption of internet technologies

H6: There is a direct relationship between the hoteliers' perceived usefulness and the adoption of internet technologies

H7: There is a direct relationship between the hoteliers' perceived ease of use and affordability and the adoption of internet technologies

H8: There is a direct relationship between the hoteliers' attitude and the adoption of internet technologies

H9: There is a direct relationship between the hoteliers' entrepreneurial spirit and the adoption of internet technologies

H10: There is a direct relationship between the hoteliers' perceived customers' pressure and the adoption of internet technologies

H11: There is a direct relationship between the hoteliers' perceived competitive marketing intensity and the adoption of internet technologies

Discriminant analysis is suitable for this aspect of the research because the dependent variables in this study are categorical, where they are classified into 'deployed', 'plans to deploy' and 'no plans to deploy'. Discriminant analysis could also observe if the groups

can be separated well, where the variances between the groups and variances within the groups can be compared based on the discriminant scores generated by a linear combination of independent variables. Kinnear & Gray (1997) stated that there are three types of discriminant analysis, namely, direct, hierarchical and stepwise, further stating that the stepwise method is most often used, because as in this study, most analyses do not require predictors to be given a higher priority. The factor analysis conducted earlier in the study facilitated the utilisation of discriminant analysis to advance the study's understanding of each of the factors that were found in the reduction of a series of independent variables. These independent variables have a causal effect on each other, regardless of manipulation or direction, however, it is important to note that in performing the discriminant analysis, the seven factors obtained are now the independent variables and the group variable is now the dependent variable.

The purpose of the discriminant analysis is, given the independent variables of factors 1 to 7, to find a linear function (D) of the independent variables so that when a one way ANOVA is conducted comparing the categories (in this case, 'plans to deploy', 'deployed', 'no plans to deploy') of the qualitative dependent variable with respect to D , the ratio of Sum of Squares (between the DV s) divided by the total of sum of squares is as large as possible. The function of D in this analysis is: (where b is the constant)

$$D = b_0 + b_1(IV_1) + b_2(IV_2) + b_3(IV_3) + \dots + b_7(IV_7)$$

Discriminant analysis uses the Wilks' Lambda to weigh up the correlation of variables or the removal of variables from the analysis. Wilks' Lambda (Λ) also helps to assess if a function of the independent variables reliably discriminates among the categories of the

dependent variable. In this multivariate case, Λ becomes a ratio of determinants of matrices of sums of squares and cross products (Kinnear & Gray, 1997) where a variable's potential is measured. Once the variables are removed or added, the remaining variables are then used in the discriminant function. A classification table is also created so as to assess the accuracy of the function predicted. This occurs when the discriminant function is created, where 'the predictive assignment of each subject based on the objective function and relative weights is compared with the original group assignment' (Lee, 2004: 62). The classification test allows the model to be verified in relation to its capacity to classify accurately.

10.1 Discriminant investigation

Individual discriminant models were generated using five different internet technologies as dependent variables against a list of independent variables (factors obtained from the previous factor analysis). Data were coded into 3 separate groups in SPSS: hoteliers who have deployed, hoteliers who have plans to deploy and hoteliers who have no plans to deploy. Discriminant analysis was conducted on each of the internet technologies examined. The grouping variable in each instance was an internet technology indicating if the hotelier has deployed, have no plans to deploy or plans to deploy. Descriptive means and univariate ANOVAs were requested with prior probabilities of all groups equal. A display request of a summary table with a 'leave-one-out classification' and the within-groups covariance matrix were also made.

The SPSS output of Wilkes lambda value, chi-square and the significance for each of the five internet technologies are shown in table 10.1, together with the means and standard deviation of each of the independent variables. Significance of each of the models is taken

where an assessment of the average group discriminant scores were recorded. Four groups were statistically significant ($p < 0.05$) in relation to their association with the various independent variables except for the 'own website' variable- one important reason could be because, less than 3% of the respondents are without a website. The chi-square statistics simply tests the hypothesis that the means of the functions listed are equal across groups, but the value must be understood with the significance value. A small significance value indicates that the discriminant function does better than chance at separating the groups.

In table 10.1, the interpretation of the discriminant functions involves the mean and standard deviation measures, the significance of the discriminant and the discriminant loadings. Discriminant loadings illustrate the correlation between the variables and the discriminant functions where 'independent variables with relatively larger weight contribute more to the discriminating power of the function than do variables with smaller weights.' (Lee, 2004: 62). Discriminant loadings were found to be better parameters for evaluation of variables (Hair, Anderson, Tatham & Black, 2007). The discriminant loadings reflected the variance shared by the internet technologies adoption profile and the proposed research model. Hair et. al. (2007) also suggested that discriminant loadings of 0.3 or greater should be considered significant. The results shown on table 10.3 indicate that not all factors were significant in affecting the hoteliers' adoption of a particular internet technology, but discriminant loadings that do not play a part or have little impact are not highlighted although some of the loadings are above 0.3. This is because while measuring the loadings of the dependent categorical variable based on its relationship with the independent variables were not found to significant in the discriminant analysis.

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Table 10.1 Discriminant analysis

	Currently deployed		Plans to deploy		No plans to deploy		Sig	Model Statistics	
	Mean	SD	Mean	SD	Mean	SD			
Electronic Mail									
Effectiveness as a marketing tool	4.20	0.77	4.05	0.55	3.71	1.22	.113	Wilks A	0.92
Perceived usefulness	3.54	0.82	3.33	0.68	2.80	1.17	.012	X ²	33.55
								d.f.	14
								Sig	.002
Perceived ease-of-use & affordability	3.26	0.91	3.15	0.71	3.05	0.94	.671		
Attitude	3.57	0.99	3.17	1.00	3.39	1.41	.186		
Entrepreneurship	3.05	0.99	2.81	0.70	2.85	1.23	.492		
Customers' pressure	3.53	0.91	3.14	0.66	2.33	0.91	.000		
Competitive/ marketing Intensity	3.78	0.71	3.89	0.69	3.53	0.76	.431		
Online Form									
Effectiveness as a marketing tool	4.30	0.79	4.25	0.69	3.9	0.76	.000	Wilks A	.848
Perceived usefulness	3.71	0.80	3.54	0.73	3.18	0.83	.000	X ²	66.33
								d.f.	14
								Sig	.000
Perceived ease-of-use & affordability	3.25	0.95	3.30	0.86	3.2	0.88	.761		
Attitude	3.73	0.98	3.70	0.87	3.05	1.06	.000		
Entrepreneurship	3.25	0.99	3.07	0.89	2.6	0.96	.000		
Customers' pressure	3.73	0.90	3.47	0.82	3.58	0.711	.000		
Competitive/ marketing Intensity	3.88	0.69	3.83	0.73	3.06	0.91	.001		
Online Intermediaries									
Effectiveness as a marketing tool	4.25	0.74	4.21	0.69	3.93	0.88	.003	Wilks A	.899
Perceived usefulness	3.62	0.79	3.42	0.86	3.15	0.85	.000	X ²	42.63
								d.f.	14
								Sig	.000
Perceived ease-of-use & affordability	3.29	0.94	2.97	0.84	3.19	0.77	.261		
Attitude	3.6	0.99	3.65	0.89	3.35	1.10	.120		
Entrepreneurship	3.16	0.97	2.58	0.8	2.69	1.01	.000		
Customers' pressure	3.58	0.87	3.28	0.96	3.18	1.01	.001		
Competitive/ marketing Intensity	3.85	0.70	3.74	0.80	3.57	0.68	.006		
Online payment									
Effectiveness as a marketing tool	4.45	0.63	4.26	0.77	4.04	0.80	.000	Wilks A	.834
Perceived usefulness	3.89	0.68	3.58	0.79	3.34	0.84	.000	X ²	73.04
								d.f.	14
								Sig	.000
Perceived ease-of-use & affordability	3.16	0.94	3.25	0.9	3.29	0.89	.507		
Attitude	3.91	0.92	3.84	0.84	3.30	1.04	.000		
Entrepreneurship	3.55	0.91	3.17	0.89	2.79	0.98	.000		
Customers' pressure	3.87	0.87	3.66	0.89	3.25	0.88	.000		
Competitive/ marketing Intensity	4.01	0.68	3.82	0.77	3.68	0.68	.001		
Own website									
Effectiveness as a Marketing tool	4.2	0.76	3.93	0.61	2.57	1.09	.000	Wilks A	.931
Perceived usefulness	3.52	0.82	3.00	0.60	2.46	1.23	.025	X ²	28.947
								d.f.	14
								Sig	.011
Perceived ease-of-use & affordability	3.25	0.90	4.13	1.24	3.19	0.85	.390		
Attitude	3.55	1.01	3.33	0.47	3.05	0.89	.588		
Entrepreneurship	3.04	0.99	3.25	1.06	2.38	1.11	.392		
Customers' pressure	3.50	0.91	2.5	0.00	1.88	0.63	.001		
Competitive/ marketing Intensity	3.79	0.71	3.83	.47	3.07	.76	.130		

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Table 10.1 indicates whether there is a statistically significant difference among the dependent variable means for each independent variable. Wilks' lambda is a measure of a variable's potential where smaller values indicate that the variable is better at discriminating between groups. From table 10.1, the Wilks' lambda of 0.834 indicates that the variables were best at discriminating between groups within the online payment model (Appendix 17). This was followed by a wilks lambda of 0.848 in the 'Online form' model (Appendix 18), 'Online intermediaries' (0.899) (Appendix 19), 'Electronic mail' (0.92) (Appendix 16)- and 'Own website' (0.931) (Appendix 15) . High significance ($p < 0.005$) were recorded for electronic mail, online forms, online intermediaries and online payment; 'own website' had a slightly lower value, but the model is still significant at ($p > 0.05$).

Classification accuracies were also calculated and shown in table 10.2. Classification accuracies are between 49.8% and 78.9%, while the chance accuracies all varied lower between 47.5% and 77.7%. This difference simply indicates that the models' prediction accuracies are higher than chance accuracies.

Table 10.2 Classification accuracy

		Prediction Count			Total	Accuracy	
		Deployed	Plans to deploy	No plans to deploy		Overall	Chance
Electronic Mail	Deployed	224	93	60	377	58.3%	56.1%
	Plans to deploy	6	9	6	21		
	No plans to deploy	2	3	5	10		
Online payment	Deployed	50	12	24	86	61.10%	59.50%
	Plans to deploy	33	24	35	92		
	No plans to deploy	54	44	132	230		
Online form	Deployed	98	44	45	187	50.50%	47.5%
	Plans to deploy	42	38	28	97		
	No plans to deploy	24	19	70	113		
Online intermediaries	Deployed	166	70	65	301	49.80%	48%
	Plans to deploy	5	10	4	19		
	No plans to deploy	33	28	27	88		
Own website	Deployed	317	55	30	402	78.90%	77.7%
	Plans to deploy	0	2	0	2		
	No plans to deploy	1	0	3	4		

The classification accuracy of the 'e-mail' model is 58.3% (table 10.2). 224 of the hoteliers were accurately predicted to have deployed, while 9 were correctly predicted to have plans to deploy and 5 were correctly predicted to have no plans to deploy. This result is rather weak given that more than 90% of the hoteliers sampled were already using electronic mail. Nevertheless, this model cannot be discounted because the discriminant model for 'email' is significant at $p=0.002$ (table 10.1). The variables that are significant at $p<0.05$ level are, perceived usefulness at $p=.012$ and customers' pressure at $p=.000$. Perceived ease-of-use and affordability, attitude, entrepreneurship, effectiveness as a marketing tool and customers' pressure were not significant to the adoption of electronic mail. Critical loadings (table 10.3) are 0.551 and 0.859 for Perceived usefulness and Customers' pressure respectively within the electronic mail model.

The overall model for 'online form' was significant at $p=.000$, and the classification accuracy is 50.5% (table 10.2). The significant independent variables are effectiveness as a marketing tool, perceived usefulness, attitude, entrepreneurship, customers' pressure and competitive/ marketing intensity. The only insignificant variable was perceived ease-of-use and affordability. The critical loadings (table 10.3) in this model are customers' pressure (0.765), entrepreneurship (0.695), attitude (0.676), perceived usefulness (0.671), effectiveness as a marketing tool (0.564) and competitive/ marketing intensity (0.435).

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Table 10.3 Supported hypotheses

	Electronic Mail	Online Form	Online intermediaries	Online payment	Own website	Support for hypotheses
Effectiveness as a marketing tool	0.386	0.554	-0.632	0.509	0.835	H5: strong Support
Perceived usefulness	0.551	0.707	0.754	0.642	0.543	H6: full Support
Perceived ease-of-use & affordability	0.163	0.043	-0.394	-0.130	-0.047	H7: not supported
Attitude	0.563	0.662	-0.505	0.689	0.205	H8: weak Support
Entrepreneurship	0.294	0.661	0.718	0.758	0.239	H9: some Support
Customers' pressure	0.859	0.775	0.595	0.704	0.765	H10: full Support
Competitive/ marketing Intensity	-0.471	0.442	0.491	0.437	0.382	H11: some support

The discriminant model for 'online intermediaries' was significant at $p=.000$, and the classification accuracy is 49.8% (table 10.2). Significant independent variables ($p=.05$) are effectiveness as a marketing tool, perceived usefulness, entrepreneurship, customers' pressure and competitive/ marketing intensity. Perceived ease of use and affordability was found to be insignificant. Critical loading factors (table 10.3) were entrepreneurship (0.718), perceived usefulness (0.754), customers' pressure (0.595), effectiveness as a marketing tool (0.632) and competitive/ marketing intensity (0.491). The critical loadings that are statistically significant are bold, therefore enabling the distinction between a strong or weak support for each of the factors in relation to internet technology deployment.

The classification accuracy is 61.1% for 'online payment' and the discriminant model is significant at $p=.000$. Effectiveness as a marketing tool, perceived usefulness, attitude, entrepreneurship, customers' pressure and competitive marketing intensity were all found to be highly significant at $p=.000$. However perceived ease of use and affordability were again found to be insignificant. Critical contributors to the model are entrepreneurship (0.758), customers' pressure (0.704), attitude (0.689) while perceived usefulness (0.642),

effectiveness as a marketing tool (0.509) and competitive/ marketing intensity (0.437) were important contributors.

The discriminant model for 'own website' is insignificant, which also makes this the second weakest model (after electronic mail), although only less than 3% of respondents did not have their own website. Three factors were found to be significant in contributing to the hoteliers' decision to deploy, not to deploy or plans to deploy their own website. The first of which was effectiveness as a marketing tool ($p=.000$) which was found to be significant in the measurement between deployments and also had a high loading of 0.835 (Table 10.3) which is also the highest for 'own website' as an internet technology for the factor. The second factor found to be significant was perceived usefulness ($p=.025$) and a loading of 0.543. The third factor was customers' pressure ($p=.001$) and a loading of 0.765. The classification accuracy was tabulated at a high of 78.9%, again this could be due to the high number of respondents with their own website.

Table 10.3 of discriminant loadings summarise the results of all the five tests along with results of the hypotheses tests. The table illustrates the configuration and difference among the five internet technologies and their adoption. Hypothesis eleven measuring competitive marketing intensity as a determining factor was fully supported across all five internet technologies. Hypotheses six which measured perceived usefulness as a determining factor was strongly supported across four of the models (except 'own website'). Moderate support was found for hypotheses five, nine and six across three similar internet technologies of 'online form', 'online intermediaries' and 'online payment'. Hypothesis eight measuring attitude had weak support as it only applied to 'online forms'. Finally,

perceived ease-of-use and affordability measure in hypothesis seven was rejected in all five models.

10.2 Discriminant findings

The canonical loadings of structure matrix of table 10.4 displays the optimal combination of variables where the first function provides the most overall discrimination between groups and the second provides second most discrimination. By looking at the means for the functions across groups, the nature of the discrimination for each function can be ascertained. It has been argued that structure coefficients should be used when trying to interpret the "meaning" of discriminant functions, because firstly, the structure coefficients are suppose to be more stable, and secondly they enable the interpretation of factors (discriminant functions) in the manner that is almost similar to factor analysis. Although it has been argued that some (Barcikowski & Stevens, 1975; Huberty, 1975) discriminant function coefficients and the structure coefficients could both be unstable, this could be discounted if the sample size (n) is large enough (e.g. 20 times more cases than there are variables) which is the case for this particular study (where $n=408$). It is important to note that the discriminant function coefficients (weights) expresses the unique (partial) contribution of each variable to the discriminant function(s), while the structure coefficients reveals the simple correlations between the variables and the function(s) where 'meaningful' labels can be assigned to the discriminant functions to be interpreted.

Table 10.4 Canonical (discriminant) loadings of structure matrix

	Electronic Mail		Online payment		Online forms		Online Interned.		Own website	
	Function1	Function2	Function1	Function2	Function1	Function2	Function1	Function2	Function1	Function2
Exogenous factors										
Customers' pressure	0.833		0.704		0.775		0.595		0.765	
Competitive/ Marketing Intensity		0.471	0.437		0.442		0.491		0.382	
Entrepreneurship		0.294	0.758		0.661		0.718		0.303	
Endogenous factors										
Effectiveness as a marketing tool	0.386		0.509		0.554		0.0632		0.835	
Perceived usefulness	0.551		0.642		0.707		0.754		0.543	
Attitude		0.563	0.689		0.662		0.505		0.205	
Perceived ease-of-use and affordability	0.163			0.143		0.297		0.394		0.628

The findings of table 10.4 appear to indicate that the greatest discrimination between groups (i.e. function 1) seem to be made up of mostly exogenous factors of customers' pressure, competitive marketing intensity and entrepreneurship. This is particularly imminent with customers' pressure as it appears in function 1 of all internet technologies examined. However, this does not mean that the endogenous factors of effectiveness as a marketing tool, perceived usefulness, attitude, and perceived ease of use and affordability do not contribute to the discrimination. Although the endogenous factors seem to take more of a back seat in the discrimination between the group of internet technologies deployed.

In summary, following the use of discriminant analysis, the hypotheses tested indicates that most of the factors tested against the level of internet technologies deployment were either strongly or fully supported. Results of the first hypothesis H5, reveal that the relationship between the hoteliers' perceived effectiveness of internet technologies as a marketing tool and the level of internet technologies deployment is strongly supported, as significant factor loadings were found for a majority of the internet technologies.

Tests for H6 reveal that the relationship between the hoteliers' perceived usefulness and the level of internet technology deployment is fully supported as significant factor loadings were found for electronic mail, online form, online intermediaries and online payment.

Tests for H7 indicate that it is the only hypothesis that indicated no support between the relationship hoteliers' perceived ease of use and affordability and the level of internet technologies deployment.

Testing for H8 found weak support between the hoteliers' attitude and the level of internet technologies deployment because significant loadings were only found with online form and online payment. Tests for H9 on the other hand revealed that the relationship between the hoteliers' entrepreneurial spirit and the level of internet technologies deployment is somewhat supported with important loadings contributed in online forms, online intermediaries and online payments. Similarly, H10 tested showed full support between the hoteliers' perceived customers' pressure and the level of internet technologies deployment.

Finally, discriminant analysis conducted on H11 reveals that there is some relationship between the hoteliers' perceived competitive marketing intensity and the level of internet technologies deployment, since all internet technologies contributed with significant loadings.

10.3 Summary

Discriminant analysis was found to be most suitable to conduct an investigation of whether the 7 factors held by hoteliers contribute to their decision to adopt, not to adopt or plans to adopt an internet technology. This mode of analysis was undertaken as the complexity of

the data collected meant that there were 3 categories of usage (deployed, plans to deploy and no plans to deploy) for each of the 5 internet technologies ('e-mail', 'online form', 'own website', 'online payment' and 'online intermediaries') examined.

The results of the analysis have indicated that all 7 factors play a significant role in explaining the hoteliers' decision to deploy, having plans to deploy or no plans to deploy. While there were factors that are more important in the explanation of an internet technology's usage or non usage, the 'perceived ease-of-use and affordability' factor was consistently found to be insignificant in any of the internet technologies examined. This led to the assertion that the seventh hypothesis is not supported, as no relationship was found between the 'perceived ease-of-use and affordability' and the stages of internet technology usage.

The discovery of the key antecedents influencing the hoteliers' decision to deploy, to have plans to deploy and to have no plans to deploy, reaffirms the study's consideration of how each of these factors also play significant roles in influencing hoteliers' choice in the range of internet technology deployed. The next chapter will therefore examine what exactly is the range of internet technology adopted by the hoteliers. A further cluster analysis will then be performed to ascertain if a classification of hoteliers is possible by the range of internet technology they have adopted.

CHAPTER 11

SURVEY ANALYSIS IV: CLUSTER ANALYSIS

11.0 Introduction

Seven key factors were discovered as the perception variables were collapsed via factor analysis and confirming their relationship with the four business performance measures (regression), the study was then able to investigate the relationship between the seven factors and the 5 uses of internet technology as a marketing tool. This was achieved by way of discriminant analysis where significant loadings were obtained. These loadings enabled the research to further discover the association and the contribution of each factor to each of the 5 internet technology examined, which in turn helps to explain if each of the factors had a direct or indirect effect on whether an internet technology were deployed, not deployed or is being planned to be deployed. Classification accuracies were also obtained enabling cases to be grouped according to usage levels.

Having discovered strong and reliable relationships between the six crucial factors and internet technologies usage, this section of the study ascertains if the currently deployed hoteliers of each internet technology displays similar adopter categorizations as suggested in Rogers' (1995) adopter categorization model based on innovativeness. The study will also chronicle the characteristics of hoteliers who are currently deployed with internet technologies at varying intensity

To examine only internet technologies that are currently deployed, it was necessary to isolate the responses of hoteliers who are currently deployed with the various internet technologies. While focusing only on current deployment, a manual coding of the

responses revealed 18 discrete responses. Each form of currently deployed internet technology was recoded with a unique numerical value, ensuring that, when currently deployed internet technologies are added together in any number of combinations, the total remains unique too. The result of this exercise is displayed in Table 11.1

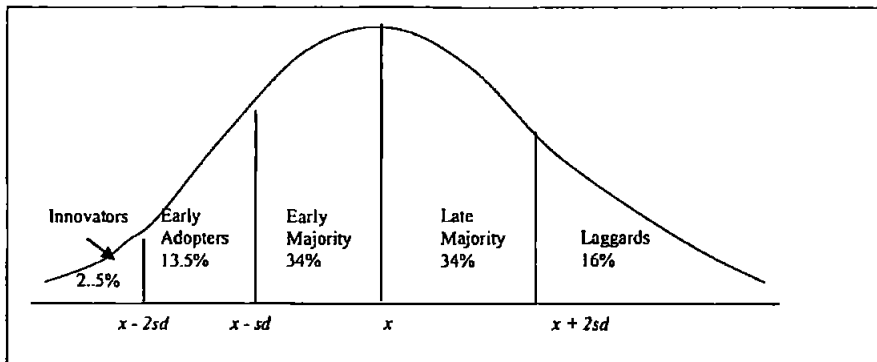
Referring back to Rogers' (1995) adopter categorization model based on innovativeness, there is a slight semblance to the results of Table 11.1, displaying a similar bell curve. The manual coding of the responses giving rise to table 11.1 had also adhered to the three rules of Rogers's adopter categorization, (i) exhaustive (i.e. including all units of study including non-adopters); (ii) mutually exclusive (i.e. exclude a unit of study that appears in one category from also appearing in any other category and (iii) derived from a single classificatory principle (i.e. in this study, internet technology currently deployed by the hoteliers). As it has been illustrated in the earlier chapter, this study's findings closely mirrored that of Rogers's graphical depiction of innovation diffusion. More appropriately Rogers has also included the criterion of *innovativeness*, where 'it is a relative dimension, in that an individual has more or less of it than others in the system' (ibid: 261). This criterion was considered when classifying all respondents.

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Table 11.1 : All combination of responses

Sta ges	Based on Rogers's Diffusion model	Modes of internet marketing used	No. of respondents	Coded total
1	Laggards	Without website or with website only	21	21 (5%)
2	Late Majority	Website & Email only	73	86
		Website & Online forms only	1	21%
		Website & Online 3rd party only	11	
		Website & online payment only	1	
3	Early majority	Website & email & online forms only	20	135
		Website & email & online 3rd party only	110	33%
		Website & email & online payment only	1	
		Website & Online 3rd party & online forms only	1	
		Website & Online 3rd party & online payment only	2	
		Website & online payment & online forms only	1	
4	Early adopters	Website & email & online forms & online 3rd party only	85	92
		Website & email & online forms & online payment only	3	22.50%
		Website & online payment & online 3rd party & online form only	2	
		Website & email & online payment & online 3rd party only	2	
5	Innovators	Website & email & online forms & online 3rd party online payment	74	74 (18%)
TOTAL			408	408

Figure 11.1 Rogers' (1995) Adopter categorizations on the basis of innovativeness



The innovativeness dimension, as measured by the time at which an individual adopts an innovation or innovations, is continuous. The innovativeness variable is partitioned into five adopter categories by laying off standard deviations from the average time of adoption (x)

'Innovators' were coded as '5' for respondents who adopted all the following five internet technologies (a) having their own hotel website; (b) uses electronic mail; (c) has an online form; (d) provides online payment; and (e) uses online intermediaries. Each of these internet technology function deployed by a hotelier are described in table 11.2 below.

'Early adopters' were coded as '4' for respondents who adopted any combination of four internet technologies. 'Early majorities' were coded as '3' for respondents who adopted any combination of three internet technologies. 'Late majorities' were coded as '2' for respondents who adopted any combination of two internet technologies and the 'laggards' were coded as '1' for respondents who has either adopted one or no internet technology.

Table 11.2: Description of internet enabled functions used by hoteliers

	Description of function
Web pages	Documents viewed in a web browser, which may include text, images, files and hyperlinks pointing to other web pages or e-mail addresses. Static pages exist as files and reside on a server, which may be attached to the internet. To access a web page, users must know the address of the page, which commonly consists of a registered domain name, the name of the web server, the name of an individual file, and a three-letter extension (Griffin, 2002)
Online payment	having an online payment facility on the hotel's own website; with such a facility, hotels can sell their room nights to consumers all around the world and accept payments from consumers via plastic card mechanisms (Inkpen, 1998)
Online intermediaries	receiving reservations from online travel intermediaries; like traditional bricks and mortar travel agents, online travel intermediaries offers a range of travel services and products directly to customers but are operated online. Examples include, Expedia and Travelocity.
Electronic mail	communicates with customers via electronic mail; and E-mail: Electronic messaging service capable of sending text messages and attached files over local area networks and the Internet. Users receive messages in their inbox and can reply, forward, or store them for later use. To send a message, the user must know the e-mail address of the receiver (Griffin, 2002)
Online booking form	having an online booking form on the hotel website. Online booking forms are filled in online, they are often for guests to request for information or to make a booking. The completed form submitted is then forwarded to the hotel in an electronic mail.

While the study's findings and Rogers' curve displayed a similar bell curve, the percentages varied somewhat besides that of early majorities or hoteliers who currently deploys any combination of three internet technologies. The variances in the two curves are shown in Figure 11.2 below. Comparing the curves displayed in Figure 11.2, it becomes evident that 'laggards' (1) and 'late majorities' (2) seem to be correspondingly lower in this study compared to Rogers' original adopter categorization model. On the other extreme end, there were higher numbers of 'early adopters' (4) and 'innovators' (5) from the study's findings compared to Rogers' original model. This could indicate two possibilities:

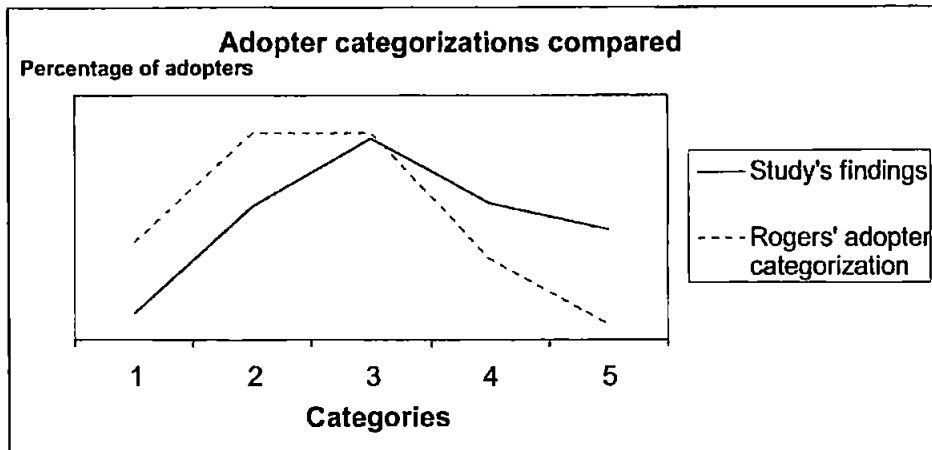
- (1) the adoption of internet technologies have intensified through the years resulting in more exhaustive usage of internet technologies by the independent hoteliers

- (2) the independent hoteliers are aware of the proliferation of the internet and are deploying as many of the internet technologies available as they deem necessary and/or affordable.

There is no difference found in the number of 'early majorities' (3) when compared with Rogers' original model. Up to this point (or number of internet technologies deployed), the study suggests that there are less independent hoteliers who were 'laggards' or deploying little or no internet technologies. However with hoteliers deploying four or five internet technologies, there were correspondingly more hoteliers than anticipated in Rogers' adopter categorization model. According to Rogers' description of the 'early majorities', 'they follow with deliberate willingness in adopting innovations, but seldom lead' (Rogers, 1995: 265). This would appear to be the case too, with the independent hoteliers who have adopted three internet technologies, as a good majority of them (110 out of a possible 135) have currently deployed specifically the website, electronic mail and online 3rd party intermediaries.

Based on table 11.2 here seems to be a systematic increase, in both the number of internet technologies and the types of internet technologies deployed too. The majority of hoteliers who have deployed two internet technologies (73 out of a possible 86) deployed websites and electronic mail. With hoteliers who have adopted three internet technologies, the majority deployed the additional online 3rd party intermediaries. The majority of four internet technologies (85 out of a possible 92) deployed an additional internet technology of online forms. The fifth internet technology to be deployed by the supposed 'innovators' is the online payment facility.

Figure 11.2: Adopter categorizations compared



Given that there is a similar pattern emerging between Rogers' adopter categorizations model and this study's findings, it became apparent that characteristics of each adopter category of internet technologies may be comparable to the ideal types of adopter categories as expounded by Rogers (1995).

Therefore the next step was to conduct a cluster analysis investigating if internet technologies currently deployed by hoteliers could be similarly clustered, when relevant factors and some demographic variables of hoteliers are inputted into the analysis. This would enable the study to compare and confirm Rogers' adopter categorization model based on innovativeness which may be applicable to the understanding of the UK independent hotel sector.

11.1 Cluster analysis

The cluster analysis to be described in this section would not have been possible without having conducted the earlier analyses. Neither a particular statistical method or model can be identified using the cluster analysis (Norusis, 2005), it however aids in forming clusters

of hoteliers who have adopted similar internet technologies, and more importantly it will also attempt to investigate if these clusters of hoteliers who have adopted similar internet technologies share any similar characteristics. This will serve to inform the research if hoteliers who uphold particular perceptions or beliefs of the internet for marketing are more likely to be receptive to adopting certain types of internet technology. From a conceptual level, the cluster analysis seeks to examine if Rogers' adopter categorizations based on innovativeness is applicable.

By analyzing the perceptions of hoteliers at various levels of internet technology adoption, the typology of their spread and use can then be studied. Cluster analysis allows for these aims to be achieved as it is a procedure only for a descriptive follow-up and does not involve any hypothesis testing or estimation of significance levels. The cluster solution can be deemed satisfactory only if the needs of the research are met.

There are three types of cluster analysis, namely hierarchical clustering, *k*-means clustering and two-step clustering. In hierarchical clustering, it begins by attempting to determine how far apart or similar two cases are, a method is then selected so that groups can be formed. The last step requires one to determine how many clusters the researcher needs to represent the data. This is performed by creating additional clusters or collapsing them by examining how similar the clusters were. However, hierarchical clustering as a method was not suitable as Tabachnik & Fidell (2007) has advised that sample sizes should ideally be 250 or less. An alternative method to clustering is *k*-means clustering, the researcher gets to select the number of clusters required, whereupon the cluster means is estimated and each case is then assigned to a cluster which has the smallest distance to the cluster mean. *k*-means clustering was deemed unsuitable for this stage of the analysis because it requires

the researcher to decide on the number of clusters before any analysis could be further conducted. It was impossible to decide on the number of clusters without creating any element of bias therefore two-step clustering was utilized.

In two-step clustering, based on preselected criteria, the algorithm decides on the number of clusters. It is performed by first assigning cases to preclusters, followed by clustering using the hierarchical clustering algorithm. Moreover, it adopts a clustering procedure that allows it to create clusters based on either categorical or continuous data, which neither the hierarchical nor k means method can perform.

With a relatively large data set, the SPSS two step cluster analysis procedure 'requires only one pass of data (important for large data files), and it can produce solutions based on mixtures of continuous and categorical variables and for varying numbers of clusters (Norusis, 2005)'.

Some of the options that were specified when using two step clustering include the standardization of all variables, where the data selected include a mixture of continuous and categorical data using the log-likelihood criterion. Cases with the largest log-likelihood are assigned to a cluster. The algorithm then selects the optimal number based on the Schwarz Bayesian Criterion.

Based on the data obtained from the questionnaires returned, various demographical variables were inputted together with the six factors obtained earlier. Because 'perceived ease-of-use and affordability' as a factor was persistently found to be insignificant in its relationship and correlation with the rest of the factors and the levels of internet

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technologies adopted, the factor was therefore removed from further analysis so that a more accurate representation of the hoteliers' perception can be obtained.

With the consideration of the Rogers' adopter categorizations model based on innovativeness, the closest model obtained from the range of cluster analysis performed was, the level of internet technologies adopted by the hoteliers were coded as categorical variables so that the effectiveness of the match can be compared. 6 factors and the level of internet technologies were inputted as continuous variables.

Table 11.3: 5 Cluster distribution

	Laggards (4.5%)		Late majorities (22%)		Early majorities (33%)		Early adopters (22.5%)		Innovators (18%)	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Cluster 1	0	0%	0	0%	0	0%	0	0%	72	97.3%
Cluster 2	0	0%	0	0%	0	0%	87	94.6%	0	0.0%
Cluster 3	21	100%	1	1.2%	6	4.4%	5	5.4%	2	2.7%
Cluster 4	0	0%	85	98.8%	0	0%	0	0%	0	0.0%
Cluster 5	0	0%	0	0%	129	95.6%	0	0%	0	95.9%
Combined	21	100%	86	100%	135	100%	92	100%	74	100%

From table 11.3, the analysis revealed 5 clusters, with only cluster 3 having members from each of the pre-determined adopter categorizations. However, the biggest membership for cluster 3 appears to be derived from the entire population of 'laggards' (one internet technology) together with small numbers from each of the other 4 categories. Cluster 5 displays only members from 'early majorities' (3 deployed internet technologies), while cluster 4 shows only membership from 'late majorities' (2 deployed internet technologies). Cluster 2 displays only members from the 'early adopters' (4 internet technologies) while Cluster 1 displayed only members from 'innovators' (all 5 internet technologies).

Based on the continuous variables inputted into the analysis, the resulting number of clusters obtained from the analysis further suggests that the 6 factors helped to explain the characteristics of each of the adopter categories.

The second observation suggests a match arising when each of the factors was examined via a plot of means within each group and the simultaneous confidence intervals for the population cluster means. With the first factor of 'effectiveness as a marketing tool', the most positive response obtained is for the first cluster ('innovators') which made up 18% of the sampled population. The least positive response came from cluster 3 ('laggards') which makes up 5% of the sampled population.

Factors 2 to 6 showed very similar responses from the hoteliers. The second factor of 'attitude' and the third factor of 'perceived usefulness' respectively, suggested that the most positive responses were from the first clusters ('innovators'). The least positive responses came from cluster 3 ('laggards'). Responses for factor 4 of 'customers' pressure' showed a similar level of responses together with factor 5 of 'competitive marketing intensity'. The only minor difference found in the sequence of response was factor 6 of 'entrepreneurship' where the cluster 3 ('laggards') had a higher measure of the factor than cluster 4 ('late majority').

In summary, the SPSS cluster analysis showed that cluster 1 displaying 'innovator' characteristics had the most positive endogenous and exogenous perception of internet technology (factors 1-6), followed by cluster 2 exhibiting 'early adopter' characteristics, then cluster 5 with 'early majority' characteristics, after which was cluster 4 with 'late majority' characteristics and finally cluster 3 with 'laggard' characteristics. As shown in

the summary of the relationship between the five derived clusters and each of the factors below, innovators (1) feels most strongly about each of the 6 factors examined. Hoteliers:

Feels that competitive marketing is very intense: 1>2>5>4>3

Displays highest degree of entrepreneurship (innovativeness): 1>2>5>4>3

Perceives the internet to be a highly effective marketing tool: 1>2>5>4>3

Has the most positive attitude toward the internet: 1>2>5>4>3

Perceives the internet for marketing to be very useful: 1>2>5>4>3

Perceives customers' pressure to be most intense: 1>2>5>4=3

11.2 Comprehensive Cluster created

Having attempted to determine the number of clusters that have arisen from the input of just the six significant factors, the results have established that Rogers' adopter categorization based on innovativeness can be applied to this study of the UK independent hotel sector. The resulting five clusters that emerged from the analysis, chiefly explain the characteristics of each of the clusters which were found to be clustered by the number of internet technologies deployed.

Although this initial finding has proven that Rogers' model could be applied to the independent hotels sector based on the factors examined, none of the independent hoteliers' profiles were included in the cluster analysis. To this end, a further cluster analysis was conducted. Rather than simply having the categories clustered using just the endogenous and exogenous antecedents, some key characteristics of both the hotelier and the hotel are added to the cluster analysis. They include three key variables, hotel location

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(entered as categorical variable), age of the hotelier and the number of rooms (entered as continuous variables).

Table 11.4: 3 cluster distribution

	Laggards (4.5%)		Late majorities (22%)		Early majorities (33%)		Early adopters (22.5%)		Innovators (18%)	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Cluster 1	0	0%	0	0%	130	98.3%	0	0%	0	0%
Cluster 2	21	100%	86	100%	5	3.7%	4	4.3%	2	2.7%
Cluster 3	0	0%	0	0%	0	0%	88	95.7%	72	97.3%
Combined	21	100%	86	100%	135	100%	92	100%	74	100%

Figure 11.6 presents the results of the cluster analysis performed with the set of 6 factors and 3 key hoteliers' demographic variables. Although it is evident that the analysis has produced only three clusters, compared to the five clusters earlier, it is worthy to note that all of cluster 1 can be found in 'early majorities' who are the hoteliers who have deployed three internet technologies. In cluster 2, while membership can be found across all sections of the adopter categories, cluster 2 represents all of the 'laggards' (one internet technology) and 'late majorities' (2 internet technologies), with insignificant fragments of other adopter categories. Finally, in cluster 3, all membership can be found in 'early adopters' (4 internet technologies) and 'innovators' (5 internet technologies). Detailed SPSS data results can be found in Appendix 20.

With the results shown in table 11.4, it has become more apparent that the differences in hoteliers' characteristics amongst the three clusters could be further enhanced by examining more demographic and operational variables of the hoteliers. The next chapter will therefore be looking at how a taxonomy or typology is developed from the findings of this study thus far.

11.3 Summary

Summing up, the discriminant analysis conducted earlier in the chapter revealed that only six out of the seven factors (discovered in Chapter 9) had helped to explain the internet technology deployment decisions of hoteliers. Although only six of the seven factors accounted for the deployment phases of the hotelier, the predicted classification of the internet technologies were still comparatively accurate. Following these steps taken, a cluster analysis was then conducted confirming that hoteliers who have currently deployed various number internet-enabled technology, displayed similar adopter categorizations as suggested by Rogers (1995). The successful cluster enabled the characteristics of the hoteliers to be identified according to each of the three cluster found.

The next chapter will discuss how the results and findings from this chapter (and preceding chapters) amalgamate to present a comprehensive taxonomy that accurately portrays UK independent hoteliers. The taxonomy developed identifies and the factors, demographic and independent variables that were found to be associated with the hoteliers' deployment of internet-enabled application for marketing and distribution.

CHAPTER 12

TAXONOMY DEVELOPING

12.0 INTRODUCTION

Having conducted a series of statistical analyses to ascertain important factors, confirm and refute significance and associations, and identifying groups of hoteliers. The essence of this chapter is therefore, to bring together the findings of this research and the conceptual models, based on literature reviews, in order to develop a coherent archetype that can be put into use, not only in theory but also into practice.

Most models, be they taxonomies or typologies are focused on evaluating adopter characteristics of information technology at various stages. The factors examined in past models are often drawn from a wide range of disciplines from psychology economics, sociology (McKnight & Chervany, 2002) to behavioural dimensions expounded by Stern (1965). Conceptual models based on literature help researchers' link science to the real world so as to enable findings of scientific research to be put into better use in practice (Sagasti & Mitroff, 1973). In a similar vein, the development of this study's conceptual model is based on the perceptions of the hoteliers and the operational characteristics of the hotel, but the main difference is, these will be understood in correspondence to the range of internet technology adopted by the hoteliers.

12.1 Re-classification of data into a taxonomy

Given the relatively large sample of hoteliers in this study, it was possible to learn a great deal about how and what type of perceptions held by hoteliers led to a greater or lesser likelihood of the adoption of internet technologies. To obtain a concise understanding of which variables or factors matter is evidently not simple, but by establishing a taxonomy of

hoteliers based on their perception would help to illuminate the common factors that link hoteliers to the level of internet technologies adopted, while revealing critical differences between hoteliers and between groups of hoteliers. The constructed taxonomy will explore areas of hoteliers' perception leading to internet technologies adoption, revealing the underlying principles of the hoteliers' mindset in relation to internet technologies adoption.

Based on the data collected from the survey of 408 hoteliers, it was evident that there were consistently heavier usages for certain combinations of internet applications. Although seven respondents reported they did not use any internet applications, it was deemed necessary to include them in all analysis because they may still have an online presence despite having made no conscious attempt to do so. For instance, this could occur if their membership with the AA (Automobile Association), list them in the online AA Hotel Guide, if an attempt was made to search for any of these hotels on a search engine, the chances are that the hotels would be listed in the results as being hosted by the AA uniform resource locator (URL).

To facilitate a comprehensive analysis of the findings, the initial five stages of internet applications revealed, based on Rogers's model, were condensed to form a three cluster taxonomy. The central rationalization being that a three cluster taxonomy investigation allows for a broader consideration of more variables compared to various other groupings of stages. The three clusters are therefore, in essence distilled from the initial findings based on Rogers's adopter categorization model beginning with stages 1 (laggards) and 2 (late majority) where the group is reclassified as Internet Applications (IA) Reticent, since this group of hoteliers seemed to display characteristics of being reserved and restrained particularly in relation to the number of internet applications adopted. Table 12.1 presents the re-classification.

Table 12.1 Conceptually developed clusters based on Rogers' Diffusion of Innovation

Rogers's categories of Diffusion of Innovations	Developed clusters from study
<i>Stage 1: Laggards</i>	IA reticent
<i>Stage 2: Late majority</i>	
<i>Stage 3: Early majority</i>	IA rationalist
<i>Stage 4: Early adopters</i>	IA realists
<i>Stage 5: Innovators</i>	

Hoteliers in this IA reticent group adopt a maximum of two internet applications with the largest proportion (68%) adopting a website and electronic mail. Stage 3 of what is known as the 'early majority' in Rogers's diffusion model has been reclassified as IA rationalist, as this group of hoteliers seemed to exhibit characteristics that are more 'middle-of-the-road' and illustrated by three modes of internet applications used by all hoteliers surveyed. The final classification of stages 4 (early adopters) and 5 (innovators) are reorganized as IA realists, since this group of hoteliers used a wider range of internet applications that were available to them and, as will be demonstrated later, possess distinctly different characteristics compared to the IA rationalist and reticent.

With the aim of discovering if there was a relationship between the means of the three categories defined, one way ANOVAs were used to obtain the homogeneity of variance with a *post-hoc* Scheffe test conducted. Table 12.2 shows only the significant associations found between each specific category and the variables. Nominal variables such as hotel location, type of business, Mann-Whitney tests (Table 12.4) and Kruskal Wallis tests (Table 12.3) were used to conduct significance testing of relevant dependant variables. Detailed results of these tests can be found in Appendix 21 and 22 respectively.

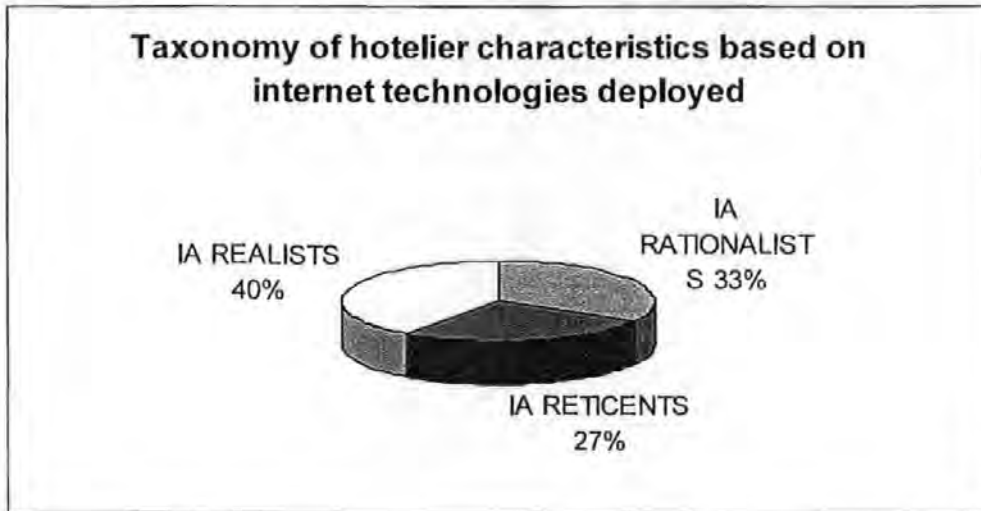
Associations were not completely significant at all levels of online usage, only associations of significance ($p < 0.05$) will be discussed here. With the seven factors derived from the factor analysis that was carried out earlier, six of the factors had some strong significant associations between some of the stages defined. Therefore, to widen the search for more possible associations between the variables and the adopter categories, hoteliers with 1 and 2 internet technologies deployed were merged and recoded to form one adoption category of internet applications (IA) reticent, while hoteliers who adopted 3 internet technologies (a.k.a. early majorities) were recoded as IA rationalists and finally hoteliers who have deployed 4 or 5 internet technologies were recoded as IA realists. The summarised re-grouping can be found in Figure 12.1.

By combining the adopter categorizations, one way ANOVAs performed resulted in the uncovering of significance between the three adopter categories and six additional significant variables. The six additional variables are on top of the 14 significantly associated variables described in greater detail between adopter categories earlier. Table 12.2 shows SPSS output from the Scheffe post hoc procedure. The table clearly shows the percentage of each adopter category found from the survey. For each group the difference between group means is displayed together with the standard error of that difference and the significance level of that difference. Only variables with a significance > 0.05 level are displayed.

Table 12.2: Mean Differences and Significance comparison

Dependent Variable	Between stages of internet usage	Mean difference	Std. Error	Sig.
Scheffe tests				
Age	2 & 3	3.33	1.33	0.044
FT EMPLOYEES	1 & 3	-16.18	3.82	.000
	2 & 3	-19.31	3.72	.000
AA Ratings	1 & 3	-0.5	0.07	.000
	2 & 3	-0.37	0.07	.000
Number of hotels	2 & 3	-0.31	0.1	0.009
Number of rooms	1 & 3	-29.82	5.64	.000
	2 & 3	-21.9	5.8	0.001
% of telephone reservations	1 & 3	18.57	2.64	.000
	2 & 3	14.9	2.56	.000
% of web reservations	1 & 3	-8.78	0.97	.000
	2 & 3	-7.94	0.94	.000
% of internet reservations	1 & 3	-6.52	1.64	.000
	2 & 3	-4.6	1.6	0.017
Annual turnover	1 & 3	-0.511	0.12	.000
	2 & 3	-0.42	0.12	.002
Changes in profit	2 & 3	-0.32	0.1	0.003
Changes in customer retention	1 & 3	-0.28	0.09	0.007
	2 & 3	-0.25	0.08	0.014
Changes in number of inquiries	2 & 3	-0.406	0.1	.000
Changes in occupancy levels	1 & 3	-0.44	0.09	.000
	2 & 3	-0.29	0.09	0.009
Changes in internet usage and its marketing effectiveness - F1	1 & 2	-0.47	0.09	.000
	1 & 3	-0.698	0.08	.000
	2 & 3	-0.233	0.09	0.025
Emotional attitude - F3	1 & 2	-0.393	0.13	0.008
	1 & 3	-0.574	0.12	0.000
Operational usefulness F4	1 & 2	-0.496	0.1	.000
	1 & 3	-0.813	0.09	.000
	2 & 3	-0.317	0.09	.002
Customers' pressure F5	1 & 2	-0.511	0.11	.000
	1 & 3	-0.825	0.1	.000
	2 & 3	-0.314	0.1	.009
Competitive marketing intensity - F6	1 & 2	-0.366	0.09	.000
	1 & 3	-0.506	0.08	.000
Entrepreneurship - F7	1 & 2	-0.378	0.12	0.008
	1 & 3	-0.707	0.12	.000
	2 & 3	-0.329	0.11	0.014
Cluster 1:	IA reticent			
Cluster 2:	IA rationalists			
Cluster 3:	IA realist			

Figure 12.1 Taxonomy of Internet Application (IA) intensity



12.1.1 Endogenous and exogenous influences affecting decision makers

Factor 1 illustrated the hoteliers' perception of changes in their internet use and how effective they think the change has been for marketing purposes. Not surprisingly the strongest difference in perception ($p=.008$) was discovered between the IA reticent (1) and the IA realist (3). In other words, the IA reticent is more likely not to have made changes to their internet use and do not perceive internet marketing as effective as the IA realist. The one way ANOVAs also indicated that as less modes of internet technologies as a combination are used, the difference in perception between the adopters gets wider. The mean difference between the IA reticent (1) and the IA rationalist (2) is only $-.47$ while the mean difference is $-.698$ between the IA reticent (1) and the IA realists (3). On closer examination, hoteliers adoption based on the number of IA appear to indicate that, as more internet applications are adopted, hoteliers are more likely to have experienced a change in business performance and sees internet marketing as effective and beneficial. Internet technology as a marketing tool was similarly perceived by the interviewed hoteliers (in the

exploratory study) as essential and crucial to improving the marketing and distribution of their hotel.

Factor 3 measures emotional attitudes of hoteliers. Two significant differences were flagged up between IA reticent (1) and IA realist (3) ($p=.000$), and between IA reticent (1) and IA rationalist (2) ($p=.008$). Based on the figures, it is apparent that the IA reticent (1) were less likely to have a positive perception of the internet compared to IA rationalist (2) and IA realist (3). There were no significant differences between the rest of the categories, perhaps indicating that emotional attitudes differ much less amongst those who have adopted 3, 4 and 5 internet technologies.

Factor 4 represents the perceived operational usefulness of internet technologies. Significant differences were found across all IA categories, but the most significant difference occurred between IA reticent (1) and IA realist (3) where $p=.000$ with a mean difference (MD) of $-.813$. The next significance occurs between IA reticent (1) and IA rationalist (2) where $p=.000$, $MD=-.496$. These figures indicate that the IA reticent (1) does not perceive the internet as operationally useful as the IA rationalist (2) or the IA realist (3). There were also significant difference (albeit lesser) between IA reticent (2) and IA realist (3) where $p=.002$ and $MD=-.317$, suggesting that IA reticent do not perceive internet technologies to be operational useful compared to the IA realist.

With Factor 5 illustrating hoteliers' perception of customers' pressure, there were significant differences highlighted across all adoption categories, more notably between IA reticent (1) and IA realist (3). IA reticent (1) and hoteliers who have adopted 3 or more modes of internet technology experienced proportionately more significant differences. IA reticent (1) perceives that the industry is experiencing less internet marketing intensity

compared to IA rationalist (2) ($p=.000$, $MD= -.511$). This difference in perception widens and becomes more significant between hoteliers who are IA reticent (1) and IA realist (3) ($p=.000$, $MD= -.825$). Significance was also flagged between IA rationalist (2) and IA realist (3) where $p=.009$ and $MD=-.314$, evidently the difference in perception between these two clusters are minimal compared to other comparisons. However, the reverse is true when comparing differences in means between IA realist (3) and the rest of the adopter categories where this cluster consistently perceived a higher level of customers' pressure compared to the other two clusters. Notably, IA reticent (1) perceived less intense customers' pressure compared to IA rationalist (2) and IA realist (3), while IA realist (3) perceived the highest level of customers' pressure compared to hoteliers in any other clusters.

Factor 6 measuring perception of competitive marketing intensity showed highly significant differences ($p=.000$) in means between the IA reticent (1), IA realist (3), and IA rationalist (2). Implying that the IA reticent perceived significantly less environmental turbulence than the IA realist ($MD=-.506$). No significance was flagged between the IA rationalist (2) and IA realist (3) perhaps indicating that perceptions of IA rationalist (2) do not differ significantly to the IA realist.

One way ANOVA conducted with dependent variable Factor 7 measuring entrepreneurship, reveals very significant differences between all clusters of the taxonomy. Between IA reticent (1) and IA realist (3) there is a significance of $p=.000$ with a mean difference of $-.707$, followed by IA rationalist (2) and IA realist (3) with $p=.014$ and a mean difference of $-.329$, and finally between IA reticent (1) and IA rationalist (2) with $p=.008$ and a mean difference of $-.378$. These significances imply that IA realist (3) consistently displays a higher level of entrepreneurship characteristics compared to all

other levels of adopters. The difference intensifies as the IA realist is being measured with adopters who use less internet applications (the IA reticent and the IA rationalist).

Significant differences were found in all four business performances measured. Changes in customer retention were found between IA rationalist (2) and IA realist (3) with $p=.014$ and IA reticent (1) and IA realist (3) with $p=.007$. Mean differences demonstrated that IA realist reported a more significant increase in customer retention compared to IA rationalist ($MD=-.25$). No significance was found between IA reticent (1) and IA rationalist (2) implying that changes in customer retention are not considerable between the two groups, but changes could be experienced once more three or more internet technologies are used.

Changes in occupancy levels were also found to be significant between IA rationalist (2) and IA realist (3) with $p=.009$ and IA reticent (1) and IA realist (3) with $p=.000$. Mean differences were significantly higher between the IA reticent (1) and the IA realist (3) at $-.44$, while mean difference of $-.29$ was recorded between the IA rationalist (2) and the IA realist (3). Interestingly, the exploratory interviews with hoteliers had also found that their concern with occupancy levels appeared to be a motivator when considering the extent of internet technologies deployed. Similar to the findings in customer retention figures, changes in occupancy levels are more greatly felt when 3 or more internet technologies are deployed.

Significant differences were only found between the IA rationalist (2) and IA realist (3) when changes in profit and changes in the number of inquiries were examined. Mean difference was $-.406$ ($p=.000$) between the two categories, indicating that hoteliers with less internet technologies deployed (IA rationalist) experienced a smaller positive change in the number of inquiries. Similarly with changes in profits, the mean difference was $-.32$

($p=.003$) again indicating that hoteliers with less internet technologies deployed experiences a smaller positive change in profit compared to the IA realist (3) who adopts more internet technologies.

12.2 Other characteristics of each IA cluster

With the combined categorizations, significance was found with age between adopter category 2 (IA rationalist) and 3 (IA realist) where $p=.044$ and a mean difference of 3.33. These figures suggest that IA realist (3) appear to be younger than IA reticent (2). No other significance was found, which could possibly indicate that is little age variation between hoteliers who adopt little or no internet technologies (e.g. IA reticent) with the rest of the hoteliers.

With an independent variable recording percentages of telephone reservations received, significance was found between IA reticent (1) and IA realist (3), and IA rationalist (2) and IA realist (3). The biggest mean difference (18.57%) was found between the IA reticent (1) and IA realist (3) with a significance of $p=.000$. The mean difference between IA rationalist (2) and IA realist (3) narrows to just 14.9 with a significance of $p=.000$, indicating that hoteliers who deploy more internet technologies have a progressively lower percentage of telephone reservations than IA rationalist and IA reticent respectively. Exploratory interviews conducted have also similarly suggested that reservation methods used by guests do indeed have an effect on the extent of internet technologies adopted by the hoteliers. Given that there is no significance found between the IA reticent (1) and the IA rationalist (2), this indicates that differences between the two could be negligible.

When measuring significance with annual turnovers, both IA reticent (1) and IA rationalist (2) reported lower annual turnovers than the IA realist (3). As shown in the table, mean

difference was -0.511 , $p=0.000$ with IA reticent (1) and IA realist (3); and with the IA rationalist (2) and the IA realist (3), mean difference narrows to -0.42 with $p=0.002$. These figures show that hoteliers who adopt less internet technologies seem to consistently display a lower annual turnover compared to those who adopt a higher number of internet technologies. The difference is however not as stark between the IA reticent (1) and the IA rationalist (2).

One way ANOVA measures of independent variable AA ratings with adopter categorizations reveal that there are some distinct significant differences. Beginning with IA reticent (1) and IA realists (3) it is not surprising to discover a significant association of $p=0.000$, $MD=-0.05$, implying that IA realists are far more likely to have a higher AA rating compared to IA reticent. Similar trends are repeated between IA rationalists (2) ($p=0.000$) and IA realists (3) where $MD=-0.37$. These figures suggest that both IA reticent and IA rationalists have lower AA ratings than the IA realists, but AA ratings do not differ significantly between the IA reticent (1) and the IA rationalists (2).

Measuring percentages of web reservations with the range of adopter categorizations, two significant mean differences are discovered. This measure re-confirms the significant associations between those who adopt more internet technologies with a higher proportion of web reservations. The biggest mean difference was -8.78 between IA reticent (1) and IA realist (3) ($p=0.000$), followed by IA rationalist (2) and IA realist (3) ($p=0.000$) with a mean difference of -7.94 . On closer examination of significance and the mean differences between the number of internet applications used, it becomes apparent that as the number of internet technologies deployed increases, so does the percentage of web reservations. When evaluating intermediaries reservation as a dependent variable, significant associations ($p=0.000$) have been recorded between the IA reticent (1), IA rationalist (2) and

IA realist (3) ($p=.017$). IA reticent receives a much smaller percentage of reservations from intermediaries compared to IA realist ($MD=-6.52$). IA realists (3) were also found to be more likely to have 4.6% more of reservations from online intermediaries ($p=.017$).

Significance was not found between any other clusters, indicating that the percentages of intermediaries reservation received by IA rationalist (2) do not differ greatly between the IA reticent (1). Not surprisingly, this finding is in line with the exploratory findings, where the majority of interviewed hoteliers were not convinced and sceptical of the services provided by online intermediaries. This could explain why there is little or no difference between hoteliers who are IA reticent or IA rationalist.

Two very significant differences were recorded when evaluating if adopter categorizations had any associations with the number of rooms an hotelier has. In the first instance, significance between the IA reticent (1) and IA realist (3) were recorded as $p=.009$ with a mean difference of -29.82 , suggesting that IA reticent have much fewer rooms than IA realist. The second difference occurs between IA rationalist (2) and IA realist (3) with significance being $p=.001$ and a mean difference of -21.9 . The difference in number of rooms narrows between hoteliers adopting smaller number of internet applications when compared to hoteliers who adopt four or five internet applications. Hoteliers who deploy more internet technologies seem to have a larger number of rooms to sell.

According to the results of the one way ANOVA tests, the number of hotels a hotelier has seem to have a significant difference between IA rationalists (2) and IA realists (3) too ($p=.009$) where $MD=-.31$, indicating that IA realists are more likely to be running more hotels than IA reticent. While the statistics have not indicated any other significance between other clusters, this may suggest that there are little differences in the number of hotel units operated by the IA reticent and the other clusters.

Similar ANOVA tests conducted on the number of full time employees as a dependent variable also reveal that significant differences were found between the three clusters. Figures suggest that IA realist (3) employs more full time employees than IA reticent (1) ($p=.000$; MD= 16.18) and IA rationalist (2) ($p=.000$; MD= 19.31). The mean difference narrows between the IA realist and hoteliers adopt more internet applications.

Using the Kruskal- Wallis test (Table 11.5), significance level is lower than 0.05 ($p=.000$), indicating that there is a difference between hotels in the four different locations in the mean ranking of the intensity of internet application.

Finally, by means of the Mann-Whitney test (Table 11.6), significances were found between the number of internet applications adopted and hotels which are family business or otherwise, significance was found between the clusters ($p=.007$). The figures seem to suggest that the IA realist is more likely to be non-family businesses compared to the IA reticent or the IA rationalist.

Table 12.3:
Kruskal- Wallis test

Hotel location		N	Mean Rank	Sig.
Adopter categorizations	Coastal	121	184.51	.000
	Suburban	101	222.86	
	City hotels	36	272.79	
	Country	150	191.88	

Table 12.4:**Mann-Whitney test**

Family business

	Type of business	N	Mean Rank	Sig.
Adopter categorizations	Family run	353	197.84	.007
	Non-Family run	53	241.23	

12.3 Summary

In summary, the significance of endogenous and exogenous perceptions, demographic and independent variables alongside the three clusters of hoteliers (IA reticent, IA realist and IA rationalist) are shown in this chapter. Based on a series of statistical significance and correlation testing, comparisons between the 3 classifications were revealed. The following section will explain how the key hotelier perceptions, hotel profiles and operational variables are placed into three clusters, based on statistical findings from this chapter.

CHAPTER 13**CONCLUSION****13.0 Introduction**

The discovery of key factors and variables that influence the range of internet technology deployed facilitates the construction of a taxonomy. This chapter will discuss the findings presented in the earlier chapters, integrating the outcomes so as to be able to conclude the study with the conceptual development of a taxonomy. Illustrations of the independent hoteliers' deployed range of internet technology and how each category are distinct are included. The chapter will then deliberate on the theoretical and managerial implications resulting from the study, before reflecting on the limitations of the study and how future research could drive this study forward.

13.1 Discussion of findings

The focal point of this research is the antecedents of internet technologies deployment by independent hoteliers. Although some antecedents appear to be more critical in explaining some hoteliers' deployment behaviour, it must be highlighted that there are factors that do not explain internet technologies deployment or non-deployment decisions. This study's research problem was identified as having to methodically establish the various antecedents that influence the deployment of internet technologies for marketing and distribution.

The findings and conclusions in the next sections are presented in accordance with the study's aims and objectives set out in Chapter 1:

13.1.1 summarises the perceptions and impression of the internet for marketing and distribution by UK independent hoteliers [Study Objective 2]

13.1.2 to establish, in the context of the independent hotel sector, the various antecedents that influence the deployment of internet technologies for marketing and distribution purposes [Study Aim A]

13.2 to construct a taxonomy of independent hotels based on the range of internet technologies deployed, the hoteliers' characteristics and perceptions of technology use [Study Aim B]

13.1.1 UK independent hoteliers perception and impression of the internet for marketing and distribution

Chapter 2 of the thesis defined independent hotels in order to identify the problems associated with this sector of the hotel industry. Trade editorials and academic studies were shown to have often focused on the larger chain and group hotels, which were more likely to have the financial and human resources to oversee the deployment of technology. As the bigger hotel players forge ahead with their internet strategies, the independent hotels representing at least 70% of the entire hotel industry were shown to register a slower and more cautious uptake of internet technologies. This study, however, has led to the identification of core characteristics that define an independent hotel which enabled the discovery of the online challenges this particular sector is facing, in the midst of the proliferation of the internet for marketing and distribution purposes.

Based on findings from previous studies, literature and industrial articles, an independent hotel was shown to be typically an individual and personable small or medium sized establishment providing accommodation and meals, whose management is free from outside control and is operationally flexible. Commentaries by both industrial reports and academic studies were shown to have acknowledged that while independent hotels lack the initiative and commercial skills in marketing, pricing, cost and have few financial

resources (Watkins, 2003), they are performing well against branded competition in terms of market occupancy share by equalizing in terms of REVPAR (Swig, 2000).

Evolving internet technologies present a challenge partly because of the three dimensional uses of promotion, information and transaction (Timmers, 1998), where 77.8% of internet sites are promotional, only 12.3% are informational and 9.9% are transactional (Tchokogue & Boiskert, 2002). Other challenges were posed by major hotel players who are expanding their seemingly effective use of the internet, forcing smaller independent hotels to recognise the increase in importance of the medium, which was time and again illustrated to be a tool that will finally level the playing field (Sheldon, 1994).

This study via literature reviews and the qualitative study, has revealed that there are a few internet technologies that are more commonly adopted by the independent hotelier. They were identified to be the website, the electronic mail (ETC, 2002), the online form, the online payment facility, and the use of online intermediaries. As extensively described in the literature review, there are also many forms of online intermediaries, ranging from a global distribution system to an online travel agent or an online travel wholesaler.

Therefore the various modes adopted by the hoteliers serve to provide consumers with both information (website/ online form) and to facilitate a purchase (online payment facility) (Middleton and Clark, 2001; and O'Connor, 2003).

Given that there are so many types and combinations of internet technologies a hotelier could adopt, the challenge in deciding the best combination emerges from both the online and offline context. As reiterated by Burns (2000), only the most cost-effective and compelling channels that will bring in guests and put heads on beds will be allocated the limited resource.

The literature reviews also confirmed that the travel intermediaries are an essential distribution source primarily because they have both the online and offline trading potential. Offline travel intermediaries may be operating in a bricks-and-mortar shop front, but they often have online tools to aid their trading process. This online tool could be the global distribution system that supports travel intermediaries' reservation of hotel, airline and other ancillary travel service. While hoteliers are aware of the potential revenue source presented by travel intermediaries, their relationship is one of a classic 'catch-22' situation, where the hoteliers are paying out commissions to both the online and offline intermediaries, they cannot opt out of working with them for fear of inventory going unsold (Allenson, 2004).

The research here showed the hoteliers' conundrums in selecting appropriate internet technologies to aid in their marketing and distribution; the next section presents findings related to the perception of hoteliers and the characteristics of the hotels they run. The factors and variables that have influenced the hoteliers' current choice of internet technologies use will then be identified.

13.1.2 Antecedents and hoteliers' choice of internet technology use

The discussion of antecedents influencing hoteliers' technology choice was shown to be classified into three main areas; the hotel's operational characteristics of business performance measures and hotel features, the hotelier's endogenous perception of internet technologies, and the hoteliers' exogenous assessment of internet technologies.

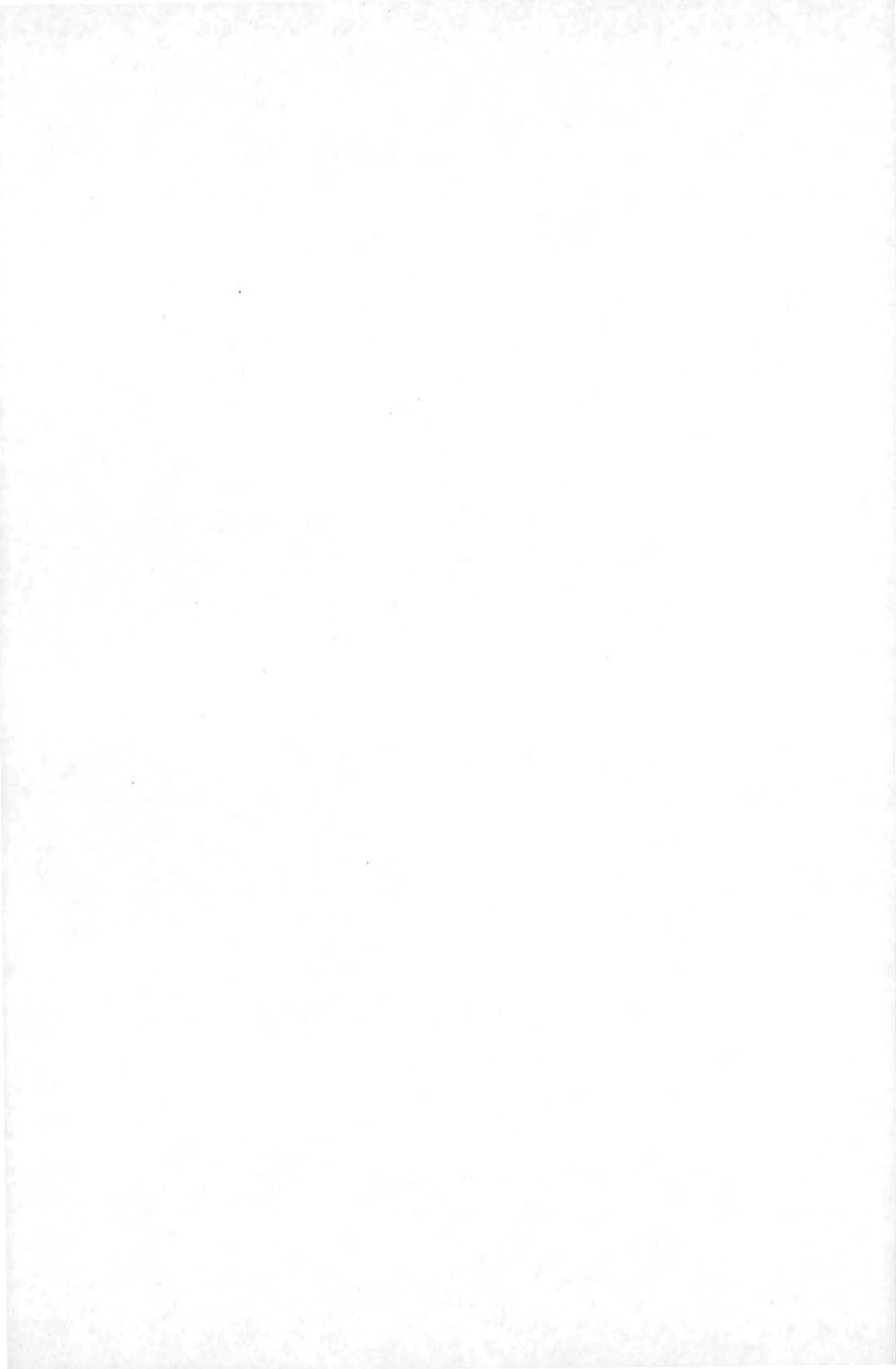
The hotel's operational characteristics obtained in the survey included common business performance measures like customer retention levels (Imrie & Fyall, 2000; Sin et. al., 2000; Subramaniam & Gopalakrishna, 2000), the number of inquiries (Swig, 2000), occupancy levels (Haktanir & Harris, 2005; Pine & Phillips, 2005; Swig, 2000) and financial performance (Sargeant & Mohamad, 1999; Haktanir & Harris, 2005). Table 13.1 displays the correlation coefficient and the coefficient determination of the regression analysis conducted to test the four hypotheses of perceived business performance measures (These hypotheses were eventually rejected because significant differences were found between the respective business performance measures and hoteliers' perception of the internet for marketing). Other hotel features that were included in the survey include, location, number of rooms, whether the hotel was a family business, number of full-time employees, star ratings and types of reservation modes.

Table 13.1 Regression analysis of perceived business performance

Perceived business performance	<i>R</i>	<i>R</i> ²
H1: Profitability	0.427	0.182
H2: Customer retention	0.433	0.187
H3: Number of inquiries	0.533	0.284
H4: Occupancy level	0.446	0.199

Perceived profitability (H1) has the lowest variability of 18.2% predicted by the scores of variables. The strongest relationship was found in H3 where the scores of variables explained more than 28% of the variability in the number of inquiries.

In general, although the coefficient determination for H1, H2 and H4 were not particularly robust, significant *F*-ratios reported for each of these perceived business performance measures indicates that the models have been meaningful in explaining the figures.



Therefore, as a whole, the regression analysis successfully tested each business performance hypothesis where some aspects of hoteliers' perception of internet technology as a marketing tool were correlated with perceived changes in each of the business performance measures.

Based on the study's conceptual framework, Davis's TAM and Rogers' diffusion of innovations were adopted for the research, as each theory formed a basis for discovering the antecedents influencing independent hoteliers' deployment or non-deployment of internet technologies for marketing and distribution purposes. In particular, an in-depth examination of the hoteliers' endogenous perception and exogenous assessment of internet technologies was undertaken. This understanding eventually enabled the development of a classification taxonomy which explained the antecedents measure for hoteliers who have deployed various internet technologies for marketing and distribution.

The discriminant and cluster analysis conducted, facilitated the systematic development of this taxonomy. The discriminant analysis allowed the study to 'predict group membership from a set of predictors' (Tabachnik & Fidell, 2007). In this study, one of the objectives was to determine if a differential analysis among a group of hoteliers who have deployed, a group of hoteliers who have plans-to-deploy and a group of hoteliers who have no-plans-to-deploy the examined internet technologies can be undertaken reliably from a set of antecedents and perceptions scores. A set of hypotheses were developed to examine each of the seven factors found from the factor analysis. The extent of support for the hypotheses is summarised in the following table 13.2 showing the supported hypotheses.

The table below shows that most of the factors provided at least some support in explaining the correlations between the group memberships and the internet technologies

adopted. The critical loadings that are statistically significant are bold, therefore enabling the distinction between a strong or weak support for each of the factors in relation to internet technology deployment. The only hypothesis that was not supported was hypothesis 7 (H7) where there was no relationship found between the hoteliers' perceived ease-of-use and affordability and the internet technologies adopted.

Table 13.2: Deployment of online technology: Hypotheses tested

Factors	Support for hypotheses
H5: Effectiveness as a marketing tool	Strong support ****
H6: Perceived usefulness	Full support ****
H7: Perceived ease-of-use & affordability	Not supported
H8: Attitude	Weak support **
H9: Entrepreneurship	Some support ***
H10: Customers' pressure	Full support ****
H11: Competitive intensity	Some support ***

Based on the understanding that the internet is a new marketing and/ or distribution channel, Coughlan et. al. (2003) suggested that the first stage of any channel relationship is the awareness of such a channel and with it, the benefits or constructiveness this new channel could potentially bring. In line with this argument, amongst the independent variables found, factor 1 was derived, evaluating the awareness of hoteliers in relation to the benefits of internet marketing. As displayed in table 13.2, the factor was found to have strong significance across four out of the five internet technologies tested. The only technology that was measured to be insignificant was the hotels' use of 'e-mail'. Since it has been found that less than 7.5% of all respondents do not use the e-mail, this finding can only suggest that although the variables could have played a role in influencing owner-managers' adoption of internet technologies, most of them are no longer significant in measuring the owner-managers' tendency to adopt. This may be because e-mail use may

have become the most basic essential internet technology deployment, leaving most of the variables measured redundant or displaying an inconsistent reading.

Perceived ease-of-use, together with attitude and perceived usefulness were variables adapted from Davis's (1989) TAM. The TAM as discussed in the literature review was an extension of the TRA and TPB developed by Fishbein & Ajzen (1975). Perceived usefulness (PU- Factor 2) illustrates the extent to which an individual believes that his or her organisation's performance will improve by adopting particular technologies.

According to a study by Igarria et. al. (1996), perceived usefulness is the main motivator in the use of technology, although other studies have found that it is one of a few variables that influences technology adoption decisions (Venkatash & Davis, 1996; Poku & Vlosky, 2004; Karahanna & Straub, 1999; Malhotra & Galletta, 1999). As indicated in table 13.1, perceived usefulness was one of two factors that were significant across all five internet technology models. Critically, this discovery coincides with the exploratory findings that hoteliers perceived online channels as essential and useful for marketing purposes and for creating awareness of their hotel's existence.

The derivation of factor 3 was a combination of cost variables and perceived ease-of-use variables. Cost variables measured hoteliers' perception of the adoption and maintenance costs of internet marketing. Perceived ease of use illustrates the individual's perception of how much effort is required to use and adopt, while the cost variables were found to group with perceived ease of use variable. This particular factor was, however, found to be insignificant throughout the range of statistical analysis performed. The insignificance runs contrary to the exploratory findings conducted earlier in the study, which suggested that cost was indeed a major consideration by most of the hoteliers interviewed. Theoretically, past literature has also affirmed that cost or perceived cost were salient variables in the

determination of internet technologies adoption (Garces et. al., 2004; Ellsworth & Ellsworth, 1995). Studies have frequently revealed that organisations, particularly small and medium sized businesses, are price-conscious and are careful about the returns on capital invested (Christian, 2001; Cragg, 1996; Jones, 2003). So it was doubly surprising to discover that perceived ease-of-use and affordability were found to be insignificant in all the five models of internet technology. It seems as if the consideration of adopting internet technology is beyond the concept of cost and how easy a technology is to use. Griffin (1997) had also expounded in his study that, for an organisation, the investment in a distribution channel must be valid from an economic perspective. Although Sharma & Upneja (2005) has found that limited investment in internet technologies by smaller hotels has affected their competitiveness and performance, this study on the other hand has indicated that the cost component does not appear to play an originally important role in the deployment or non-deployment of internet technologies. This appears to confirm that there may be an element of perceived financial slack by the hoteliers, a phenomenon confirmed in Kumar & Petersen's (2006) study that only companies with a substantial cash flow are able to adopt e-commerce strategies because of the inhibitive set up costs. This trait is appropriately placed together, as Ching & Ellis (2004) noted that the propensity to adopt is via both the perception of learning and economic costs. Cost does not seem to be a significant factor in the consideration, as technologies are perceived to be more of a competitive necessity than something that goes along with the concept that 'if others have it, why not us?'. This finding is not congruent with other studies on the effect of costs on technology adoption, most studies seem to find that costs is a significant factor affecting the adoption of e-commerce (Ha & Ellis, 2004; Premkumar & Roberts, 1999; Lee, 2004).

It was also discovered in this study that the attitude developed by the user could also influence the hoteliers' behavioural intention to use a technology. While the exploratory

findings suggested that the attitude of the interviewed hoteliers towards internet technology deployment was important, attitude as a variable (when statistically analysed) was shown to be significant only for the use of online forms and online payment. This could indicate that the adoption of these two internet technologies had more to do with the hoteliers' personal attitude towards the technology than the other technologies where exogenous environmental perceptions play a bigger role in the decision to adopt. Attitudinal determinants of predicting usage was used as a basis for the construct of TRA because it was discovered that attitude, amongst other behavioural determinants such as subjective norms, beliefs and intention plays an important role in influencing an individual's decision to deploy or not deploy a technology (Poku & Vlosky, 2004).

Assessing the hoteliers' exogenous assessment of internet technologies, the 13 independent variables that were factor analysed produced 3 factors. The first of which was entrepreneurship, labelled factor 5. Some significance was discovered across the internet technologies tested. This factor was assessed on the basis of how hoteliers perceive the trading environment and the actions they undertake in response. Despite Martin's (2004) generalization of small hospitality firm owners as possessing entrepreneurship, Getz and Petersen's (2005) investigation of entrepreneurship orientation of hospitality business owners concluded that the label should also involve the innovative use of technology.

Factor 6 of customers' pressure is one of two factors that were found to be significant across all five internet technologies. In line with previous studies conducted by Premukumar and Roberts (1999) and Ha (2000), both indicated that customers' pressure was an important factor when deciding on the types of internet technologies to be adopted. More recent studies have also suggested that customers' pressure was tied to customers' satisfaction and customer service experience (Froehle & Roth, 2004), because customers'

pressure came in the form of customers' demand and expectations of better service (Zeithaml, Parasuraman & Malhotra, 2002).

The third factor derived from the exogenous assessment, factor 7, is competitive marketing intensity. Most prominently, Porter's (1980) strategic framework of the five forces of competition has emphasised the significance of competitive forces that propels the intensity of competitive marketing. This framework is particularly salient in the hoteliers' operational context as even the most basic information such as competitor prices can be accessed online, enabling online consumers to use these sites to compare prices before purchase (Song & Zahedi, 2006). Premkumar & Roberts (1999) have also reported that external and competitive pressure was found to influence the degree of adoption in technologies. Unlike the study conducted by Lee (2004) and Premkumar & Roberts (1999) who found that competitive pressure has little influence in small businesses adoption decisions, this study has, on the contrary found that hoteliers' perception of competitive marketing intensity does influence an hotelier's technology adoption decision. Findings from this study suggests rather strongly that owner- managers who perceive stronger competitive marketing intensity are more likely to adopt internet technologies and are most concerned with the competitiveness of their hotels compared to all other factors. This was substantiated by the exploratory findings, where the interviewed hoteliers' internet technology adoption strategy also appears to hinge upon what other hoteliers have adopted (Hotelier AA has a website but he added that '*every other decent hotel has a website*')

Having discovered that six of the factors influenced the deployment decisions of hoteliers, and that they classify accurately, the study went on to investigate whether the hoteliers who have deployed these internet technologies can be classified based on their endogenous, exogenous perceptions and operational characteristics of the hotel. This was

performed with the aid of cluster analysis, but not before computing the number of hoteliers who have deployed which and how many internet technologies.

Following which, the classification of independent hoteliers based on the antecedents and range of internet technology deployed, facilitated the conceptual development of a taxonomy.

13.2 Conceptual development

This research's conceptual advancement was broadly guided by the framework developed in Chapter 5, figure 5.1. The initial framework proposed highlight both Davis's (1989) Technology Acceptance Model and Rogers' (1995) Diffusion of Innovations' adopter categorizations. These two theories provided the foundation that enabled the examination of independent hoteliers' propensity to deploy internet technology and the hoteliers' resultant perception of changes in business performances. Appropriate statistical analyses were conducted, where significant factors were discovered and the relationship between these factors and each of the four performance measure studied were tested positive. The new model is not only abridged and specifically relevant to the independent hotel sector, it also facilitates the profiling of internet technology adoption by independent hoteliers amongst practitioners and researchers alike.

The successful analysis of data obtained in both the qualitative and quantitative work carried out, led to the development of a more robust model via the final cluster analysis. Cluster analysis could only be performed after hoteliers who are currently deployed with the various internet technologies were isolated by manual coding, where 18 discrete responses were found. The exercise found distinct groupings of hoteliers with specific internet technologies deployed. This final computation of hoteliers' internet technologies deployment bears resemblance to Rogers' adopter categorization model, where the greatest

CONCLUSION

percentage of hoteliers who adopted two internet technologies had websites and electronic mail, while the majority of hoteliers who adopted three internet technologies had websites, electronic mail and online 3rd party intermediaries. The majority of hoteliers who had adopted four internet technologies deployed websites, electronic mail, online forms and online 3rd party intermediaries. The majority of respondents with just one internet technology have a website.

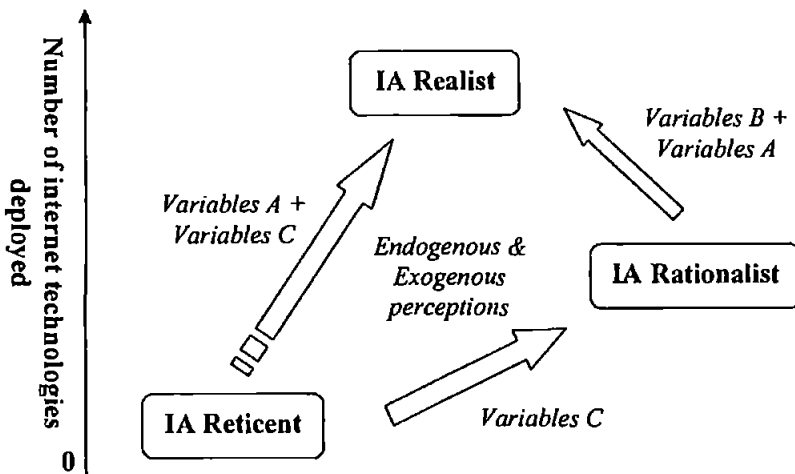
Having established the hoteliers' standard combinations of internet technologies, the cluster analysis conducted revealed that hoteliers' grouped together based on their standard combination of internet technologies could be similarly clustered, when significant factors and some operational characteristics were inputted. Two levels of insights were obtained from the analysis. Firstly, from a conceptual level, Rogers' (1995) adopter categorizations model (based on innovativeness) was found to be adaptable to this study of independent hoteliers and their use of internet technology. Secondly, a taxonomy was developed to explain differences in hoteliers' perceptions and beliefs of the internet for marketing as hoteliers adopt more or less internet technologies.

The initial five stages of internet applications based on Rogers' model were condensed to form a three cluster taxonomy, the central reason being that the three cluster taxonomy derived included more variables compared to other groupings of internet technologies used. The three clusters of hoteliers were reclassified as internet applications (IA) reticent, IA rationalist and IA realist. IA reticent because, based on the factors and variables obtained, this group of hoteliers display characteristics of being reserved and restrained in relation to the number of internet technologies they adopted (up to a maximum of two). The second group was re-designated as IA rationalist because they were found to display characteristics that were more 'middle-of-the-road', deploying three modes out of the five

internet technologies examined and had the highest number of hoteliers belonging to this group. The third group were re-named IA realist because this group of hoteliers used the widest range of internet technologies available and were also found to be more entrepreneurial compared to the rest.

In alignment with the findings of the quantitative survey conducted, this section will now summarise the new cluster of taxonomy developed. Figure 13.1 illustrates the Internet Applications taxonomy of UK independent hoteliers, with groups of variables that were found to be of significance within the taxonomy.

Figure 13.1: Taxonomy of hoteliers' internet technology deployment



- Variables A :** Profit & number of inquiries (**Business performance I**) (+)
AA ratings; number of rooms, number of full time employees; Annual turnover (+)
Reservations modes [Web (+); Intermediaries (+); Telephone (-)]
- Variables B:** Occupancy level & Customer retention (**Business performance II**) (+)
Hotelier's age (-)
- Variables C:** Attitude and Competitive marketing intensity (+)
- Endogenous & Exogenous perceptions:** Effectiveness of the internet; perceived usefulness;
customers' pressure; entrepreneurship

The centre of the taxonomy depicts '*Endogenous & Exogenous perceptions*' of hoteliers; four of those variables were found to be imperative in explaining across-the-board

differences in characteristics, between the IA reticent, IA rationalist and IA realist. Factor 1 measured the perceived benefits of internet marketing, which revealed that the IA realists were more likely to feel positively about the benefits of internet marketing, compared to the IA reticent and the IA realist. The less strongly a hotelier feels about the benefits of internet marketing, the more likely that the hotelier will deploy fewer forms of internet technology (i.e. larger likelihood of being an IA rationalist or IA reticent). Conversely, hoteliers who deploy more internet technology perceive internet marketing as correspondingly offering more benefits. The IA realists compared to the IA reticents, were more positive about the changes in their internet uses and were more likely to feel that internet marketing is a valuable tool with its benefits outweighing the costs. Factor 4 which is the culmination of six likert scale questions in relation to the perceived usefulness of internet applications for the marketing of the hotel, were found to have significance across the various forms of IA users. Statistics analysed suggest that IA rationalists were more likely to feel that internet applications are helping them to operate their hotel more efficiently than the IA reticents, perceiving internet applications as being able to generate more revenue, to gather more information for making decisions, as a means of providing customer service and to help hoteliers know more about their guest needs and wants. This belief that internet applications are operationally useful is even more resolute with the IA realist. As perception of IA operational usefulness gets more negative, there is a parallel decline in the number of internet applications adopted.

Factor 5 measures perceived customers pressure. The more the hoteliers feel they will lose customers or fall behind their competitors, if they do not use the internet for marketing, the more likely they will be adopting more internet applications. Similar to factor 4, these hoteliers are more likely to be IA rationalist or IA realist. The less they feel that their

customers want them to communicate or conduct transactions with them via the internet, the closer hoteliers will be classed as IA reticent or IA rationalist in the taxonomy.

The fourth variable that is significant across the taxonomy is factor 7, measuring entrepreneurship elements of the hoteliers. The more a hotelier makes aggressive, intense competitive decisions, and displays a strong tendency to be ahead of others by adopting new technology, the more likely the hotelier will utilise more internet applications and are therefore more likely to be IA realist in the taxonomy. Conversely, the less an hotelier feels this way, the more likely the said hotelier is an IA reticent.

Variables B has grouped together significant differences found between the IA rationalist and IA realist which are age differences, business performance measures of profit and customer retention. IA rationalist were found to be older than IA realist. IA realists are also more likely to experience a positive change in profit and a higher number of inquiries from the use of internet marketing.

Variables C consists of the attitude and marketing competitive intensity perceptions (Factor 3 and 6), found to have an effect on the classification of hoteliers. Differences in those perceptions were found between the IA reticent and the IA realist, and between the IA reticent and the IA rationalist. Factor 3 measuring the attitude of hoteliers revealed that both the IA rationalist and IA realist have a more positive attitude compared to the IA reticent. Factor 6, measuring the perception of competitive marketing intensity, shows that the IA reticent perceives less intensity in competitive marketing compared to the IA rationalist and the IA realist. IA realists are more prone to feelings of internet technology within the industry, as impacting on the way they make decisions and challenging as it may be, this group too feel that technology will also create opportunities for the industry. The

IA reticent will be less likely to share this perception. With both factors 3 and 6, the difference in perception between IA rationalist and IA realist are less distinct and therefore have not been found to be significantly associated.

Variables A consist only of significant associations between IA reticent and IA realist, together with IA rationalist and IA realist. Unlike the previous group of variables, no distinct differences in characteristics and perceptions were found between the IA reticent and the IA rationalist. Hotel AA star ratings were found to be consistently higher with hoteliers who are IA realist compared to IA rationalist and the IA reticent. This finding is consistent with the exploratory interviews conducted, where hoteliers themselves believed that when a hotel has a higher star rating, the more likely it would deploy more internet technology. In the same vein, IA realist was found to have more rooms compared to other categories of adopters. This finding is in line with the earlier finding that hoteliers deploying more internet technologies (IA realist and IA rationalist) were more likely to be operating more hotel units. This inclination is not surprising because with a hotel operating more properties and more rooms, it is all the more probable that a hotel would want to adopt a wider array of channels to market and distribute their rooms. Perhaps hotels with fewer rooms do not see the need to adopt a similar range of internet applications in comparison with their larger counterparts. The IA rationalist (being the middle-of-the-road adopter of internet applications) or the IA reticent are less likely to be operating larger number of rooms or larger number of properties compared to the IA realist.

The number of full time employees employed amongst the three categories was also found to be associated with the number of internet technologies deployed. Hoteliers who have deployed four or five internet technologies had larger number of full time employees compared to hoteliers who deployed less internet technologies. Similarly, the annual

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turnover of the IA realist was also consistently reported to be higher than that of the IA reticent or the IA rationalist. This finding could also be supported by the discovery that the IA realist experienced positive changes in occupancy levels and higher customer retention levels compared to the IA reticent and the IA rationalist. This is hardly surprising since the IA rationalist would have adopted three internet applications compared to IA reticent who may have 2 or less of the same, and by adopting more internet applications, hoteliers have provided customers with more options to make reservations and have therefore helped to improve customer retention. Hoteliers who adopt more internet technologies for marketing not only experience higher occupancy levels and higher customer retention levels, these positive experiences evidently translate to higher annual turnover too.

There are important associations found to be with the amount of reservations received with three specific modes used by the hotelier, and the extent of internet technologies deployed. Significantly, the IA realist who deploys the greatest number of internet technologies in this study receives a higher percentage of web reservations compared to that of the IA rationalist and the IA reticent. This is consistent with the fact that as more internet technologies are deployed for internet marketing, more reservations will occur as a result of more extensive deployment. Correspondingly, hoteliers who have reported a higher percentage of reservations via intermediaries are more likely to be classified as IA realist when compared to the IA reticent or the IA rationalist. No significant difference was flagged between the IA reticent and the IA rationalist, indicating that reservation modes may not differ greatly between the two classifications. Fittingly, as hoteliers report receiving higher percentages of telephone reservations, these hoteliers are less likely to be IA realist and so are mostly IA reticent and IA rationalist. This makes plausible findings because the more telephone reservations a hotelier receives, the less likely will he/she will want to deploy more internet technologies. These conclusions also confirmed findings

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from the earlier exploratory interviews, where interviewed hoteliers suggested that the reservation methods used by their guests had an effect on the extent of internet technologies deployed by the hoteliers.

From the above scrutiny of each variable and the evaluation of the breakdown in each cluster, it is prudent to summarise that independent hoteliers generally fall into the three classifications of the taxonomy. Firstly, the IA reticent is generally an older hotelier who is systematically less inclined to perceive the internet as a positive instrument of marketing and distributing their accommodation, but is nonetheless heavily dependent on traditional modes of distribution, operates smaller number of rooms and properties, is less entrepreneurial and does not perceive the internet to be a critical tool for the industry.

The IA rationalist on the other hand is more receptive to the internet for marketing and distribution although some are still reliant on traditional means of reservation methods, she/he generally experiences higher customer retention but does not see as high an increase in occupancy levels. Nonetheless, this group of hoteliers is likely to persist in their quest to rationalise their use of internet applications.

Finally the IA realist is almost the opposite of the IA reticent. He/she is usually forward looking, takes the onslaught of internet technology for marketing and distribution in their stride, is generally entrepreneurial but tends to have higher AA star ratings, operate more rooms, hotel properties and hire more full time employees than the other clusters and crucially holds very positive overall perception of internet technologies for marketing. Compared to the IA rationalist and the IA reticent, the IA realist receives few reservations via the telephone than via intermediaries and the web. This group of hoteliers has also

experienced much more positive changes in occupancy levels and is better able to retain customers.

13.3 Theoretical contributions

This study has both illustrated and evaluated the perceptions, beliefs and business performances of 408 independent hotels across the UK, and has confirmed, challenged and extended theory. This latter aspect is discussed in this section.

Although perceived usefulness, perceived ease-of-use and attitude are accepted as important criteria in Davis's TAM, it was found in this study that independent hoteliers do not feel that ease of use of a technology influenced their decision to deploy. While the variables of the technology acceptance model (TAM) have been adopted and employed in enhancing the understanding of the independent hotelier, only one of these variables has not been found to have a bearing or influence on the internet technologies deployed.

Nonetheless, some other influencing factors were found in the form of exogenous factors including customers' pressure, perceived competitive marketing intensity and entrepreneurship. This study has confirmed that the ease of use of a technology does not affect the hotelier's deployment decisions; rather, the study has suggested that exogenous factors play a significant role in influencing the decision to deploy internet technology. In fact, the entrepreneurial characteristics of the hotelier and perceived customers' pressure were found to be amplified as the number of internet technologies adopted increased.

While the study has confirmed that the TAM's variables could be used to enhance the understanding of how hoteliers adopt internet technologies, it has also refuted the efficacy of perceived ease-of-use as a variable when the model is adapted for the assessment of independent hotels. More significantly, despite an extensive number of past studies suggesting that the perceived affordability of adopting a technology is paramount to the

consideration of technology deployment (Garces et. al., 2004; Ellsworth & Ellsworth, 1995), this study has found that hoteliers do not perceive the factor as significant.

While attempting to group the hoteliers based on the number and type of internet technologies deployed, a cluster of five distinct groups were obtained. The five clusters found in the study displayed a similar bell curve to Rogers' adopter categorizations curve. More interestingly, there appears to be an orderly addition to the increase in the internet technologies adopted. This is reflected in the fact that the majority of hoteliers (18 out of 21) either had not deployed any internet technologies or had only deployed a website. Where hoteliers have deployed two internet technologies, the majority (73 out of 89) had deployed a website and electronic mail. The majority of hoteliers who have deployed three internet technologies had a combination of website, electronic mail and online 3rd parties (110 out of 135). With hoteliers who have deployed four internet technologies, the majority (85 out of 92) had a combination of website, electronic mail, online 3rd parties and online forms. The study therefore confirmed, theoretically, that the characteristics of each adopter category of internet technologies are comparable to the types of adopter categories expounded by Rogers (1995).

The above manual tabulation of deployed internet technology classifications, further confirmed each of the group membership, when the first cluster analysis was conducted with the six significant factors obtained from the factor analysis. Five clusters were obtained, robustly suggesting that the six factors helped to explain the characteristics of each of the five adopter categories found. Critically, the statistical output of confidence levels for the population cluster means also suggested that there is a distinct alignment between the clustered categories (based on Rogers' adopter categorization model) and the six factors. It was consistently found that the innovators most strongly felt that both

endogenous and exogenous factors had influenced their decision to deploy the highest number of internet technologies. The sentiments perceived by the innovators were next followed by the early adopters, the early majorities, the late majorities and finally the laggards who perceived the least influence from endogenous and exogenous factors.

The analysis of the adopter categories did not stop there, as no operational characteristics of the hotels were added to the cluster analysis. Having conducted another set of cluster analyses with the six factors and three operational characteristics of the hotel, three clusters were found instead of the earlier five. This finding had further reinforced the adopter categories because with the addition of operational characteristics, the clustering exercise revealed that the laggards and late majorities were distinctly grouped as the first cluster, the early majorities remained as one cluster, and the early adopters and innovators were markedly grouped as the third cluster.

This stage of the analysis facilitated the search for further variations in the operational characteristics between the adopter categories. Stark differences in the operational characteristics of the hotels were found, in particular, hoteliers who are technology reticent (initially classified as laggards and late majorities) and hoteliers who are technology realists (originally grouped as early adopters and innovators). Hoteliers who adopt the most internet technologies appear to obtain a large proportion of their reservations from their own websites and 3rd party online intermediaries, and had a correspondingly lower number of telephone reservations.

Predictably, the IA reticent also had lower star ratings, a smaller number of rooms to sell, fewer full time employees, a lower annual turnover and experienced a smaller change in occupancy levels and customer retention with the use of internet technology, compared to

the IA realist. However, IA realists tend to be younger than IA rationalists, run more hotels and, having conducted a multiple regression on the main business performance measures this group of hoteliers also tends to experience a greater change in profit and the number of inquiries with the use of internet technology. These quantitative findings correspond to the qualitative interviews conducted earlier, particularly in relation to the deployment of internet payment facility.

The findings from the qualitative research consisting of exploratory interviews with 12 hoteliers, contributed extensively and meaningfully to the advancement of the taxonomy. The exploratory findings helped to identify the core factors which were then tested on the wider population of hoteliers in the UK. In order to do so, a quantitative research method was selected via the development of the questionnaire instrument that was administered to UK independent hoteliers.

The resultant taxonomy that was developed facilitated the identification of managerial implications for various stakeholders within the hotel industry. These will be discussed in the following section.

13.4 Managerial implications

In addition to the theoretical contributions described, this study has also provided a more precise profile of independent hoteliers for relevant trade associations such as the British Hospitality Association (BHA) and the Department of Culture, Media and Sports' arm of travel and tourism. This study reveals that the hotel sector has not only advanced in the range of internet technology adopted, the number of adopters has also increased. As stated in a 2002 English Tourism Council report, only 45% of hotels adopted websites, 58% of hotels adopted the e-mail, while only 2% adopted online booking. This study shows that

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website and e-mail adoption by independent hoteliers have reached almost 100% while online booking (payment) is adopted by close to 19% of independent hoteliers. These figures suggest that hoteliers are gradually recognising the necessity of adopting internet technology but are doing so cautiously, and therefore relevant trade associations could strategise assistance and funding accordingly.

It has long been established that conceptual models based on literature help researchers to link science to the real world, enabling findings of scientific research to be put into better use in practice (Sagasti & Mitroff, 1973). Furthermore, the managerial implications arising from this study could be manifested from three points of view; the hoteliers', the online travel suppliers, the hospitality software developers.

All independent hoteliers, regardless of their size, cannot avoid adding internet technologies to their existing marketing strategies. It has been shown in this study that positive changes in business performance occur as more internet technologies are adopted. More importantly, the perceptions of the hoteliers were found to be most critical in explaining the number of internet technologies adopted, which could lead to positive changes in the business performance. With the taxonomy of internet applications categorization (Figure 13.1), hoteliers could position themselves in an adopter category, identify the operational characteristics they possess and the reservation modes they are currently using, depending on what business performance outcome they wish to achieve and which adopter category a hotelier wishes to aim for. They could then aim to enhance their internal and external perceptions of internet technologies.

The study has also identified that online travel agents are a critical instrument in the hotel distribution network. It has been confirmed by a BDRC (Business Development Research

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Consultants) report that 89% of business and leisure travellers book through search engines compared with only 41% who go straight to the hotel website (Fearis, 2007). Independent hoteliers also recognise that they cannot work without such technology for fear of inventory going unsold (Allenson, 2004). 70% of the hoteliers in the study already use online travel intermediaries, and are likely to be categorised as IA rationalist and IA realist. Online travel intermediaries could therefore identify and target the hoteliers who are almost certainly classified as IA reticent, as new affiliates for their online operations.

Given that the study has also discovered that affordability and perceived ease-of-use do not influence a hoteliers internet technology deployment decision; online travel intermediaries and, conceivably, current travel software developers could advance and improve on current technologies with less apprehension towards the development of a complex or higher priced technology. For example, HotelPORT was launched in 2006 for independent hotels by Cendant travel distribution services. Recognising that it is challenging for independent properties to garner exposure in the online distribution channels, HotelPORT was developed. It provided connectivity through various distribution channels such as the GDS (Global Distribution Systems), and IDS (Internet Distribution Systems and ODD (Online Distribution Database), but without the start-up costs and monthly minimum fees traditionally charged. (Anon, 2005).

Based on the taxonomy developed, travel software developers could identify the category of hoteliers they wish to target and market developed technologies based around the characteristics of the hotelier. For instance, if developers target hoteliers who are IA rationalists, the developers would be able to establish from the taxonomy that the IA rationalist generally experiences smaller changes in occupancy levels and customer retention, is less convinced about the benefits of the internet a technology and perceives

less customer pressure compared to the IA realist. Travel software developers may therefore seek to enhance the IA rationalist's awareness of the benefits of technology, and to promote the potential of increased occupancy and customer retention levels.

In the next echelon, the developed taxonomy could serve to advice the HTNG (Hotel Technology Next Generation- currently the only globally recognised non profit organization that certifies vendors' products against a set of specifications). While the taxonomy is currently only applicable to UK independent hotels, HTNG's benchmarks and specifications for vendors trading in the UK, could be drawn up based on the operational characteristics and perceptions of hoteliers found in this study.

While the uses of the taxonomy are relevant to various stakeholders in the hospitality industry, there are inevitably some limitations that occurred in the course of the research. The next section puts forward some suggestions for future research which could consider and compensate for those limitations.

13.5 Limitations

Inevitably, there are both empirical and methodological limitations inherent in the study. The single largest limitation occurred when obtaining a sample from the population of UK independent hotels. As explained and discussed in Chapter 6, obtaining a comprehensive list of UK independent hotels had been a challenge. Despite checks with the Yellow Pages, the tourism departments of district councils, and hotel grading organisations, none were able to produce a comprehensive list of bona fide hotels, let alone independent hotels. The population of hotels (only) in the UK was estimated to be approximately 10,963 units in 2002 (Quest & Needham, 2003). Given that a total of 2,580 independent hotels were eventually, manually extracted from the AA hotel Guide 2005 where approximately 4,000

hotels are members, and assuming that the total number of hotels remained the same in 2005, this study's sampled population only represents 40% of the hotel population in the UK. Moreover, the extent to which the characteristics of the sample differ from the overall population is not known.

A second limitation was recognised arising from the exploratory interviews conducted. The issue of where guests originate from was identified by four of the twelve interviewed hoteliers as having an influence on their decision to adopt more sophisticated internet technologies for marketing and distribution purposes. It appears that hoteliers who were keen on drawing more international and regional guests were more enthusiastic, and inclined to learn and deploy more internet technologies. The question of international, regional or domestic guests was not included in the final questionnaire administered because the exploratory interviews significantly highlighted the importance of the hoteliers' behaviour, perceptions of technology and the external business environment in influencing internet technologies deployment. While adding the international/ domestic question could potentially add a fascinating slant to the study, it would not have adhered to the framework of objectives set out, i.e. of solely examining hoteliers' characteristics influencing technology adoption.

The third limitation of the study stems from the validity of the measurement device. This study administered questionnaires with a series of likert scale questions to measure independent hoteliers' perception and attitude towards deployed internet technology. Although direct observations would have removed the validity concern (Martella ,Nelson & Marchand-Martella, 1999), data collection via this mode is unfeasible because a large respondent sample is required in this study.

The fourth limitation surfaced with the construction of the constructed, although the models explained the overall degree of independent variables and business performance as they do not explain causality. Additionally, the size of R^2 across all models was low, because the values suggest that only a maximum of 20% was achieved, leaving as much as 80% of residual variability unexplained.

This study has shown that the perception of UK independent hotel operations can be categorised effectively according to the technology adopted. This does not mean that the same approach can be applied to other countries or even industrial sectors. The generalisability of the findings to other tourism, hospitality or independent hotels in another country is limited.

13.6 Future Research

Future research could seek to examine whether the desire for international guests could play a major role, in influencing the adoption of internet technologies. This could involve a more intensive deployment of internet technologies from the survey included hoteliers' plans-to-deploy and no-plans-to-deploy technologies chosen for the study. This information could be used to enhance understanding of hoteliers who have no-plans-to-deploy by attempting to examine the factors that explain this behaviour. It would also be interesting to corroborate whether the hoteliers' propensity to adopt and use internet technologies share the same influencing factors, as compared to hoteliers who have no plans to deploy internet technologies. The relationship between the type of internet adopter and business performance could be modelled using an objective rather than a subjective method.

potentially facilitate the understanding of how hoteliers decide to deploy or not deploy certain technologies, while developing a deeper awareness of the importance of certain business performance measures that the decision influences.

Having developed a taxonomy of internet applications adopters based on UK independent hoteliers in this study, the typology could be tested on different sectors of the industry. In particular, the typology could potentially be extended to bed-and-breakfast accommodation in the UK as this sector appears to share some operational characteristics with independent hoteliers, such as being mostly family run and being generally regarded as having less technological know-how. To further establish external validity, the developed typology could also be tested on independent hotels outside the UK. External validity is especially salient, particularly as the best practices found from this research are being recommended to practitioners (Martella et. al., 1999). Additionally, comparative studies of independent hotels across geographical regions could also be conducted, to ascertain whether independent hoteliers react to the same set of antecedents in relation to internet technology adoption.

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EXPLORATORY INTERVIEW SCHEDULE

A. HOTEL DEMOGRAPHICS

Ratings _____ (AA or RAC)

Location of hotel: City, Coastal, Country, Suburban

Number of rooms:

Number of FT employees: (or equivalent)

Average room occupancy:

Domestic Guests: Overseas guests:

Guest types in %:

 Corporate

 Rack

 Leisure

 Tour Groups

 Conference

 Others

Number of hotels owned?

A website?

Website designed? In House or Sub contracted

Is there a online transaction facility on your website?

What is the % of reservations taken through:

 Property owned systems?

 3rd party (bricks & mortar)?

 3rd party (internet)?

 Others?

PERCEIVED AWARENESS

1. There are various types of website where you can promote or market your hotel. What types are you aware of? (prompt if necessary: advertising; auction; GDS)
2. In your opinion as a decision maker, do you think it is necessary to consider the various electronic business to consumer (B2C) distribution channels such as switch companies, pure web based channels, auction style web sites, GDSs, lastminute, discount sites etc.?
3. In your opinion, do you think the skills required to use the internet effectively are too complex for yourself or your employees? If so, do you perceive it as a problem integrating the internet to your current business opportunities?

4. Is your hotel a member of any trade association? For instance, are you actively involved in SWTB, Business Link or any local business association? Where do you normally obtain industrial information?

RELATIVE ADVANTAGES

1. What do you think are the advantages of adopting the internet?

COMPATIBILITY

1. Is the adoption of the internet consistent with your hotel's business values? And in the future?

COST EFFECTIVENESS

1. Do you think the benefits of setting up a website and using the internet is worth the costs? Are the costs of maintaining and supporting the internet affordable for your hotel? (prompt: past, present and future...)

COMPETITIVENESS

1. How important do you think having an online presence is important to your guests? Do you think you will gain more guests by going online?
2. At present, do you think your guests would prefer to have the possibility of booking and paying online? What about the near future?
3. Do you think, having an online booking and payment system will improve the image of your hotel? Or do you think at the moment, a web presence is sufficient exposure for a wider market?

CUSTOMER'S PRESSURE

1. Does your hotel obtain feedback from your guests about the hotel's use of the internet? Was there a demand from guests that the hotel has an online presence whether for marketing or communication purposes?

FINAL QUESTIONS:

1. What is your hotel's annual revenue in the region of? (not compulsory)

DECISION MAKERS' PROFILE

1. GENDER:
2. JOB TITLE:
3. YEARS IN CURRENT POSITION:
4. YEARS IN SECTOR/ INDUSTRY:
5. HIGHEST EDUCATIONAL LEVEL:
6. AGE:
7. Do you make accommodation purchases over the internet?

NATIONAL HOTEL INTERNET MARKETING SURVEY

Please follow the instructions as you move through the questionnaire.
All your answers will be treated in the strictest confidence.

Section 1: About your hotel

Separate instructions are given for each question in this section

1. Which of the following best describes the location of your hotel? Please tick only one

Coastal Suburban/ town City Country

2. How many hotel properties do you operate?

Please write here: _____

3. How many en-suite guest rooms does your hotel/s have in total?

Please write here: _____ rooms

4. Would you describe your hotel as a family business? (owned and managed by member of one family, or of the families of key partners/directors) Please tick

Yes No

5. Including yourself and all employees, how many people work in all your hotel/s?

Full time employees: _____ Part time employees: _____

6. What is the star rating of your hotel by the AA/RAC/ETC (English Tourism Council)? If you are operating more than one hotel, what is the highest star rating? Please fill in accordingly

AA _____ star/s

RAC _____ star/s

ETC _____ star/s

7. What proportions of your occupancy are to the following types of guests, please provide an estimate for the year ending 2005? (please enter approximate % totalling 100%)

Leisure Guests _____ %

Business Guests _____ %

Groups/ Group events (e.g. coach tours, conference, event groups) _____ %

TOTAL **100** %

8. What proportion of your reservations are made up by: (please enter approximate % totalling 100%)

Telephone or Fax _____ %

E-mail or hotel's own website booking form _____ %

Hotel's own online web booking facility _____ %

Intermediaries (e.g. tourist information centres, online/offline travel agents) _____ %

Others, please indicate: _____ %

TOTAL **100** %

Section 1: About your hotel

Continued

In the table below please select the internet technology that your hotel either has currently deployed or plans to deploy in the next 12 months? *Please tick relevant box*

	Currently deployed	Plans to deploy	No plans to deploy
9. Hotel's own website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Online payment facility on hotel's own website	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Receiving reservations from 3 rd party online travel intermediary (e.g. activehotels.com, latebeds.com) ..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Communicate with customers via the e-mail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Intranet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Online booking/ ordering facility on hotel's own website .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Section 2: Your perception of the internet as a marketing tool

This section is to assess your perception (as a decision maker in your hotel) of the internet as a marketing tool.

Please circle ONE number for each item: 1 = Strongly disagree, 2 = Disagree to some extent, 3 = Uncertain, 4 = Agree to some extent, 5 = Strongly agree

15. The internet has changed the way I market my hotel	1	2	3	4	5
16. The internet has changed the way I think about markets	1	2	3	4	5
17. The internet helped me to know more about the guests needs and wants	1	2	3	4	5
18. We use internet technologies in our hotel as a form of advertising & promotion	1	2	3	4	5
19. We use internet technologies in our hotel as a means of providing customer service	1	2	3	4	5
20. We use internet technologies in our hotel to generate revenue	1	2	3	4	5
21. We use internet technologies in our hotel to gather information to make decisions	1	2	3	4	5
22. We use internet technologies in our hotel because our competitors use them	1	2	3	4	5
23. Using the internet for marketing improves business performance of the hotel	1	2	3	4	5
24. Using the internet for marketing enhances the overall effectiveness of advertising for the hotel.	1	2	3	4	5
25. Learning to use the internet is easy for me	1	2	3	4	5
26. Interacting with the internet requires a lot of mental effort	1	2	3	4	5
27. I find it takes a lot of effort to become skilful at using the internet	1	2	3	4	5
28. Using the internet for marketing the hotel makes me feel happy	1	2	3	4	5
29. Using the internet for marketing the hotel makes me feel positive	1	2	3	4	5
30. Using the internet for marketing the hotel makes me feel good	1	2	3	4	5
31. Internet marketing is a wise marketing tool for the hotel	1	2	3	4	5
32. Internet marketing is a beneficial marketing tool for the hotel	1	2	3	4	5
33. Internet marketing is a valuable marketing tool for the hotel	1	2	3	4	5
34. Internet marketing is an expensive tool to adopt	1	2	3	4	5
35. Internet marketing is an expensive tool to maintain	1	2	3	4	5
36. The benefits of adopting internet marketing outweigh the costs	1	2	3	4	5

Section 3: Extra-organisational factors

This section is used to assess your view on competition and customer's pressure.

Please circle ONE number for each item. 1 = Strongly disagree, 2 = Disagree to some extent, 3 = Uncertain, 4 = Agree to some extent, 5 = Strongly agree.

37. We believe that we will lose our customers to our competitors if we do not adopt the internet for marketing	1	2	3	4	5
38. We believe that we will fall behind our competitors if we do not market ourselves online	1	2	3	4	5
39. Our current customers demand that we communicate with them via the internet	1	2	3	4	5
40. Our current customers demand that we use the internet for conducting transactions with them	1	2	3	4	5
41. The technology in our industry is changing rapidly.	1	2	3	4	5
42. Technological changes provide big opportunities in our industry.	1	2	3	4	5
43. It is very difficult to forecast where technology in our industry will be in the next 2 to 3 years	1	2	3	4	5
44. A large number of new service ideas have been possible through technological breakthroughs in our industry	1	2	3	4	5
45. Technological developments have had a major impact on the hotel industry	1	2	3	4	5
46. We believe that due to the nature of the market, wide-ranging acts are necessary to achieve our business objectives	1	2	3	4	5
47. When faced with uncertain decisions we typically 'wait-and-see' to reduce the chance of making costly mistakes	1	2	3	4	5
48. Our hotel makes aggressive and intensely competitive decisions	1	2	3	4	5
49. In general we have a strong tendency to be ahead of others in introducing new technology	1	2	3	4	5

Section 4: Your business performance

To what extent do you think the use of internet technology in your business has changed the performance measures below over the last 2 years (or since you started your business if less than 2 years ago)?

The higher the score the higher the level of achievement. 1 = significant decrease, 2 = decrease, 3 = no change, 4 = increase, 5 = significant increase.

50. Change in net profit	1	2	3	4	5
51. Change in customer retention	1	2	3	4	5
52. Change in number of inquiries	1	2	3	4	5
53. Change in occupancy levels	1	2	3	4	5

Section 5: About you

This section is for comparative purposes and will remain confidential to the researcher alone.

54. What is your gender?

Male

Female

55. ...and your age: _____ years

56. Which of the following represents your highest educational/professional qualification? Please tick one.

None

Vocational qualification

GCSE/ O level

Degree or equivalent

A/AS level or equivalent

Postgraduate qualification

HND/HNC

Other (please specify)

Specialist ICT/ Web Tech training

57. What is your position within the hotel? Please tick one.

Sole trader/ partner/ director

Manager employed by the business

Family member of owner, partner or director

Other (please specify)

Section 6: A little more about your hotel

58. How many years have you been running your hotel/s? _____ years

59. If the hotel was in existence before you started running it, approximately how many years has it been established in total?

_____ years

60. What is the estimated annual occupancy level of your hotel (year ending 2005)?

_____ %

61. Roughly what was the turnover (annual sales income) of your business in the last financial year (ending April 2005)? Please tick one

Less than £25,000

£25,000-£49,999

£50,000-£99,999

£100,000-£499,999

£500,000-£1 million

More than £1 million

If possible, I would like to talk to you in more detail about my research. Would you be willing to help me if I were to contact you by telephone? (no more than 20 minutes)

Yes

No

Maybe, check with me again

If you have answered yes or maybe, could you please provide me your name and contact number:

Name: _____

E-mail address: _____

Telephone number (including area code): _____

If you would like to receive a copy of the summary report of this research project, please enter your details below:

Business Name:

Address:

APPENDIX 3

Cover letter for the postal group



Dated 23rd January 2006

Dear Sir/Madam,

I am conducting a doctoral study with the University of Plymouth Business School in order to better understand the role of the internet marketing and distribution for UK independent hotels. This research will help the independent hotel sector (which currently makes up about 70% of the entire UK hotel industry) to better understand how the internet has affected their decision making in marketing and distribution.

I would greatly appreciate your completing the enclosed questionnaire and returning it using the enclosed prepaid envelope by the 25th of February 2006. Since the validity of the results depend on obtaining a high response rate, your participation is crucial to the success of this study. Should you prefer to fill up an online questionnaire instead, please log onto the following website and click submit at the end of the survey before the 25th of February 2006 <http://facultyj.hs.plymouth.ac.uk/hotelinternetsurvey/>

This survey will take between 15-25 minutes to complete (online or on paper) and all responses will be held in the strictest confidence. As soon as I receive your completed survey, your answers will be entered anonymously into a statistical software package. All data will be destroyed as soon as my doctoral candidature is complete. If the results of this study were to be written for publication, no identifying information will be used.

The potential benefits to you from participating in the study include enabling you to reflect on your hotel's current internet strategy and to examine if your hotel's current internet use can be further improved as a marketing tool. This study will not only provide an objective investigation into the uses of internet as a marketing tool, it will also inform tourism councils and online developers about industry needs and uncertainties, so as to provide suitable support and develop software products where relevant. Respondents will have the opportunity to receive a report of the study results by filling in your particulars at the end of the survey, alternatively you could write to Wai Mun, LIM at Plymouth Business School, University of Plymouth, Drake Circus, Plymouth, Devon, PL4 8AA or e-mail address: wmlim@plymouth.ac.uk.

If you have any questions about this study, you can contact the person below:

Principal Supervisor: Dr. Phil MEGICKS

Department/School: Associate Dean of Graduate Affairs

Address: 15 Portland Villas, Drake Circus, University of Plymouth, PL4 8AA

Telephone numbers: 0175 232837;

E-mail addresses: pmegicks@plymouth.ac.uk

I hope that you will be able to participate in this study.

Yours faithfully,

Wai Mun, LIM (Ms.)

Data Protection Statement

The personal information that you provide in this survey will be handled by the University of Plymouth in accordance with the Data Protection Act 1998. It will be used for the purpose of Wai Mun LIM's research only. Your information will not be used for any other purpose, and will not be disclosed to any other parties, including other university departments and outside individuals or bodies

APPENDIX 3.1 Cover letter in e-mail for postal group



Dated 10th March 2006

Dear Sir/Madam,

I am conducting a doctoral study with the University of Plymouth Business School in order to better understand the role of the internet marketing and distribution for UK independent hotels. This research will help the independent hotel sector (which currently makes up about 70% of the entire UK hotel industry) to better understand how the internet has affected their decision making in marketing and distribution.

Recently, I have posted a similar survey to your hotel. If you have already completed the survey and returned it by freepost, please accept my sincere thanks and also apologies for receiving this letter of request. If you have not completed the postal survey, I would greatly appreciate your completing the online questionnaire by following this link <http://facultyj.hs.plymouth.ac.uk/hotelinternetsurvey2/> and clicking the submit key at the end of it before the 14th of April 2006, this will then be forwarded straight into my university's e-mail account. Since the validity of the results depend on obtaining a high response rate, your participation is crucial to the success of this study

This survey will take between 15-25 minutes to complete and all responses will be held in the strictest confidence. As soon as I receive your completed survey, your answers will be entered anonymously into a statistical software package. All data will be destroyed as soon as my doctoral candidature is complete. If the results of this study were to be written for publication, no identifying information will be used.

The potential benefits to you from participating in the study include enabling you to reflect on your hotel's current internet strategy and to examine if your hotel's current internet use can be further improved as a marketing tool. This study will not only provide an objective investigation into the uses of internet as a marketing tool, it will also inform tourism councils and online developers about industry needs and uncertainties, so as to provide suitable support and develop software products where relevant. Respondents will have the opportunity to receive a report of the study results by filling in your particulars at the end of the survey, alternatively you could write to Wai Mun, LIM at Plymouth Business School, University of Plymouth, Drake Circus, Plymouth, Devon, PL4 8AA or e-mail address: wmlim@plymouth.ac.uk.

If you have any questions about this study, you can contact the person below:

Principal Supervisor: Dr. Phil MEGICKS E-mail addresses: pmegicks@plymouth.ac.uk
Department/School: Associate Dean of Graduate Affairs
Address: 15 Portland Villas, Drake Circus, University of Plymouth, PL4 8AA
Telephone number: 01752 232837

I hope that you will be able to participate in this study.

Yours faithfully,

Wai Mun, LIM (Ms.)

Data Protection Statement

The personal information that you provide in this survey will be handled by the University of Plymouth in accordance with the Data Protection Act 1998. It will be used for the purpose of Wai Mun LIM's research only. Your information will not be used for any other purpose, and will not be disclosed to any other parties, including other university departments and outside individuals or bodies

APPENDIX 4 Cover letter for the e-mail group



25th January 2006

Dear Sir/Madam,

I am conducting a doctoral study with the University of Plymouth Business School in order to better understand the role of the internet for UK independent hotels. This research will help the independent hotel sector (which currently makes up about 70% of the entire UK hotel industry) to better understand how the internet has affected their decision making in marketing and distribution.

I would greatly appreciate your completing the questionnaire by following this link <http://facultyj.hs.plymouth.ac.uk/hotelinternetsurvey/> and clicking the submit key at the end of it before the 25th of February 2006, this will then be forwarded straight into my university's e-mail account. Since the validity of the results depend on obtaining a high response rate, your participation is crucial to the success of this study. Should you prefer to fill up a postal questionnaire instead, please reply to this e-mail with your name and postal address, a postal survey will then be mailed out to you.

This survey will take about 15-25 minutes to complete (online or postal), and all responses will be held in the strictest confidence. As soon as I receive your completed survey, your answers will be anonymously entered into a statistical software package. All data will be destroyed as soon as my doctoral candidature is complete. If the results of this study were to be written for publication, no identifying information will be used.

The potential benefits to you from participating in the study include enabling you to reflect on your hotel's current internet strategy and if your hotel's current internet use can be further improved as a marketing tool. This study will provide information to tourism councils and online developers to help them recognize your hotel's needs and uncertainties, so as to provide suitable support and develop software products where relevant. Respondents will have the opportunity to receive a report of the study results by filling in your particulars at the end of the survey, alternatively you could write to Wai Mun, LIM at Plymouth Business School, University of Plymouth, Drake Circus, Plymouth, Devon, PL4 8AA or e-mail address: wmlim@plymouth.ac.uk.

If you have any questions about this study, you can contact the person below:

Principal Supervisor: Dr. Phil MEGICKS

Department/School: Associate Dean of Graduate Affairs

Address: 15 Portland Villas, Drake Circus, University of Plymouth, PL4 8AA

Telephone numbers: 0175 232837

E-mail addresses: pmegicks@plymouth.ac.uk

I hope that you will be able to participate in this study.

Yours faithfully,

Wai Mun LIM (Ms.)

[Click here to go directly to the survey](http://facultyj.hs.plymouth.ac.uk/hotelinternetsurvey/)

<http://facultyj.hs.plymouth.ac.uk/hotelinternetsurvey/>

Data Protection Statement

The personal information that you provide in this survey will be handled by the University of Plymouth in accordance with the Data Protection Act 1998. It will be used for the purpose of Wai Mun LIM's research only. Your information will not be used for any other purpose, and will not be disclosed to any other parties, including other university departments and outside individuals or bodies

APPENDIX 4.1 Cover letter for e-mail group in post



Dated 27th February 2006

Dear Sir/Madam,

I am conducting a doctoral study with the University of Plymouth Business School in order to better understand the role of the internet marketing and distribution for UK independent hotels. This research will help the independent hotel sector (which currently makes up about 70% of the entire UK hotel industry) to better understand how the internet has affected their decision making in marketing and distribution.

Recently, I have electronically mailed a similar survey to your hotel's e-mail address. If you have already completed the survey electronically, please accept my sincere thanks and also apologies for receiving this survey again. If you have not completed the electronic survey, I would greatly appreciate your completing the enclosed questionnaire and returning it using the enclosed prepaid envelope before the 27th of March 2006. Since the validity of the results depend on obtaining a high response rate, your participation is crucial to the success of this study. The online survey can be found at <http://faculty.hs.plymouth.ac.uk/hotelinternetsurvey/> should you prefer to complete it online.

This survey will take between 15-25 minutes to complete and all responses will be held in the strictest confidence. As soon as I receive your completed survey, your answers will be entered anonymously into a statistical software package. All data will be destroyed as soon as my doctoral candidature is complete. If the results of this study were to be written for publication, no identifying information will be used.

The potential benefits to you from participating in the study include enabling you to reflect on your hotel's current internet strategy and to examine if your hotel's current internet use can be further improved as a marketing tool. This study will not only provide an objective investigation into the uses of internet as a marketing tool, it will also inform tourism councils and online developers about industry needs and uncertainties, so as to provide suitable support and develop software products where relevant. Respondents will have the opportunity to receive a report of the study results by filling in your particulars at the end of the survey, alternatively you could write to Wai Mun, LIM at Plymouth Business School, University of Plymouth, Drake Circus, Plymouth, Devon, PL4 8AA or e-mail address: wmlim@plymouth.ac.uk.

If you have any questions about this study, you can contact the person below:

Principal Supervisor: Dr. Phil MEGICKS E-mail addresses: pmegicks@plymouth.ac.uk
Department/School: Associate Dean of Graduate Affairs
Address: 15 Portland Villas, Drake Circus, University of Plymouth, PL4 8AA
Telephone number: 01752 232837

I hope that you will be able to participate in this study.

Yours faithfully,

Wai Mun, LIM (Ms.)

Data Protection Statement

The personal information that you provide in this survey will be handled by the University of Plymouth in accordance with the Data Protection Act 1998. It will be used for the purpose of Wai Mun LIM's research only. Your information will not be used for any other purpose, and will not be disclosed to any other parties, including other university departments and outside individuals or bodies

APPENDIX 5

5.1 Mann-Whitney tests for non-response bias

Test Statistics(a)

	SMEAN(FAMILY)	SMEAN(HTL_LOC)	SMEAN(QUALIFIC)
Mann-Whitney U	18518.000	16676.500	18722.500
Wilcoxon W	28388.000	52722.500	28592.500
Z	-.368	-1.933	-.034
Asymp. Sig. (2-tailed)	.713	.053	.973

a Grouping Variable: Waves

5.2 T-tests for non-response bias

Independent Samples Test

		Levene's Test for Equality of Variances			Mean Difference
		F	Sig.	Sig. (2-tailed)	
SMEAN(aa)	Equal variances assumed	1.390	.239	.150	-.099
	Equal variances not assumed				
SMEAN(BP_OCCUP)	Equal variances assumed	1.006	.316	.112	.1326
	Equal variances not assumed				
SMEAN(AGE)	Equal variances assumed	2.580	.109	.839	.233
	Equal variances not assumed				
SMEAN(no_rooms)	Equal variances assumed	.180	.672	.908	-.5966
	Equal variances not assumed				

APPENDIX 6 CROSS TABULATIONS OF GUEST TYPES

6.1 AA RATINGS & GUEST TYPES

SMEAN(LEISURE) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(LEISURE)	Less than 30%	Count	0	29	78	18	0	125
		% within SMEAN(LEISURE)	.0%	23.2%	62.4%	14.4%	.0%	100.0%
		% within SMEAN(aa)	.0%	24.2%	32.6%	42.9%	.0%	30.6%
		% of Total	.0%	7.1%	19.1%	4.4%	.0%	30.6%
	31-50%	Count	2	20	49	10	0	81
		% within SMEAN(LEISURE)	2.5%	24.7%	60.5%	12.3%	.0%	100.0%
		% within SMEAN(aa)	66.7%	18.7%	20.5%	23.8%	.0%	19.9%
		% of Total	.5%	4.9%	12.0%	2.5%	.0%	19.9%
	51-70%	Count	0	25	51	7	3	86
		% within SMEAN(LEISURE)	.0%	29.1%	59.3%	8.1%	3.5%	100.0%
		% within SMEAN(aa)	.0%	20.8%	21.3%	16.7%	75.0%	21.1%
		% of Total	.0%	6.1%	12.5%	1.7%	.7%	21.1%
	71% and above	Count	1	46	61	7	1	116
		% within SMEAN(LEISURE)	.9%	39.7%	52.6%	6.0%	.9%	100.0%
		% within SMEAN(aa)	33.3%	38.3%	25.5%	16.7%	25.0%	28.4%
		% of Total	.2%	11.3%	15.0%	1.7%	.2%	28.4%
Total	Count	3	120	239	42	4	408	
	% within SMEAN(LEISURE)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

SMEAN(BUSINESS) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(BUSINESS)	Less than 10%	Count	1	45	63	6	2	117
		% within SMEAN(BUSINESS)	.9%	38.5%	53.8%	5.1%	1.7%	100.0%
		% within SMEAN(aa)	33.3%	37.5%	26.4%	14.3%	50.0%	28.7%
		% of Total	.2%	11.0%	15.4%	1.5%	.5%	28.7%
	11-30%	Count	1	22	62	9	0	94
		% within SMEAN(BUSINESS)	1.1%	23.4%	66.0%	9.6%	.0%	100.0%
		% within SMEAN(aa)	33.3%	18.3%	25.9%	21.4%	.0%	23.0%
		% of Total	.2%	5.4%	15.2%	2.2%	.0%	23.0%
	31-60%	Count	1	26	71	19	2	119
		% within SMEAN(BUSINESS)	.8%	21.8%	59.7%	16.0%	1.7%	100.0%
		% within SMEAN(aa)	33.3%	21.7%	29.7%	45.2%	50.0%	29.2%
		% of Total	.2%	6.4%	17.4%	4.7%	.5%	29.2%
	61% and above	Count	0	27	43	8	0	78
		% within SMEAN(BUSINESS)	.0%	34.6%	55.1%	10.3%	.0%	100.0%
		% within SMEAN(aa)	.0%	22.5%	18.0%	19.0%	.0%	19.1%
		% of Total	.0%	6.6%	10.5%	2.0%	.0%	19.1%
Total	Count	3	120	239	42	4	408	
	% within SMEAN(BUSINESS)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

SMEAN(GROUPS) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(GROUPS)	Less than 5%	Count	2	77	105	14	2	200
		% within SMEAN(GROUPS)	1.0%	38.5%	52.5%	7.0%	1.0%	100.0%
		% within SMEAN(aa)	68.7%	64.2%	43.9%	33.3%	50.0%	49.0%
		% of Total	.5%	18.9%	25.7%	3.4%	.5%	49.0%
	6-10%	Count	0	23	52	14	0	89
		% within SMEAN(GROUPS)	.0%	25.8%	58.4%	15.7%	.0%	100.0%
		% within SMEAN(aa)	.0%	19.2%	21.8%	33.3%	.0%	21.8%
		% of Total	.0%	6.6%	12.7%	3.4%	.0%	21.8%
	11-20%	Count	0	8	31	7	1	48
		% within SMEAN(GROUPS)	.0%	18.8%	64.6%	14.6%	2.1%	100.0%
		% within SMEAN(aa)	.0%	7.5%	13.0%	16.7%	25.0%	11.8%
		% of Total	.0%	2.2%	7.6%	1.7%	.2%	11.8%
	21% and above	Count	1	11	51	7	1	71
		% within SMEAN(GROUPS)	1.4%	15.5%	71.8%	9.9%	1.4%	100.0%
		% within SMEAN(aa)	33.3%	9.2%	21.3%	18.7%	25.0%	17.4%
		% of Total	.2%	2.7%	12.5%	1.7%	.2%	17.4%
Total	Count	3	120	239	42	4	408	
	% within SMEAN(GROUPS)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

6.2 HOTEL LOCATION & GUEST TYPES

SMEAN(LEISURE) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(LEISURE)	Less than 30%	Count	13	65	17	30	125
		% within SMEAN(LEISURE)	10.4%	52.0%	13.6%	24.0%	100.0%
		% within SMEAN(HTL_LOC)	10.7%	64.4%	47.2%	20.0%	30.6%
		% of Total	3.2%	15.9%	4.2%	7.4%	30.6%
	31-50%	Count	24	13	12	32	81
		% within SMEAN(LEISURE)	29.6%	16.0%	14.8%	39.5%	100.0%
		% within SMEAN(HTL_LOC)	19.8%	12.9%	33.3%	21.3%	19.9%
		% of Total	5.9%	3.2%	2.9%	7.8%	19.9%
	51-70%	Count	31	16	5	34	88
		% within SMEAN(LEISURE)	36.0%	18.6%	5.8%	39.5%	100.0%
		% within SMEAN(HTL_LOC)	25.8%	15.8%	13.9%	22.7%	21.1%
		% of Total	7.6%	3.9%	1.2%	8.3%	21.1%
	71% and above	Count	53	7	2	54	116
		% within SMEAN(LEISURE)	45.7%	6.0%	1.7%	46.6%	100.0%
		% within SMEAN(HTL_LOC)	43.8%	6.9%	5.6%	36.0%	28.4%
		% of Total	13.0%	1.7%	.5%	13.2%	28.4%
Total	Count	121	101	36	150	408	
	% within SMEAN(LEISURE)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

SMEAN(BUSINESS) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(BUSINESS)	Less than 10%	Count	58	8	0	51	117
		% within SMEAN(BUSINESS)	49.6%	6.8%	.0%	43.6%	100.0%
		% within SMEAN(HTL_LOC)	47.9%	7.9%	.0%	34.0%	28.7%
		% of Total	14.2%	2.0%	.0%	12.5%	28.7%
	11-30%	Count	34	14	8	38	94
		% within SMEAN(BUSINESS)	36.2%	14.9%	8.5%	40.4%	100.0%
		% within SMEAN(HTL_LOC)	28.1%	13.9%	22.2%	25.3%	23.0%
		% of Total	8.3%	3.4%	2.0%	9.3%	23.0%
	31-60%	Count	27	35	16	41	119
		% within SMEAN(BUSINESS)	22.7%	29.4%	13.4%	34.5%	100.0%
		% within SMEAN(HTL_LOC)	22.3%	34.7%	44.4%	27.3%	29.2%
		% of Total	6.6%	8.6%	3.9%	10.0%	29.2%
	61% and above	Count	2	44	12	20	78
		% within SMEAN(BUSINESS)	2.6%	56.4%	15.4%	25.6%	100.0%
		% within SMEAN(HTL_LOC)	1.7%	43.6%	33.3%	13.3%	19.1%
		% of Total	.5%	10.8%	2.9%	4.9%	19.1%
Total	Count	121	101	36	150	408	
	% within SMEAN(BUSINESS)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

SMEAN(GROUPS) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(GROUPS)	Less than 5%	Count	58	44	17	81	200
		% within SMEAN(GROUPS)	29.0%	22.0%	8.5%	40.5%	100.0%
		% within SMEAN(HTL_LOC)	47.9%	43.6%	47.2%	54.0%	49.0%
		% of Total	14.2%	10.8%	4.2%	19.9%	49.0%
	6-10%	Count	27	21	12	29	89
		% within SMEAN(GROUPS)	30.3%	23.6%	13.5%	32.6%	100.0%
		% within SMEAN(HTL_LOC)	22.3%	20.8%	33.3%	19.3%	21.8%
		% of Total	6.6%	5.1%	2.9%	7.1%	21.8%
	11-20%	Count	10	16	4	18	48
		% within SMEAN(GROUPS)	20.8%	33.3%	8.3%	37.5%	100.0%
		% within SMEAN(HTL_LOC)	8.3%	15.8%	11.1%	12.0%	11.8%
		% of Total	2.5%	3.9%	1.0%	4.4%	11.8%
21% and above	Count	26	20	3	22	71	
	% within SMEAN(GROUPS)	36.6%	28.2%	4.2%	31.0%	100.0%	
	% within SMEAN(HTL_LOC)	21.5%	19.8%	8.3%	14.7%	17.4%	
	% of Total	6.4%	4.9%	.7%	5.4%	17.4%	
Total	Count	121	101	36	150	408	
	% within SMEAN(GROUPS)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

6.3 NUMBER OF ROOMS & GUEST TYPES

SMEAN(LEISURE) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(LEISURE)	Less than 30%	Count	24	22	34	45	125
		% within SMEAN(LEISURE)	19.2%	17.6%	27.2%	36.0%	100.0%
		% within SMEAN(NO_ROOMS)	21.2%	26.2%	30.6%	45.0%	30.6%
		% of Total	5.9%	5.4%	8.3%	11.0%	30.6%
	31-50%	Count	20	21	19	21	81
		% within SMEAN(LEISURE)	24.7%	25.9%	23.5%	25.9%	100.0%
		% within SMEAN(NO_ROOMS)	17.7%	25.0%	17.1%	21.0%	19.9%
		% of Total	4.9%	5.1%	4.7%	5.1%	19.9%
	51-70%	Count	19	12	37	18	86
		% within SMEAN(LEISURE)	22.1%	14.0%	43.0%	20.9%	100.0%
		% within SMEAN(NO_ROOMS)	16.8%	14.3%	33.3%	18.0%	21.1%
		% of Total	4.7%	2.9%	9.1%	4.4%	21.1%
	71% and above	Count	50	29	21	16	116
		% within SMEAN(LEISURE)	43.1%	25.0%	18.1%	13.8%	100.0%
		% within SMEAN(NO_ROOMS)	44.2%	34.5%	18.9%	16.0%	28.4%
		% of Total	12.3%	7.1%	5.1%	3.9%	28.4%
Total	Count	113	84	111	100	408	
	% within SMEAN(LEISURE)	27.7%	20.6%	27.2%	24.5%	100.0%	
	% within SMEAN(NO_ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.7%	20.6%	27.2%	24.5%	100.0%	

SMEAN(BUSINESS) * SMEAN(NO_ROOMS) Cro

			Σ	
			16 rooms or less	17-24
SMEAN(BUSINESS)	Less than 10%	Count	43	
		% within SMEAN(BUSINESS)	36.8%	
		% within SMEAN(NO_ROOMS)	38.1%	
		% of Total	10.5%	
11-30%		Count	23	
		% within SMEAN(BUSINESS)	24.5%	
		% within SMEAN(NO_ROOMS)	20.4%	
		% of Total	5.6%	
31-60%		Count	26	
		% within SMEAN(BUSINESS)	21.8%	
		% within SMEAN(NO_ROOMS)	23.0%	
		% of Total	6.4%	
61% and above		Count	21	
		% within SMEAN(BUSINESS)	26.9%	
		% within SMEAN(NO_ROOMS)	18.6%	
		% of Total	5.1%	
Total		Count	113	
		% within SMEAN(BUSINESS)	27.7%	
		% within SMEAN(NO_ROOMS)	100.0%	
		% of Total	27.7%	

SMEAN(GROUPS) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(GROUPS)	Less than 5%	Count	83	47	48	22	200
		% within SMEAN(GROUPS)	41.5%	23.5%	24.0%	11.0%	100.0%
		% within SMEAN(NO_ROOMS)	73.5%	56.0%	43.2%	22.0%	49.0%
		% of Total	20.3%	11.5%	11.8%	5.4%	49.0%
	6-10%	Count	16	18	27	28	89
		% within SMEAN(GROUPS)	18.0%	20.2%	30.3%	31.5%	100.0%
		% within SMEAN(NO_ROOMS)	14.2%	21.4%	24.3%	28.0%	21.8%
		% of Total	3.9%	4.4%	6.6%	6.9%	21.8%
	11-20%	Count	7	6	19	16	48
		% within SMEAN(GROUPS)	14.6%	12.5%	39.6%	33.3%	100.0%
		% within SMEAN(NO_ROOMS)	6.2%	7.1%	17.1%	16.0%	11.8%
		% of Total	1.7%	1.5%	4.7%	3.9%	11.8%
	21% and above	Count	7	13	17	34	71
		% within SMEAN(GROUPS)	9.9%	18.3%	23.9%	47.9%	100.0%
		% within SMEAN(NO_ROOMS)	6.2%	15.5%	15.3%	34.0%	17.4%
		% of Total	1.7%	3.2%	4.2%	8.3%	17.4%
Total	Count	113	84	111	100	408	
	% within SMEAN(GROUPS)	27.7%	20.6%	27.2%	24.5%	100.0%	
	% within SMEAN(NO_ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.7%	20.6%	27.2%	24.5%	100.0%	

APPENDIX 7 CROSS TABULATIONS OF RESERVATION MODES

7.1 AA RATINGS & RESERVATION MODES

SMEAN(RES_TEL) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(RES_TEL)	Less than 45%	Count	0	19	72	17	1	109
		% within SMEAN(RES_TEL)	.0%	17.4%	66.1%	15.6%	.9%	100.0%
		% within SMEAN(aa)	.0%	15.8%	30.1%	40.5%	25.0%	26.7%
		% of Total	.0%	4.7%	17.6%	4.2%	.2%	26.7%
46-65%	Count	Count	1	34	64	10	3	112
		% within SMEAN(RES_TEL)	.9%	30.4%	57.1%	8.9%	2.7%	100.0%
		% within SMEAN(aa)	33.3%	28.3%	26.8%	23.8%	75.0%	27.5%
		% of Total	.2%	8.3%	15.7%	2.5%	.7%	27.5%
66-85%	Count	Count	2	38	80	14	0	134
		% within SMEAN(RES_TEL)	1.6%	28.4%	59.7%	10.4%	.0%	100.0%
		% within SMEAN(aa)	66.7%	31.7%	33.5%	33.3%	.0%	32.8%
		% of Total	.5%	9.3%	19.6%	3.4%	.0%	32.8%
86% and above	Count	Count	0	29	23	1	0	53
		% within SMEAN(RES_TEL)	.0%	54.7%	43.4%	1.9%	.0%	100.0%
		% within SMEAN(aa)	.0%	24.2%	9.6%	2.4%	.0%	13.0%
		% of Total	.0%	7.1%	5.6%	.2%	.0%	13.0%
Total	Count	Count	3	120	239	42	4	408
		% within SMEAN(RES_TEL)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%
		% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%

SMEAN(RES_EMAL) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(RES_EMAL)	None	Count	1	16	15	5	0	37
		% within SMEAN(RES_EMAL)	2.7%	43.2%	40.5%	13.5%	.0%	100.0%
		% within SMEAN(aa)	33.3%	13.3%	6.3%	11.9%	.0%	9.1%
		% of Total	.2%	3.9%	3.7%	1.2%	.0%	9.1%
Less than 5%	Count	Count	0	25	44	6	0	75
		% within SMEAN(RES_EMAL)	.0%	33.3%	58.7%	8.0%	.0%	100.0%
		% within SMEAN(aa)	.0%	20.8%	18.4%	14.3%	.0%	18.4%
		% of Total	.0%	6.1%	10.8%	1.5%	.0%	18.4%
6-15%	Count	Count	0	25	72	11	1	109
		% within SMEAN(RES_EMAL)	.0%	22.9%	66.1%	10.1%	.9%	100.0%
		% within SMEAN(aa)	.0%	20.8%	30.1%	26.2%	25.0%	26.7%
		% of Total	.0%	6.1%	17.6%	2.7%	.2%	26.7%
16-25%	Count	Count	1	28	58	11	2	100
		% within SMEAN(RES_EMAL)	1.0%	28.0%	58.0%	11.0%	2.0%	100.0%
		% within SMEAN(aa)	33.3%	23.3%	24.3%	26.2%	50.0%	24.5%
		% of Total	.2%	6.9%	14.2%	2.7%	.5%	24.5%
26% or more	Count	Count	1	26	50	9	1	87
		% within SMEAN(RES_EMAL)	1.1%	29.9%	57.5%	10.3%	1.1%	100.0%
		% within SMEAN(aa)	33.3%	21.7%	20.9%	21.4%	25.0%	21.3%
		% of Total	.2%	6.4%	12.3%	2.2%	.2%	21.3%
Total	Count	Count	3	120	239	42	4	408
		% within SMEAN(RES_EMAL)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%
		% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%

SMEAN(RES_WEB) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(RES_WEB)	None	Count	3	88	122	12	0	225
		% within SMEAN(RES_WEB)	1.3%	39.1%	54.2%	5.3%	.0%	100.0%
		% within SMEAN(aa)	100.0%	73.3%	51.0%	28.6%	.0%	55.1%
		% of Total	.7%	21.6%	29.9%	2.9%	.0%	55.1%
	1-10%	Count	0	21	81	16	3	121
		% within SMEAN(RES_WEB)	.0%	17.4%	66.9%	13.2%	2.5%	100.0%
		% within SMEAN(aa)	.0%	17.5%	33.9%	38.1%	75.0%	28.7%
		% of Total	.0%	5.1%	19.9%	3.9%	.7%	28.7%
	11% or more	Count	0	11	36	14	1	62
		% within SMEAN(RES_WEB)	.0%	17.7%	58.1%	22.6%	1.6%	100.0%
		% within SMEAN(aa)	.0%	9.2%	15.1%	33.3%	25.0%	15.2%
		% of Total	.0%	2.7%	8.8%	3.4%	.2%	15.2%
Total	Count	3	120	239	42	4	408	
	% within SMEAN(RES_WEB)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

SMEAN(RES_INT) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(RES_INT)	None	Count	0	21	11	3	0	35
		% within SMEAN(RES_INT)	.0%	60.0%	31.4%	8.6%	.0%	100.0%
		% within SMEAN(aa)	.0%	17.5%	4.6%	7.1%	.0%	8.6%
		% of Total	.0%	5.1%	2.7%	.7%	.0%	8.6%
	Less than 10%	Count	2	72	128	16	3	221
		% within SMEAN(RES_INT)	.9%	32.6%	57.9%	7.2%	1.4%	100.0%
		% within SMEAN(aa)	66.7%	60.0%	53.6%	38.1%	75.0%	54.2%
		% of Total	.5%	17.6%	31.4%	3.9%	.7%	54.2%
	11-20%	Count	1	18	56	10	0	85
		% within SMEAN(RES_INT)	1.2%	21.2%	65.9%	11.8%	.0%	100.0%
		% within SMEAN(aa)	33.3%	15.0%	23.4%	23.8%	.0%	20.8%
		% of Total	.2%	4.4%	13.7%	2.5%	.0%	20.8%
	21-30%	Count	0	6	19	7	1	33
		% within SMEAN(RES_INT)	.0%	18.2%	57.6%	21.2%	3.0%	100.0%
		% within SMEAN(aa)	.0%	5.0%	7.9%	16.7%	25.0%	8.1%
		% of Total	.0%	1.5%	4.7%	1.7%	.2%	8.1%
	31% or more	Count	0	3	25	6	0	34
		% within SMEAN(RES_INT)	.0%	8.8%	73.5%	17.6%	.0%	100.0%
		% within SMEAN(aa)	.0%	2.5%	10.5%	14.3%	.0%	8.3%
		% of Total	.0%	.7%	6.1%	1.5%	.0%	8.3%
Total	Count	3	120	239	42	4	408	
	% within SMEAN(RES_INT)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

SMEAN(RES_OTHE) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(RES_OTHE)	None	Count	3	96	191	35	4	329
		% within SMEAN(RES_OTHE)	.9%	29.2%	58.1%	10.6%	1.2%	100.0%
		% within SMEAN(aa)	100.0%	80.0%	79.9%	83.3%	100.0%	80.6%
		% of Total	.7%	23.5%	48.8%	8.6%	1.0%	80.6%
	1-5%	Count	0	14	26	2	0	42
		% within SMEAN(RES_OTHE)	.0%	33.3%	61.9%	4.8%	.0%	100.0%
		% within SMEAN(aa)	.0%	11.7%	10.9%	4.8%	.0%	10.3%
		% of Total	.0%	3.4%	6.4%	.5%	.0%	10.3%
	6% or more	Count	0	10	22	5	0	37
		% within SMEAN(RES_OTHE)	.0%	27.0%	59.5%	13.5%	.0%	100.0%
		% within SMEAN(aa)	.0%	8.3%	9.2%	11.9%	.0%	9.1%
		% of Total	.0%	2.5%	5.4%	1.2%	.0%	9.1%
Total	Count	3	120	239	42	4	408	
	% within SMEAN(RES_OTHE)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

7.2 HOTEL LOCATION & RESERVATION MODES

SMEAN(RES_TEL) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(RES_TEL)	Less than 45%	Count	36	27	17	29	109
		% within SMEAN(RES_TEL)	33.0%	24.8%	15.6%	26.6%	100.0%
		% within SMEAN(HTL_LOC)	29.8%	26.7%	47.2%	19.3%	26.7%
		% of Total	8.8%	6.6%	4.2%	7.1%	26.7%
	46-65%	Count	28	28	10	48	112
		% within SMEAN(RES_TEL)	25.0%	25.0%	8.9%	41.1%	100.0%
		% within SMEAN(HTL_LOC)	23.1%	27.7%	27.8%	30.7%	27.5%
		% of Total	6.9%	6.9%	2.5%	11.3%	27.5%
	66-85%	Count	39	30	6	58	134
		% within SMEAN(RES_TEL)	29.1%	22.4%	4.5%	44.0%	100.0%
		% within SMEAN(HTL_LOC)	32.2%	29.7%	16.7%	39.3%	32.8%
		% of Total	9.6%	7.4%	1.5%	14.5%	32.8%
	86% and above	Count	18	16	3	18	53
		% within SMEAN(RES_TEL)	34.0%	30.2%	5.7%	30.2%	100.0%
		% within SMEAN(HTL_LOC)	14.9%	15.8%	8.3%	10.7%	13.0%
		% of Total	4.4%	3.9%	.7%	3.9%	13.0%
Total	Count	121	101	36	150	408	
	% within SMEAN(RES_TEL)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

SMEAN(RES_EMAL) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(RES_EMAL) None	Count		12	6	4	15	37
	% within SMEAN(RES_EMAL)		32.4%	16.2%	10.8%	40.5%	100.0%
	% within SMEAN(HTL_LOC)		9.9%	5.9%	11.1%	10.0%	9.1%
	% of Total		2.9%	1.5%	1.0%	3.7%	8.1%
Less than 5%	Count		20	25	6	24	75
	% within SMEAN(RES_EMAL)		26.7%	33.3%	8.0%	32.0%	100.0%
	% within SMEAN(HTL_LOC)		16.5%	24.8%	16.7%	16.0%	18.4%
	% of Total		4.9%	6.1%	1.5%	5.9%	18.4%
6-15%	Count		28	36	10	35	109
	% within SMEAN(RES_EMAL)		25.7%	33.0%	9.2%	32.1%	100.0%
	% within SMEAN(HTL_LOC)		23.1%	35.6%	27.8%	23.3%	28.7%
	% of Total		6.9%	8.8%	2.5%	8.6%	26.7%
16-25%	Count		36	23	7	34	100
	% within SMEAN(RES_EMAL)		36.0%	23.0%	7.0%	34.0%	100.0%
	% within SMEAN(HTL_LOC)		29.8%	22.8%	19.4%	22.7%	24.5%
	% of Total		8.8%	5.6%	1.7%	8.3%	24.5%
26% or more	Count		25	11	9	42	87
	% within SMEAN(RES_EMAL)		28.7%	12.6%	10.3%	48.3%	100.0%
	% within SMEAN(HTL_LOC)		20.7%	10.9%	25.0%	28.0%	21.3%
	% of Total		6.1%	2.7%	2.2%	10.3%	21.3%
Total	Count		121	101	36	150	408
	% within SMEAN(RES_EMAL)		29.7%	24.8%	8.8%	36.8%	100.0%
	% within SMEAN(HTL_LOC)		100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total		29.7%	24.8%	8.8%	36.8%	100.0%

SMEAN(RES_WEB) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(RES_WEB) None	Count		74	43	14	94	225
	% within SMEAN(RES_WEB)		32.9%	19.1%	6.2%	41.8%	100.0%
	% within SMEAN(HTL_LOC)		61.2%	42.6%	38.9%	62.7%	55.1%
	% of Total		18.1%	10.5%	3.4%	23.0%	55.1%
1-10%	Count		30	44	11	36	121
	% within SMEAN(RES_WEB)		24.8%	36.4%	9.1%	29.8%	100.0%
	% within SMEAN(HTL_LOC)		24.8%	43.6%	30.6%	24.0%	29.7%
	% of Total		7.4%	10.8%	2.7%	8.8%	29.7%
11% or more	Count		17	14	11	20	62
	% within SMEAN(RES_WEB)		27.4%	22.6%	17.7%	32.3%	100.0%
	% within SMEAN(HTL_LOC)		14.0%	13.9%	30.6%	13.3%	15.2%
	% of Total		4.2%	3.4%	2.7%	4.9%	15.2%
Total	Count		121	101	36	150	408
	% within SMEAN(RES_WEB)		29.7%	24.8%	8.8%	36.8%	100.0%
	% within SMEAN(HTL_LOC)		100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total		29.7%	24.8%	8.8%	36.8%	100.0%

SMEAN(RES_INT) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(RES_INT)	None	Count	11	8	3	13	35
		% within SMEAN(RES_INT)	31.4%	22.9%	8.6%	37.1%	100.0%
		% within SMEAN(HTL_LOC)	9.1%	7.9%	8.3%	8.7%	8.6%
		% of Total	2.7%	2.0%	.7%	3.2%	8.6%
	Less than 10%	Count	72	43	9	97	221
		% within SMEAN(RES_INT)	32.6%	19.5%	4.1%	43.9%	100.0%
		% within SMEAN(HTL_LOC)	59.5%	42.6%	25.0%	64.7%	54.2%
		% of Total	17.6%	10.5%	2.2%	23.8%	54.2%
	11-20%	Count	20	28	9	28	85
		% within SMEAN(RES_INT)	23.5%	32.9%	10.6%	32.9%	100.0%
		% within SMEAN(HTL_LOC)	16.5%	27.7%	26.0%	18.7%	20.8%
		% of Total	4.9%	6.9%	2.2%	6.9%	20.8%
	21-30%	Count	8	10	9	6	33
		% within SMEAN(RES_INT)	24.2%	30.3%	27.3%	18.2%	100.0%
		% within SMEAN(HTL_LOC)	6.6%	9.9%	25.0%	4.0%	8.1%
		% of Total	2.0%	2.5%	2.2%	1.5%	8.1%
31% or more	Count	10	12	6	6	34	
	% within SMEAN(RES_INT)	29.4%	35.3%	17.6%	17.6%	100.0%	
	% within SMEAN(HTL_LOC)	8.3%	11.9%	16.7%	4.0%	8.3%	
	% of Total	2.5%	2.9%	1.5%	1.5%	8.3%	
Total	Count	121	101	36	150	408	
	% within SMEAN(RES_INT)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

SMEAN(RES_OTHE) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(RES_OTHE)	None	Count	96	79	31	123	329
		% within SMEAN(RES_OTHE)	29.2%	24.0%	9.4%	37.4%	100.0%
		% within SMEAN(HTL_LOC)	79.3%	78.2%	86.1%	82.0%	80.6%
		% of Total	23.5%	19.4%	7.6%	30.1%	80.6%
	1-5%	Count	12	13	2	15	42
		% within SMEAN(RES_OTHE)	28.6%	31.0%	4.8%	35.7%	100.0%
		% within SMEAN(HTL_LOC)	9.9%	12.9%	5.6%	10.0%	10.3%
		% of Total	2.9%	3.2%	.5%	3.7%	10.3%
	6% or more	Count	13	9	3	12	37
		% within SMEAN(RES_OTHE)	35.1%	24.3%	8.1%	32.4%	100.0%
		% within SMEAN(HTL_LOC)	10.7%	8.9%	8.3%	8.0%	9.1%
		% of Total	3.2%	2.2%	.7%	2.9%	9.1%
Total	Count	121	101	36	150	408	
	% within SMEAN(RES_OTHE)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

7.3 NUMBER OF ROOMS & RESERVATION MODES

SMEAN(RES_TEL) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(RES_TEL)	Less than 45%	Count	22	23	23	41	109
		% within SMEAN(RES_TEL)	20.2%	21.1%	21.1%	37.6%	100.0%
		% within SMEAN(NO_ROOMS)	19.5%	27.4%	20.7%	41.0%	26.7%
		% of Total	5.4%	5.6%	5.6%	10.0%	26.7%
46-65%		Count	34	13	39	26	112
		% within SMEAN(RES_TEL)	30.4%	11.6%	34.8%	23.2%	100.0%
		% within SMEAN(NO_ROOMS)	30.1%	15.5%	35.1%	26.0%	27.5%
		% of Total	8.3%	3.2%	9.6%	6.4%	27.5%
66-85%		Count	37	31	39	27	134
		% within SMEAN(RES_TEL)	27.6%	23.1%	29.1%	20.1%	100.0%
		% within SMEAN(NO_ROOMS)	32.7%	36.9%	35.1%	27.0%	32.8%
		% of Total	9.1%	7.6%	9.6%	6.6%	32.8%
86% and above		Count	20	17	10	6	53
		% within SMEAN(RES_TEL)	37.7%	32.1%	18.9%	11.3%	100.0%
		% within SMEAN(NO_ROOMS)	17.7%	20.2%	9.0%	6.0%	13.0%
		% of Total	4.9%	4.2%	2.5%	1.5%	13.0%
Total		Count	113	84	111	100	408
		% within SMEAN(RES_TEL)	27.7%	20.6%	27.2%	24.5%	100.0%
		% within SMEAN(NO_ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	27.7%	20.6%	27.2%	24.5%	100.0%

SMEAN(RES_EMAL) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(RES_EMAL)	None	Count	13	10	5	9	37
		% within SMEAN(RES_EMAL)	35.1%	27.0%	13.5%	24.3%	100.0%
		% within SMEAN(NO_ROOMS)	11.5%	11.9%	4.5%	9.0%	9.1%
		% of Total	3.2%	2.5%	1.2%	2.2%	9.1%
	Less than 5%	Count	21	17	20	17	75
		% within SMEAN(RES_EMAL)	28.0%	22.7%	26.7%	22.7%	100.0%
		% within SMEAN(NO_ROOMS)	18.6%	20.2%	18.0%	17.0%	18.4%
		% of Total	5.1%	4.2%	4.9%	4.2%	18.4%
	6-15%	Count	24	20	35	30	109
		% within SMEAN(RES_EMAL)	22.0%	18.3%	32.1%	27.5%	100.0%
		% within SMEAN(NO_ROOMS)	21.2%	23.8%	31.5%	30.0%	26.7%
		% of Total	5.9%	4.9%	8.0%	7.4%	26.7%
	16-25%	Count	22	16	33	29	100
		% within SMEAN(RES_EMAL)	22.0%	16.0%	33.0%	29.0%	100.0%
		% within SMEAN(NO_ROOMS)	18.5%	19.0%	29.7%	29.0%	24.5%
		% of Total	5.4%	3.9%	8.1%	7.1%	24.5%
26% or more	Count	33	21	18	15	87	
	% within SMEAN(RES_EMAL)	37.9%	24.1%	20.7%	17.2%	100.0%	
	% within SMEAN(NO_ROOMS)	29.2%	25.0%	16.2%	15.0%	21.3%	
	% of Total	8.1%	5.1%	4.4%	3.7%	21.3%	
Total	Count	113	84	111	100	408	
	% within SMEAN(RES_EMAL)	27.7%	20.6%	27.2%	24.5%	100.0%	
	% within SMEAN(NO_ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.7%	20.6%	27.2%	24.5%	100.0%	

SMEAN(RES_WEB) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(RES_WEB)	None	Count	83	53	56	33	225
		% within SMEAN(RES_WEB)	36.9%	23.6%	24.9%	14.7%	100.0%
		% within SMEAN(NO_ROOMS)	73.5%	63.1%	50.5%	33.0%	55.1%
		% of Total	20.3%	13.0%	13.7%	8.1%	55.1%
	1-10%	Count	20	16	37	48	121
		% within SMEAN(RES_WEB)	16.5%	13.2%	30.6%	39.7%	100.0%
		% within SMEAN(NO_ROOMS)	17.7%	19.0%	33.3%	48.0%	29.7%
		% of Total	4.9%	3.9%	9.1%	11.8%	29.7%
	11% or more	Count	10	15	18	19	62
		% within SMEAN(RES_WEB)	16.1%	24.2%	29.0%	30.6%	100.0%
		% within SMEAN(NO_ROOMS)	8.8%	17.9%	16.2%	19.0%	15.2%
		% of Total	2.5%	3.7%	4.4%	4.7%	15.2%
Total	Count	113	84	111	100	408	
	% within SMEAN(RES_WEB)	27.7%	20.6%	27.2%	24.5%	100.0%	
	% within SMEAN(NO_ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.7%	20.6%	27.2%	24.5%	100.0%	

SMEAN(RES_INT) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(RES_INT) None	Count	15	9	4	7	35	
	% within SMEAN(RES_INT)	42.9%	25.7%	11.4%	20.0%	100.0%	
	% within SMEAN(NO_ ROOMS)	13.3%	10.7%	3.6%	7.0%	8.6%	
	% of Total	3.7%	2.2%	1.0%	1.7%	8.6%	
Less than 10%	Count	73	46	64	38	221	
	% within SMEAN(RES_INT)	33.0%	20.8%	29.0%	17.2%	100.0%	
	% within SMEAN(NO_ ROOMS)	64.6%	54.8%	57.7%	38.0%	54.2%	
	% of Total	17.9%	11.3%	15.7%	9.3%	54.2%	
11-20%	Count	13	20	27	25	85	
	% within SMEAN(RES_INT)	15.3%	23.5%	31.8%	29.4%	100.0%	
	% within SMEAN(NO_ ROOMS)	11.5%	23.8%	24.3%	25.0%	20.8%	
	% of Total	3.2%	4.9%	6.6%	6.1%	20.8%	
21-30%	Count	5	5	9	14	33	
	% within SMEAN(RES_INT)	15.2%	15.2%	27.3%	42.4%	100.0%	
	% within SMEAN(NO_ ROOMS)	4.4%	6.0%	8.1%	14.0%	8.1%	
	% of Total	1.2%	1.2%	2.2%	3.4%	8.1%	
31% or more	Count	7	4	7	16	34	
	% within SMEAN(RES_INT)	20.6%	11.8%	20.6%	47.1%	100.0%	
	% within SMEAN(NO_ ROOMS)	6.2%	4.8%	6.3%	16.0%	8.3%	
	% of Total	1.7%	1.0%	1.7%	3.9%	8.3%	
Total	Count	113	84	111	100	408	
	% within SMEAN(RES_INT)	27.7%	20.6%	27.2%	24.5%	100.0%	
	% within SMEAN(NO_ ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.7%	20.6%	27.2%	24.5%	100.0%	

SMEAN(RES_OTHE) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO_ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(RES_OTHE)	None	Count	87	77	85	80	329
		% within SMEAN(RES_OTHE)	26.4%	23.4%	25.8%	24.3%	100.0%
		% within SMEAN(NO_ROOMS)	77.0%	91.7%	76.6%	80.0%	80.6%
		% of Total	21.3%	18.9%	20.8%	19.6%	80.6%
	1-5%	Count	15	5	14	8	42
		% within SMEAN(RES_OTHE)	35.7%	11.9%	33.3%	19.0%	100.0%
		% within SMEAN(NO_ROOMS)	13.3%	6.0%	12.6%	8.0%	10.3%
		% of Total	3.7%	1.2%	3.4%	2.0%	10.3%
	6% or more	Count	11	2	12	12	37
		% within SMEAN(RES_OTHE)	29.7%	5.4%	32.4%	32.4%	100.0%
		% within SMEAN(NO_ROOMS)	9.7%	2.4%	10.8%	12.0%	9.1%
		% of Total	2.7%	.5%	2.9%	2.9%	9.1%
Total	Count	113	84	111	100	408	
	% within SMEAN(RES_OTHE)	27.7%	20.6%	27.2%	24.5%	100.0%	
	% within SMEAN(NO_ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.7%	20.6%	27.2%	24.5%	100.0%	

APPENDIX 8 CROSS TABULATIONS OF INTERNET TECHNOLOGIES

8.1 AA RATINGS & INTERNET TECHNOLOGIES

SMEAN(ownweb) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(ownweb)	1.0	Count	2	118	236	42	4	402
		% within SMEAN(ownweb)	.5%	29.4%	58.7%	10.4%	1.0%	100.0%
		% within SMEAN(aa)	66.7%	98.3%	98.7%	100.0%	100.0%	98.5%
		% of Total	.5%	28.9%	57.8%	10.3%	1.0%	98.5%
	2.0	Count	1	1	0	0	0	2
		% within SMEAN(ownweb)	50.0%	50.0%	.0%	.0%	.0%	100.0%
		% within SMEAN(aa)	33.3%	.8%	.0%	.0%	.0%	.5%
		% of Total	.2%	.2%	.0%	.0%	.0%	.5%
	3.0	Count	0	1	3	0	0	4
		% within SMEAN(ownweb)	.0%	25.0%	75.0%	.0%	.0%	100.0%
		% within SMEAN(aa)	.0%	.8%	1.3%	.0%	.0%	1.0%
		% of Total	.0%	.2%	.7%	.0%	.0%	1.0%
Total	Count	3	120	239	42	4	408	
	% within SMEAN(ownweb)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

SMEAN(webpay) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(webpay)	1.0	Count	0	13	51	19	3	86
		% within SMEAN(webpay)	.0%	15.1%	59.3%	22.1%	3.5%	100.0%
		% within SMEAN(aa)	.0%	10.8%	21.3%	45.2%	75.0%	21.1%
		% of Total	.0%	3.2%	12.5%	4.7%	.7%	21.1%
	2.0	Count	1	22	62	7	0	92
		% within SMEAN(webpay)	1.1%	23.9%	67.4%	7.6%	.0%	100.0%
		% within SMEAN(aa)	33.3%	18.3%	25.9%	16.7%	.0%	22.5%
		% of Total	.2%	5.4%	15.2%	1.7%	.0%	22.5%
	3.0	Count	2	85	126	16	1	230
		% within SMEAN(webpay)	.9%	37.0%	54.8%	7.0%	.4%	100.0%
		% within SMEAN(aa)	66.7%	70.8%	52.7%	38.1%	25.0%	56.4%
		% of Total	.5%	20.8%	30.9%	3.9%	.2%	56.4%
Total	Count	3	120	239	42	4	408	
	% within SMEAN(webpay)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

SMEAN(webint) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(webint)	1.0	Count	0	67	191	39	4	301
		% within SMEAN(webint)	.0%	22.3%	63.5%	13.0%	1.3%	100.0%
		% within SMEAN(aa)	.0%	55.8%	79.9%	92.9%	100.0%	73.8%
		% of Total	.0%	16.4%	46.8%	9.6%	1.0%	73.8%
	2.0	Count	1	5	13	0	0	19
		% within SMEAN(webint)	5.3%	26.3%	68.4%	.0%	.0%	100.0%
		% within SMEAN(aa)	33.3%	4.2%	5.4%	.0%	.0%	4.7%
	3.0	Count	2	48	35	3	0	88
		% within SMEAN(webint)	2.3%	54.5%	39.8%	3.4%	.0%	100.0%
% within SMEAN(aa)		66.7%	40.0%	14.6%	7.1%	.0%	21.6%	
Total	Count	3	120	239	42	4	408	
	% within SMEAN(webint)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

SMEAN(emailcom) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(emailcom)	1.0	Count	2	113	219	39	4	377
		% within SMEAN(emailcom)	.5%	30.0%	58.1%	10.3%	1.1%	100.0%
		% within SMEAN(aa)	66.7%	94.2%	91.6%	92.9%	100.0%	92.4%
		% of Total	.5%	27.7%	53.7%	9.6%	1.0%	92.4%
	2.0	Count	1	4	14	2	0	21
		% within SMEAN(emailcom)	4.8%	19.0%	66.7%	9.5%	.0%	100.0%
		% within SMEAN(aa)	33.3%	3.3%	5.9%	4.8%	.0%	5.1%
		% of Total	.2%	1.0%	3.4%	.5%	.0%	5.1%
	3.0	Count	0	3	6	1	0	10
		% within SMEAN(emailcom)	.0%	30.0%	60.0%	10.0%	.0%	100.0%
		% within SMEAN(aa)	.0%	2.5%	2.5%	2.4%	.0%	2.5%
		% of Total	.0%	.7%	1.5%	.2%	.0%	2.5%
Total	Count	3	120	239	42	4	408	
	% within SMEAN(emailcom)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

SMEAN(webbook) * SMEAN(aa) Crosstabulation

			SMEAN(aa)					Total
			1	2	3	4	5	
SMEAN(webbook)	1.0	Count	0	40	123	32	3	198
		% within SMEAN(webbook)	.0%	20.2%	62.1%	16.2%	1.5%	100.0%
		% within SMEAN(aa)	.0%	33.3%	51.5%	76.2%	75.0%	48.5%
		% of Total	.0%	9.8%	30.1%	7.8%	.7%	48.5%
	2.0	Count	1	24	64	8	0	97
		% within SMEAN(webbook)	1.0%	24.7%	66.0%	8.2%	.0%	100.0%
		% within SMEAN(aa)	33.3%	20.0%	26.8%	19.0%	.0%	23.8%
		% of Total	.2%	5.9%	15.7%	2.0%	.0%	23.8%
	3.0	Count	2	56	52	2	1	113
		% within SMEAN(webbook)	1.8%	49.6%	46.0%	1.8%	.9%	100.0%
		% within SMEAN(aa)	66.7%	46.7%	21.8%	4.8%	25.0%	27.7%
		% of Total	.5%	13.7%	12.7%	.5%	.2%	27.7%
Total	Count	3	120	239	42	4	408	
	% within SMEAN(webbook)	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	
	% within SMEAN(aa)	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	.7%	29.4%	58.6%	10.3%	1.0%	100.0%	

8.2 HOTEL LOCATION & INTERNET TECHNOLOGIES

SMEAN(ownweb) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(ownweb)	1.0	Count	120	101	36	145	402
		% within SMEAN(ownweb)	29.9%	25.1%	9.0%	36.1%	100.0%
		% within SMEAN(HTL_LOC)	99.2%	100.0%	100.0%	96.7%	98.5%
		% of Total	29.4%	24.8%	8.8%	35.5%	98.5%
	2.0	Count	1	0	0	1	2
		% within SMEAN(ownweb)	50.0%	.0%	.0%	50.0%	100.0%
		% within SMEAN(HTL_LOC)	.8%	.0%	.0%	.7%	.5%
		% of Total	.2%	.0%	.0%	.2%	.5%
	3.0	Count	0	0	0	4	4
		% within SMEAN(ownweb)	.0%	.0%	.0%	100.0%	100.0%
		% within SMEAN(HTL_LOC)	.0%	.0%	.0%	2.7%	1.0%
		% of Total	.0%	.0%	.0%	1.0%	1.0%
Total	Count	121	101	36	150	408	
	% within SMEAN(ownweb)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

SMEAN(webpay) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(webpay)	1.0	Count	25	24	15	22	86
		% within SMEAN(webpay)	29.1%	27.9%	17.4%	25.6%	100.0%
		% within SMEAN(HTL_LOC)	20.7%	23.8%	41.7%	14.7%	21.1%
		% of Total	6.1%	5.9%	3.7%	5.4%	21.1%
	2.0	Count	27	21	7	37	92
		% within SMEAN(webpay)	29.3%	22.8%	7.6%	40.2%	100.0%
		% within SMEAN(HTL_LOC)	22.3%	20.8%	19.4%	24.7%	22.5%
		% of Total	6.6%	5.1%	1.7%	9.1%	22.5%
	3.0	Count	69	56	14	91	230
		% within SMEAN(webpay)	30.0%	24.3%	6.1%	39.6%	100.0%
		% within SMEAN(HTL_LOC)	57.0%	55.4%	38.9%	60.7%	56.4%
		% of Total	16.9%	13.7%	3.4%	22.3%	56.4%
Total	Count	121	101	36	150	408	
	% within SMEAN(webpay)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

SMEAN(webint) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(webint)	1.0	Count	79	79	34	109	301
		% within SMEAN(webint)	26.2%	26.2%	11.3%	36.2%	100.0%
		% within SMEAN(HTL_LOC)	65.3%	78.2%	94.4%	72.7%	73.8%
		% of Total	19.4%	19.4%	8.3%	26.7%	73.8%
	2.0	Count	5	7	0	7	19
		% within SMEAN(webint)	26.3%	36.8%	.0%	36.8%	100.0%
		% within SMEAN(HTL_LOC)	4.1%	6.9%	.0%	4.7%	4.7%
		% of Total	1.2%	1.7%	.0%	1.7%	4.7%
	3.0	Count	37	15	2	34	88
		% within SMEAN(webint)	42.0%	17.0%	2.3%	38.6%	100.0%
		% within SMEAN(HTL_LOC)	30.6%	14.9%	5.6%	22.7%	21.6%
		% of Total	9.1%	3.7%	.5%	8.3%	21.6%
Total	Count	121	101	36	150	408	
	% within SMEAN(webint)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

SMEAN(emailcom) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(emailcom)	1.0	Count	113	95	36	133	377
		% within SMEAN(emailcom)	30.0%	25.2%	9.5%	35.3%	100.0%
		% within SMEAN(HTL_LOC)	93.4%	94.1%	100.0%	88.7%	92.4%
		% of Total	27.7%	23.3%	8.8%	32.6%	92.4%
	2.0	Count	6	4	0	11	21
		% within SMEAN(emailcom)	28.6%	19.0%	.0%	52.4%	100.0%
		% within SMEAN(HTL_LOC)	5.0%	4.0%	.0%	7.3%	5.1%
		% of Total	1.5%	1.0%	.0%	2.7%	5.1%
	3.0	Count	2	2	0	6	10
		% within SMEAN(emailcom)	20.0%	20.0%	.0%	60.0%	100.0%
		% within SMEAN(HTL_LOC)	1.7%	2.0%	.0%	4.0%	2.5%
		% of Total	.5%	.5%	.0%	1.5%	2.5%
Total	Count	121	101	36	150	408	
	% within SMEAN(emailcom)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

SMEAN(webbook) * SMEAN(HTL_LOC) Crosstabulation

			SMEAN(HTL_LOC)				Total
			Coastal	Suburban/ town	City	Country	
SMEAN(webbook)	1.0	Count	49	58	25	66	198
		% within SMEAN(webbook)	24.7%	29.3%	12.6%	33.3%	100.0%
		% within SMEAN(HTL_LOC)	40.5%	57.4%	69.4%	44.0%	48.5%
		% of Total	12.0%	14.2%	6.1%	16.2%	48.5%
	2.0	Count	31	22	5	39	97
		% within SMEAN(webbook)	32.0%	22.7%	5.2%	40.2%	100.0%
		% within SMEAN(HTL_LOC)	25.6%	21.8%	13.9%	26.0%	23.8%
		% of Total	7.6%	5.4%	1.2%	9.6%	23.8%
	3.0	Count	41	21	6	45	113
		% within SMEAN(webbook)	36.3%	18.6%	5.3%	39.8%	100.0%
		% within SMEAN(HTL_LOC)	33.9%	20.8%	16.7%	30.0%	27.7%
		% of Total	10.0%	5.1%	1.5%	11.0%	27.7%
Total	Count	121	101	36	150	408	
	% within SMEAN(webbook)	29.7%	24.8%	8.8%	36.8%	100.0%	
	% within SMEAN(HTL_LOC)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	29.7%	24.8%	8.8%	36.8%	100.0%	

8.3 NUMBER OF ROO

SMEAN

SMEAN(RES_TEL)	Less than 45%	Cour % w/ SME % w/ ROO % of
	46-55%	Cour % w/ SME % w/ ROO % of
	66-85%	Cour % w/ SME % w/ ROO % of
	86% and above	Cour % w/ SME % w/ ROO % of
Total		Cour % w/ SME % w/ ROO % of

SMEAN(

SMEAN(ownweb)	1.0	Count % within SMEAN(own % within SM ROOMS) % of Total
	2.0	Count % within SMEAN(own % within SM ROOMS) % of Total
	3.0	Count % within SMEAN(own % within SM ROOMS) % of Total
Total		Count % within SMEAN(own % within SM ROOMS) % of Total

SMEAN(webpay) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(webpay)	1.0	Count	10	12	26	38	85
		% within SMEAN(webpay)	11.6%	14.0%	30.2%	44.2%	100.0%
		% within SMEAN(NO_ROOMS)	8.8%	14.3%	23.4%	38.0%	21.1%
		% of Total	2.5%	2.9%	6.4%	9.3%	21.1%
	2.0	Count	24	22	26	20	92
		% within SMEAN(webpay)	26.1%	23.9%	28.3%	21.7%	100.0%
		% within SMEAN(NO_ROOMS)	21.2%	26.2%	23.4%	20.0%	22.5%
		% of Total	5.9%	5.4%	6.4%	4.8%	22.5%
	3.0	Count	79	50	59	42	230
		% within SMEAN(webpay)	34.3%	21.7%	25.7%	18.3%	100.0%
		% within SMEAN(NO_ROOMS)	69.9%	59.5%	53.2%	42.0%	56.4%
		% of Total	19.4%	12.3%	14.5%	10.3%	56.4%
Total	Count	113	84	111	100	408	
	% within SMEAN(webpay)	27.7%	20.6%	27.2%	24.5%	100.0%	
	% within SMEAN(NO_ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.7%	20.6%	27.2%	24.5%	100.0%	

SMEAN(webint) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(webint)	1.0	Count	62	64	84	91	301
		% within SMEAN(webint)	20.6%	21.3%	27.9%	30.2%	100.0%
		% within SMEAN(NO_ROOMS)	54.9%	76.2%	75.7%	91.0%	73.8%
		% of Total	15.2%	15.7%	20.6%	22.3%	73.8%
	2.0	Count	8	1	9	1	19
		% within SMEAN(webint)	42.1%	5.3%	47.4%	5.3%	100.0%
		% within SMEAN(NO_ROOMS)	7.1%	1.2%	8.1%	1.0%	4.7%
		% of Total	2.0%	.2%	2.2%	.2%	4.7%
	3.0	Count	43	19	18	8	88
		% within SMEAN(webint)	48.9%	21.6%	20.5%	9.1%	100.0%
		% within SMEAN(NO_ROOMS)	38.1%	22.6%	16.2%	8.0%	21.5%
		% of Total	10.5%	4.7%	4.4%	2.0%	21.6%
Total	Count	113	84	111	100	408	
	% within SMEAN(webint)	27.7%	20.6%	27.2%	24.5%	100.0%	
	% within SMEAN(NO_ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.7%	20.6%	27.2%	24.5%	100.0%	

SMEAN(emailcom) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(emailcom)	1.0	Count	102	78	104	83	377
		% within SMEAN(emailcom)	27.1%	20.7%	27.6%	24.7%	100.0%
		% within SMEAN(NO_ROOMS)	90.3%	92.9%	93.7%	93.0%	92.4%
		% of Total	25.0%	19.1%	25.5%	22.8%	92.4%
	2.0	Count	7	4	5	5	21
		% within SMEAN(emailcom)	33.3%	19.0%	23.8%	23.8%	100.0%
		% within SMEAN(NO_ROOMS)	6.2%	4.8%	4.5%	5.0%	5.1%
		% of Total	1.7%	1.0%	1.2%	1.2%	5.1%
	3.0	Count	4	2	2	2	10
		% within SMEAN(emailcom)	40.0%	20.0%	20.0%	20.0%	100.0%
		% within SMEAN(NO_ROOMS)	3.5%	2.4%	1.8%	2.0%	2.5%
		% of Total	1.0%	.5%	.5%	.5%	2.5%
Total	Count	113	84	111	100	408	
	% within SMEAN(emailcom)	27.7%	20.6%	27.2%	24.5%	100.0%	
	% within SMEAN(NO_ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.7%	20.6%	27.2%	24.5%	100.0%	

SMEAN(webbook) * SMEAN(NO_ROOMS) Crosstabulation

			SMEAN(NO ROOMS)				Total
			16 rooms or less	17-26 rooms	27-46 rooms	47 rooms and above	
SMEAN(webbook)	1.0	Count	43	34	54	67	198
		% within SMEAN(webbook)	21.7%	17.2%	27.3%	33.8%	100.0%
		% within SMEAN(NO_ROOMS)	38.1%	40.5%	48.6%	67.0%	48.5%
		% of Total	10.5%	8.3%	13.2%	16.4%	48.5%
	2.0	Count	22	22	32	21	97
		% within SMEAN(webbook)	22.7%	22.7%	33.0%	21.6%	100.0%
		% within SMEAN(NO_ROOMS)	19.5%	26.2%	28.8%	21.0%	23.8%
		% of Total	5.4%	5.4%	7.8%	5.1%	23.8%
	3.0	Count	48	28	25	12	113
		% within SMEAN(webbook)	42.5%	24.8%	22.1%	10.6%	100.0%
		% within SMEAN(NO_ROOMS)	42.5%	33.3%	22.5%	12.0%	27.7%
		% of Total	11.8%	6.9%	6.1%	2.9%	27.7%
Total	Count	113	84	111	100	408	
	% within SMEAN(webbook)	27.7%	20.6%	27.2%	24.5%	100.0%	
	% within SMEAN(NO_ROOMS)	100.0%	100.0%	100.0%	100.0%	100.0%	
	% of Total	27.7%	20.6%	27.2%	24.5%	100.0%	

APPENDIX 9 Factor analysis & Reliability tests– Endogenous factors

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
SMEAN(P15ITCHG)	4.36	.914	408
SMEAN(P16ITCHG)	4.14	.953	408
SMEAN(P17ITCHG)	3.17	1.114	408
SMEAN(P18ITUSE)	4.03	1.099	408
SMEAN(P19ITUSE)	3.48	1.206	408
SMEAN(P20ITUSE)	3.67	1.274	408
SMEAN(P21ITUSE)	3.31	1.230	408
SMEAN(P22ITUSE)	3.28	1.397	408
SMEAN(P24USEFU)	4.09	1.011	408
SMEAN(P26EOU)	2.58	1.207	408
SMEAN(P27EOU)	2.76	1.271	408
SMEAN(P28ATTIT)	3.40	1.119	408
SMEAN(P29ATTIT)	3.63	1.024	408
SMEAN(P30ATTIT)	3.63	1.099	408
SMEAN(P31ATTIT)	4.28	.908	408
SMEAN(P32ATTIT)	4.28	.938	408
SMEAN(P33ATTIT)	4.15	.917	408
SMEAN(P34ITEXP)	2.77	1.155	408
SMEAN(P35ITEXP)	2.91	1.221	408
SMEAN(P36ITEXP)	2.02	1.036	408

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.870
Bartlett's Test of Sphericity	Approx. Chi-Square	4938.559
	df	190
	Sig.	.000

Pattern Matrix(a)

	Component			
	1	2	3	4
SMEAN(P15ITCHG)	.554			
SMEAN(P16ITCHG)				.449
SMEAN(P17ITCHG)				.675
SMEAN(P18ITUSE)				.459
SMEAN(P19ITUSE)				.789
SMEAN(P20ITUSE)				.708
SMEAN(P21ITUSE)				.606
SMEAN(P22ITUSE)				.548
SMEAN(P24USEFU)	.556			
SMEAN(P26EOU)		.609		
SMEAN(P27EOU)		.664		
SMEAN(P28ATTIT)			-.912	
SMEAN(P29ATTIT)			-.817	
SMEAN(P30ATTIT)			-.893	
SMEAN(P31ATTIT)	.850			
SMEAN(P32ATTIT)	.873			
SMEAN(P33ATTIT)	.815			
SMEAN(P34ITEXP)		.818		
SMEAN(P35ITEXP)		.846		
SMEAN(P36ITEXP)	-.693			

Extraction Method: Principal Component Analysis.
 Rotation Method: Oblimin with Kaiser Normalization.
 a. Rotation converged in 10 iterations.

Component Score Covariance Matrix

Component	1	2	3	4
1	.976	-.281	1.543	.395
2	-.281	1.035	-.677	-.086
3	1.543	-.677	2.936	.072
4	.395	-.086	.072	.979

Extraction Method: Principal Component Analysis.
 Rotation Method: Oblimin with Kaiser Normalization.

Reliability test - Factor 1

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.901	.906	6

Item Statistics

	Mean	Std. Deviation	N
SMEAN(P15ITCHG)	4.36	.914	408
SMEAN(P24USEFU)	4.09	1.011	408
SMEAN(P31ATTIT)	4.28	.908	408
SMEAN(P32ATTIT)	4.28	.938	408
SMEAN(P33ATTIT)	4.15	.917	408
SMEAN(P36ITEXP)	2.02	1.036	408

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.863	2.022	4.358	2.336	2.155	.823	6

Reliability test- Factor 2

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.736	.737	4

Inter-Item Correlation Matrix

	SMEAN(P34IT EXP)	SMEAN(P35IT EXP)	SMEAN(P27E OU)	SMEAN(P26E OU)
SMEAN(P34ITEXP)	1.000	.647	.264	.341
SMEAN(P35ITEXP)	.647	1.000	.431	.237
SMEAN(P27E OU)	.264	.431	1.000	.550
SMEAN(P26E OU)	.341	.237	.550	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	2.757	2.583	2.912	.328	1.127	.018	4

Reliability tests- Factor 3

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.928	.928	3

Inter-Item Correlation Matrix

	SMEAN(P28ATTIT)	SMEAN(P29ATTIT)	SMEAN(P30ATTIT)
SMEAN(P28ATTIT)	1.000	.814	.842
SMEAN(P29ATTIT)	.814	1.000	.780
SMEAN(P30ATTIT)	.842	.780	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.552	3.397	3.632	.235	1.069	.018	3

Reliability tests- Factor 4

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.814	.819	7

Inter-Item Correlation Matrix

	SMEAN(P16TCHG)	SMEAN(P17TCHG)	SMEAN(P18TUSE)	SMEAN(P19TUSE)	SMEAN(P20TUSE)	SMEAN(P21TUSE)	SMEAN(P22TUSE)
SMEAN(P16TCHG)	1.000	.516	.443	.338	.359	.367	.328
SMEAN(P17TCHG)	.516	1.000	.324	.379	.381	.408	.298
SMEAN(P18TUSE)	.443	.324	1.000	.427	.554	.403	.338
SMEAN(P19TUSE)	.338	.379	.427	1.000	.471	.413	.356
SMEAN(P20TUSE)	.359	.381	.554	.471	1.000	.433	.366
SMEAN(P21TUSE)	.367	.408	.403	.413	.433	1.000	.348
SMEAN(P22TUSE)	.328	.298	.338	.356	.366	.348	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.584	3.169	4.142	.973	1.307	.145	7

APPENDIX 10 Factor analysis & Reliability tests- Exogenous antecedents

Descriptive Statistics

	Mean	Std. Deviation	Analysis N
SMEAN(eo37comp)	3.896	1.1663	408
SMEAN(eo38comp)	3.965	1.1341	408
SMEAN(eo39cust)	3.104	1.2634	408
SMEAN(eo40cust)	2.953	1.2697	408
SMEAN(eo41turb)	4.032	.9796	408
SMEAN(eo42turb)	3.883	.9907	408
SMEAN(eo43turb)	3.616	.9982	408
SMEAN(eo44turb)	3.700	.9440	408
SMEAN(eo45turb)	3.924	.9710	408
SMEAN(eo46entr)	3.515	.9378	408
SMEAN(eo48entr)	3.078	1.0730	408
SMEAN(eo49entr)	2.995	1.0950	408

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.816
Bartlett's Test of Sphericity	Approx. Chi-Square	1949.509
	df	66
	Sig.	.000

Pattern Matrix(a)

	Component		
	1	2	3
SMEAN(eo37comp)			-.787
SMEAN(eo38comp)			-.753
SMEAN(eo39cust)			-.838
SMEAN(eo40cust)			-.576
SMEAN(eo41turb)	.654		
SMEAN(eo42turb)	.632		
SMEAN(eo43turb)	.750		
SMEAN(eo44turb)	.803		
SMEAN(eo45turb)	.745		
SMEAN(eo46entr)	.601		
SMEAN(eo48entr)		.887	
SMEAN(eo49entr)		.892	

Extraction Method: Principal Component Analysis.
 Rotation Method: Oblimin with Kaiser Normalization.
 a. Rotation converged in 6 iterations.

Reliability tests- Factor 5

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.758	.760	4

Inter-Item Correlation Matrix

	SMEAN(eo37comp)	SMEAN(eo38comp)	SMEAN(eo39cust)	SMEAN(eo40cust)
SMEAN(eo37comp)	1.000	.635	.439	.342
SMEAN(eo38comp)	.635	1.000	.534	.168
SMEAN(eo39cust)	.439	.534	1.000	.531
SMEAN(eo40cust)	.342	.168	.531	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.479	2.953	3.965	1.013	1.343	.276	4

Reliability tests- Factor 6

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.833	.834	6

Inter-Item Correlation Matrix

	SMEAN(eo41turb)	SMEAN(eo42turb)	SMEAN(eo43turb)	SMEAN(eo44turb)	SMEAN(eo45turb)	SMEAN(eo46entr)
SMEAN(eo41turb)	1.000	.577	.342	.499	.514	.406
SMEAN(eo42turb)	.577	1.000	.286	.454	.482	.353
SMEAN(eo43turb)	.342	.286	1.000	.400	.371	.314
SMEAN(eo44turb)	.499	.454	.400	1.000	.708	.539
SMEAN(eo45turb)	.514	.482	.371	.708	1.000	.592
SMEAN(eo46entr)	.406	.353	.314	.539	.592	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.779	3.515	4.032	.517	1.147	.040	6

Reliability tests- Factor 7

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.811	.811	2

Inter-Item Correlation Matrix

	SMEAN(eo49entr)	SMEAN(eo48entr)
SMEAN(eo49entr)	1.000	.682
SMEAN(eo48entr)	.682	1.000

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3.036	2.995	3.078	.082	1.028	.003	2

APPENDIX 11 Regression: Perceived business performance of profitability

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.427(a)	.182	.163	.7278	.182	9.836	9	398	.000	1.976

a Predictors: (Constant), M-Entrepreneurship, SMEAN(AGE), M-Perceived ease of use & affordability, SMEAN(NO_ROOMS), M-Competitive Marketing Intensity, M-Attitude, M-Customers' pressure, M-Perceived usefulness, M-Effectiveness as a marketing tool

b Dependent Variable: SMEAN(BP_PFT)

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	1.901	.318		5.981	.000	1.276	2.526					
	SMEAN(AGE)	-.007	.003	-.095	2.048	.041	-.014	.000	-.109	-.102	-.093	.947	1.056
	SMEAN(NO_ROOMS)	.000	.001	-.016	-.336	.737	-.002	.001	.039	-.017	.015	.940	1.064
	M-Effectiveness as a marketing tool	.237	.070	.231	3.406	.001	.100	.373	.361	.168	.154	.445	2.247
	M-Perceived ease of use & affordability	.026	.042	.030	.636	.525	-.055	.108	.037	.032	.029	.919	1.088
	M-Attitude	.023	.045	.030	.522	.602	-.065	.111	.254	.026	.024	.635	1.575
	M-Perceived usefulness	-.026	.065	-.027	-.405	.685	-.154	.101	.282	-.020	.018	.455	2.198
	M-Customers' pressure	.041	.052	.047	.793	.428	-.061	.142	.274	.040	.036	.578	1.731
	M-Competitive Marketing Intensity	.079	.066	.070	1.196	.233	-.051	.208	.268	.060	.054	.601	1.664
	M-Entrepreneurship	.152	.041	.189	3.697	.000	.071	.233	.295	.182	.168	.783	1.278

a Dependent Variable: SMEAN(BP_PFT)

APPENDIX 12 Regression: Perceived business performance of customer retention

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.433(a)	.187	.169	.6580	.187	10.191	9	398	.000	2.105

a Predictors: (Constant), M-Entrepreneurship, SMEAN(AGE), M-Perceived ease of use & affordability, SMEAN(NO_ROOMS), M-Competitive Marketing Intensity, M-Attitude, M-Customers' pressure, M-Perceived usefulness, M-Effectiveness as a marketing tool

b Dependent Variable: SMEAN(BP_CUST)

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics		
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	2.278	.287		7.928	.000	1.713	2.843						
	SMEAN(AGE)	-.006	.003	-.089	1.911	.057	-.012	.000	-.107	-.095	-.086	.947	1.056	
	SMEAN(NO_ROOMS)	.000	.001	-.007	-.150	.881	-.001	.001	.042	-.008	.007	.940	1.064	
	M-Effectiveness as a marketing tool	.057	.063	.062	.912	.363	-.066	.181	.293	.046	.041	.445	2.247	
	M-Perceived ease of use & affordability	-.018	.038	-.023	-.482	.630	-.092	.056	-.045	-.024	.022	.919	1.088	
	M-Attitude	.085	.041	.119	2.090	.037	.005	.164	.301	.104	.094	.635	1.575	
	M-Perceived usefulness	.025	.059	.028	.418	.676	-.091	.140	.297	.021	.019	.455	2.198	
	M-Customers' pressure	.134	.047	.170	2.865	.004	.042	.226	.330	.142	.129	.578	1.731	
	M-Competitive Marketing Intensity	-.024	.059	-.023	-.398	.691	-.140	.093	.220	-.020	.018	.601	1.664	
	M-Entrepreneurship	.146	.037	.200	3.918	.000	.073	.219	.319	.193	.177	.783	1.278	

a Dependent Variable: SMEAN(BP_CUST)

APPENDIX 13 Regression: Perceived business performance of number of inquiries

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.533(a)	.284	.268	.7019	.284	17.580	9	398	.000	1.928

a Predictors: (Constant), M-Entrepreneurship, SMEAN(AGE), M-Perceived ease of use & affordability, SMEAN(NO_ROOMS), M-Competitive Marketing Intensity, M-Attitude, M-Customers' pressure, M-Perceived usefulness, M-Effectiveness as a marketing tool
 b Dependent Variable: SMEAN(BP_INQUI)

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.025	.306		6.607	.000	1.423	2.628					
	SMEAN(AGE)	-.007	.003	-.099	2.273	.024	-.014	-.001	-.137	-.113	.096	.947	1.056
	SMEAN(NO_ROOMS)	.000	.001	.021	.472	.637	-.001	.002	.054	.024	.020	.940	1.064
	M-Effectiveness as a marketing tool	.236	.067	.223	3.514	.000	.104	.367	.460	.173	.149	.445	2.247
	M-Perceived ease of use & affordability	.013	.040	.014	.324	.746	-.066	.092	.015	.016	.014	.919	1.088
	M-Attitude	.129	.043	.158	2.976	.003	.044	.214	.392	.148	.126	.635	1.575
	M-Perceived usefulness	-2.71E-005	.062	.000	.000	1.000	-.123	.123	.381	.000	.000	.455	2.198
	M-Customers' pressure	.155	.050	.173	3.106	.002	.057	.253	.416	.154	.132	.578	1.731
	M-Competitive Marketing Intensity	.087	.063	.075	1.370	.171	-.038	.211	.349	.069	.058	.601	1.664
	M-Entrepreneurship	.023	.040	.028	.581	.562	-.055	.101	.234	.029	.025	.783	1.278

a Dependent Variable: SMEAN(BP_INQUI)

APPENDIX 14 Regression: Perceived business performance of occupancy levels

Model Summary(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.446(a)	.199	.181	.7242	.199	10.986	9	398	.000	1.898

a Predictors: (Constant), M-Entrepreneurship, SMEAN(AGE), M-Perceived ease of use & affordability, SMEAN(NO_ROOMS), M-Competitive Marketing Intensity, M-Attitude, M-Customers' pressure, M-Perceived usefulness, M-Effectiveness as a marketing tool
 b Dependent Variable: SMEAN(BP_OCCUP)

Coefficients(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2.036	.316		6.439	.000	1.414	2.658					
	SMEAN(AGE)	-.005	.003	-.069	1.491	.137	-.012	.002	-.093	-.075	-.067	.947	1.056
	SMEAN(NO_ROOMS)	-1.65E-005	.001	-.001	-.022	.982	-.001	.001	.035	-.001	.001	.940	1.064
	M-Effectiveness as a marketing tool	.147	.069	.143	2.132	.034	.011	.283	.367	.106	.096	.445	2.247
	M-Perceived ease of use & affordability	-.019	.041	-.021	-.451	.652	-.100	.063	-.033	-.023	.020	.919	1.088
	M-Attitude	.096	.045	.121	2.155	.032	.008	.184	.328	.107	.097	.635	1.575
	M-Perceived usefulness	.026	.064	.027	.406	.685	-.101	.153	.335	.020	.018	.455	2.198
	M-Customers' pressure	.120	.051	.138	2.340	.020	.019	.221	.351	.116	.105	.578	1.731
	M-Competitive Marketing Intensity	.071	.065	.063	1.082	.280	-.058	.199	.299	.054	.049	.601	1.664
	M-Entrepreneurship	.074	.041	.092	1.808	.071	-.006	.154	.255	.090	.081	.783	1.278

a Dependent Variable: SMEAN(BP_OCCUP)

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