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The Effect of ICTs on Small Hospitality and Tourism Businesses in North Lebanon

MBA Final Project

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Abstract

The purpose of this paper is to explore the role of information communication technology (ICT) in small rural hospitality businesses. Although ICT is often presented as a means of reducing the impact of being rural, little is known about the extent or level of use of ICT. This paper addresses these issues.

The paper employs both quantitative and qualitative methods to gather and analyze data. The study had two stages: an initial survey to determine the extent and pervasion of ICT; and a second interview stage to explore the role and applications of ICT.

The majority of businesses use ICT effectively, mainly to provide information and improve service quality. In addition, some firms had adopted very successful methods of using the internet for sales and marketing but ignored supply functions. ICT is seen as a way of enhancing personal service. Rather than a barrier, it is seen to promote quality of service. Moreover the respondents did seem to have used ICT effectively to overcome the disadvantages of location and rurality.

The survey was carried out in a single rural environment and this limits its generalizability. Nonetheless, the study develops some interesting issues about the application of ICT in the rural context.

The paper identifies the benefits derived from the enthusiasm of some rural business owners. They had recognized the efficacy of computing and can provide lessons in how to apply ICT to overcome distance.

Introduction

The development of ICT in recent years is sometimes called the new Industrial Revolution, and the speed of its development is extremely high. ICT also spreads widely and influences deeply not only economic activities of businesses, households and governments but also various areas of people's daily life. For this reason, the preparation of official statistics related to ICT has been an urgent matter for national statistical offices of many countries and the needs of ICT statistics extends over various fields, as well.

A crucial area for all businesses is profit. Profit optimization comes from the ability to stimulate revenue and/or reduce costs. Though much is written about calculating return on investment (ROI) for ICTs and on forecasts of future ICTs, there is little written about the forecasts for ICTs profit opportunities within the hospitality sector. This paper investigates a panel of experts' perceptions of ICT impacts in terms of the potential for restaurants and hotels to maximize the contribution achieved. An investigation was conducted with 25 industry "experts" primarily to reveal their key predictions on ICTs. The selected results, presented here, of this study focus on both key internal and external profit opportunities and reveal that experts have consensus on the contribution of external (B2B relationships) and internal ICTs (electronic booking) to future profits. By acquiring knowledge, positioning themselves and availing themselves of revenue optimization opportunities hotels and restaurants should be able to take advantage of future profit optimization opportunities.

Increasing competition leads organizations to search for more effective business strategies. Many of these have turned to information and communication technologies (ICT) as a way to cope with turbulent environments. Indeed, over the last decade, ICT investments in tourism and hospitality have been greatly increasing (Cline and Warner, 1999; Sigala et al., 2000; Siguaw et al., 2000). However, studies investigating the ICT productivity impact have always led to contradictory and/or questionable results regarding the ICT benefits. Robert Solow, a Nobel winning economist, is supposed to have said that "PCs are showing up all over the place, except in productivity statistics" (Lucas, 1993, p. 8), while Brynjolfsson (1993) first referred to the "IT

productivity paradox" to highlight that the benefits of ICT spending have not shown up in aggregate output statistics. Nevertheless, as several methodological shortcomings are identified in past studies (Brynjolfsson, 1993; Shafer and Byrd, 2000), new ICT evaluation methodologies and an investigation into the ICT productivity impact are warranted.

The wide diffusion of disintermediating Internet technologies poses a threat to the role of tourism intermediaries. Service Oriented Architecture and Web Services look to be one of the few practical ways to develop operational systems able to provide customers effective tools to satisfy their needs and to ease the travel intermediary chores in a highly dynamic market environment.

ICTs are embedded in business (Carr, 2003) and companies generally view IT as a key resource and critical in providing competitive advantage and positioning in the market place (Pisello, 2003; Strassman, 2002; Piccolo, 2004). In some sectors, 50% of capital expenditure goes towards information technology (Carr, 2003). Though the hospitality industry may spend less than the other sectors, spending on technology is still a significant factor (Piccolo, 2004). Other authors suggest that too much is spent on ICTs (McAfee, 2004; Carr, 2003) and advocate spending less on technology and "that greater expenditure rarely translates into superior financial results, in fact the opposite is true" (Carr, 2003, p 12). Pisello's (2003) research of 10,000 public companies worldwide compares IT spending with benefits and concurs with Piccolo(2004) that investment in ICT alone does not deliver return on investments (ROI), moreover, that many companies measure ROI incorrectly, inadequately or worse. "Over the past ten years, the analysis of IT spending has consistently shown that it is not how much you spend on IT, but what you buy and how the IT is managed" (Pisello, 2003, p 1) Other authors (Brown & Stange, 2002) focus on the fear, risk and vulnerability involved in technology choices. The development and delivery of technology evolves rapidly (Moore's Law) and there are constant upgrades in technology products in the market e.g. software leased as opposed to bought, server space rented not owned and the growth of web services etc. Piccolo (2004) confirms that for the hospitality sector, not *all ICTs are equal* and makes a clear distinction between Information Technology (IT) and Information Systems (IS). The challenges for the hospitality industry is to identify which technologies can reduce costs and/or improve revenues within their processes and

systems, thus contribute to profit opportunities. As technology becomes more critical in terms of effective expenditure, best selection of ICTs requires some considered evaluation. Industry comparisons are deemed useful for evaluating technology spend and "can provide vital information... and serve as an on-going report card" (Pisello, 2003, p21).

Information and communication technologies (ICTs) and the online booking of travel and tourism products have had an enormous diffusion in the last years. All suppliers, in a highly competitive environment, have attempted to provide users with applications aimed at satisfying their needs and wishes. However, the problems induced by legacy infrastructure limitations have produced a very fragmented and diverse set of possibilities. This fragmentation results in inefficiencies for both the user and the organization proposing its services. The user is burdened with the problems in coordinating diverse resources, the organizations, mainly if they act as intermediaries, are affected by the difficulties in assembling several different service offerings (Bogdanovych et al., 2006; Sharda et al., 2006).

Even the quest for possible standardizations suffers from this situation. For example, the EU funded Harmonize project (www.harmo-ten.org), in pursuing the objective of creating a network to support data interoperability within the tourism industry, had identified and analyzed several dozen data models and standards (Missikoff et al., 2003). Different modeling approaches, languages, and levels were being employed and a very high degree of semantic overlap and conflict characterize some of the major standards and project outputs even if there is a fair amount of consistency between them.

During its initial deployment phase, the Internet has "put online" a very wide audience. The result has been the creation of a completely new market, with promising development perspectives. In order to be able to exploit these opportunities, companies and organizations of any kind have pursued the objective to automate their productive chains, with extensive technological and organizational efforts. They have been busy mediating between the necessity to exchange information with the external world and the necessity to preserve their own autonomy.

Today, the new web based Service Oriented Architecture (SOA) seems to have the potentialities to provide effective and efficient solutions to these problems. Information exchanged can well be thought as a type of service. An organization can provide information to the external world and, at the same time, be a user. In this two-way exchange paradigm is enclosed the innovation of a new service oriented architecture.

The SOA paradigm represents a revolution for the information technology community and Web Services are a fundamental operational instrument. With them it is possible to consider the World Wide Web (WWW) a real distributed information system in which several services are made available. The WWW evolves from a purely hierarchical architecture, where the server transfers pages or applications, to a more "democratic" architecture in which specific servers, spread on the network, provide requesting computers with specific services as a result of local processing of applications or part of them (Erl, 2006).

A necessary condition to provide and use services via the Internet is interoperability among information systems, which translates into the availability of a common descriptive language for the services. The Web Services (WS) represent the technological solution for this interoperability in the framework of the reference architecture called Service Oriented Architecture (SOA) (CACM, 2003; IEEE, 2003).

Research shows that businesses evolve in their use of an innovation, from the initial adoption of a technology to incorporating that technology within their business processes (Rogers, 1995). Similarly, hospitality and tourism websites may start by providing basic information, then in subsequent phases add interactivity and personalization (Doolin, Burgess, & Cooper, 2002; Hanson, 2000).

Furthermore, early adopters of a technology such as websites may lack a coherent managerial plan (Soutar, Allen, & Long, 2000). Lack of training, traditional ownership and rational management hinder the adoption process by small to medium sized enterprises (SMEs) (Buhalis & Main, 1998). Additionally, rather than a reasoned strategy, fear of being different can pressure organizations to adopt technologies (Abrahamson, 1991; Fichman, 2000), such as website and email in the hospitality mdustry (Murphy, Olaru, Schegg, & Frey, 2003). Still, emerging research

suggests that hotels adopting Internet technologies gain revenue relative to those hotels failing to go online (Scaglione, Schegg, & Murphy, 2006).

Given the range and evolutionary nature of Internet tools, questions remain on what Internet features and functions to adopt (Murphy et al., 2003). Furthermore, the predominant snapshot approach of hospitality website studies fails to consider the dynamics of websites (Morrison, Taylor, & Douglas, 2004).

The aim of this paper is to assess the effect of ICTs on the hospitality sector while taking Lebanon as a case study.

Literature Review

Different definitions of ICT in tourism and/or the hospitality sector exist. Stevenson (1997), for example, describes ICT in general terms as technologies that handle information and aid communication. An EU report (EU, 2001), uses the term ICT to refer to the "use of digital electronic methods and tools to gather, process, share, and distribute information throughout the tourism value chain". In a recent study of hotel ICT carried out by Lee et. al. (2003) he refers to "tools" to enhance service quality, improve efficiencies, and increase competitive advantage and profitability. The following definition is proposed by Kate Varini and Hilary Murphy (2006): ICT is represented by any hotel technology that handles information, aids communication and contributes directly to profit optimization either internally or externally.

The main software technology utilized in hotels is the property management system (PMS), which is often integrated with other systems within and external to the hotel (Lee et al., 2003). Additionally, hotels that are part of a chain commonly utilize a central reservations system (CRS) with home/intermediary websites, global distribution systems (GDS) and revenue management systems (RMS) which are mainly operated by management level staff and are usually integrated with the PMS. RMS has become a critical tool to optimize revenue from room sales (Boyd & Bilegan 2003) by enabling the hotel to forecast in a detailed and accurate way. However, reliance on RMS becomes less certain as other new technologies, e.g. online intermediaries, invade the hospitality sector and disrupt the marketplace. Although the study by Lee et al. (2003) revealed that most reservations are still made by phone, electronic reservations via CRS, GDS and/or online intermediaries are growing dramatically (Daniele, 2004) and are likely to have even greater impact in the future.

The Technology Productivity Paradox: "This occurs whenever technology that has been implemented either does not achieve a reduction in transaction costs or reduces transaction costs but not enough to offset the IT costs incurred" (Bruque & Medina, 2002, p83). However, lack of success cannot always be directly ascribed to the technology itself as many factors can contribute such as; legacy systems, poor planning, bad strategic fit, slow implementation, low buy-in from

stakeholders, weak business models, lack of proper budgeting and financial metrics etc. (Strassman, 1999; Pisello, 2003). For many hospitality organizations, technology failure can be critical with impacts on customers, services, employees, brand and market share. However, failure in the hospitality sector to optimally implement ICT at any stage can also result in, for instance, narrow distribution, failure to reach target markets and an inability to forecast demand and revenues.

Although the increased global competition and price transparency offered by the Internet creates distribution challenges, there are interesting opportunities for the future. Where hotels are small and medium sized, technologies can offer even greater opportunities (Gratzer & Winiwarter, 2003). For example, ICT can allow these establishments to compete for room sales on a global level via e-distribution (e.g. destination websites, consortia, city portals) and provide the opportunity to gain access to electronic bookings via the GDS. However decisions to invest in ICT often depend on the degree of ICT awareness of the hotel manager or owner (EU Report, 2001; Empirica, 2003).

Within most internal hotel operations, ICT technology has increased dramatically, offering firms the opportunity to be innovative in marketing with offers that add value to different customer segments and to improve the distribution of information between staff members (Lee et. al., 2003). See figure 1 for an overview of opportunities.

Pricing Opportunities

Pre-Internet	Post-Internet I	Post-Internet II – 2005 and beyond
Intuition	Intuition	Price Customization
Cost Plus	Cost Plus	Repeat Guests: Evaluation of Lifetime Value
Forecasted Events	Forecasted Events	New Guests: Evaluation of Willingness to Pay
GDS Rates	GDS/Merchant Rates	Rate Parity across Similar Channels

Fig. 1.1 Source: An Investigation of Expert Predictions of Profit Optimization Opportunities from Information Communication Technologies (ICTs) in the Hotel Sector, Kate Varini & Hilary Murphy, 2006

Marketing Opportunities

Pre-Internet	Post-Internet I
Paper Mailing	e-Marketing
Paper Brochure	Online Brochure / Virtual Tour
Intuitive CRM	e-CRM
Marketing Consortia (LHW)	Marketing Consortia (LHW)
Reservation Systems (UTELL)	Search Engine Optimization

Fig. 1.2 Source: An Investigation of Expert Predictions of Profit Optimization Opportunities from Information Communication Technologies (ICTs) in the Hotel Sector, Kate Varini & Hilary Murphy, 2006

In figure 2 it can be seen that ICT usage offers opportunities to develop, differentiate and distribute hotel products more effectively as well as raise perceived service levels. The widespread research that exists on the benefits of technology, mostly concentrates on identifying how ICT contributes to greater competitive advantage, a higher level of operational effectiveness and/or improved service quality (Lee, et. al., 2003, Piccolo, 2004). However, hotel managers are concerned about the high cost of technology and when allocating scarce resources have a limited access to information that would allow them to assess whether/when/how best to ensure that a return on investment will occur.

Tactics – Individual Room Sales – Direct and Indirect

Pre-Internet	Post-Internet I
Phone, Fax, Letter	Phone, Fax, Letter
Telex	In Person
In Person	Internet Website (own and intermediary)

Fig. 2.1 Source: An Investigation of Expert Predictions of Profit Optimization Opportunities from Information Communication Technologies (ICTs) in the Hotel Sector, Kate Varini & Hilary Murphy, 2006

Tactics – Group, Full Inclusive Tour, Corporate Room Sales

Pre-Internet	Post-Internet I
Phone, Fax, Letter, Telex	Phone, Fax, Letter
Trade Show, Sales Calls	Trade Show, Sales Calls
Site Inspection	Site Inspection
Meeting	Web Meeting
	Electronic Request for Proposal (RFP)

Fig. 2.1 Source: An Investigation of Expert Predictions of Profit Optimization Opportunities from Information Communication Technologies (ICTs) in the Hotel Sector, Kate Varini & Hilary Murphy, 2006

Profit Optimization and the Hotel: Gunn (1977) describes profit optimization (PO) as the setting of realistic goals, maximizing the firm's survival chances within the firm's maximum potential. Wilson (2003a) explains PO as combining an understanding of all attributed costs of sales with revenue management (RM). Wilson (2003b) suggests a "stepped process" to achieve profit optimization that incorporates, understanding segment's spend, creative product development (to bring in new incremental demand and to capture more revenue from each customer) and a calculation of total incremental net contribution. Few academic discussions on the topic of hotel profit optimization are available, therefore the authors propose a definition for the purpose of this paper Profit optimization is a constant effort towards raising profit levels achieved by optimizing revenue and minimizing cost of sales.

As an example of the rapid evolution of technology, figure 3 shows how revenue management has become more sophisticated and affordable.

Revenue Management

Pre-Internet	Post-Internet - 2004
Rates City Hotels Fixed with w/end Packages	City Hotels Utilize BAR Rates that Change at least Daily
Rates in Resorts by Season	Resort Hotels Still Utilize Rates by Season but Have a More Flexible Rate Structure
Less than 1% of Hotels Have RMS	Increasing Number of Hotels Using Systematic RM Tactics
Very Limited Number of Products	Economic Recession Slows RMS Installation
Revenue Manager Promoted from within the Reservations Department	New RM Tools for SME Hotels ASP RMS and PMS Allow Possible Outsourcing/Centralization of Sales Function
	Products Still Limited but Some Experimentation Occurring
	Chains Develop Internal RM "University" Utilizing eLearning

Fig. 3 Source: An Investigation of Expert Predictions of Profit Optimization Opportunities from Information Communication Technologies (ICTs) in the Hotel Sector, Kate Varini & Hilary Murphy, 2006

As offloading inventory to online intermediaries may decrease the benefit (contribution) hotels achieve, a knowledge of when it is advantageous to use the Internet can help hotels to better evaluate the value these add to the hotels' PO effort (Gratzer and Winiwarter 2003). Therefore, as reservations received through different websites have different levels of contribution in terms of variable costs, these should be attributed to room revenues in order

compare the cost of different web bookings to more traditional phone reservations or reservations received through an intermediary. Until recently the hotel industry has focused on REVPAR (revenue per average room rate) to measure hotel room sales profitability. GOPAR (gross operating profit per available room) and PROFPAR (profit per available room), (HospitalityNet, 2005; HotelOnline, 2003) have the potential to replace REVPAR as RM systems adopt a closer alignment with sales and marketing systems and marketing costs, particularly when commissions for distribution become critical.

The seemingly obvious yet elusive relationship between ICT and productivity has accumulated a great body of research (Brynjolfsson, 1993; Hitt and Brynjolfsson, 1996; Lucas, 1993) exploring the ICT productivity impact on four levels – economy, industry, firm, process – but findings are plagued with ambiguities and inconsistencies. Some researchers reported no relationship between ICT and productivity (Byrd and Marshall, 1997; Dos Santos et al., 1993; Strassmann, 1990), some others provided evidence of such relationship (Bender, 1986; Brynjolfsson, 1993). Few studies showed negative or dysfunctional ICT productivity effects (Weill, 1992). Research within the hotel sector is limited, but it draws to similar conclusions (Sigala et al., 2001a). However, as studies have been questioned on methodological grounds, research findings are claimed to be statistical artifacts. The following methodological issues affecting research quality on the ICT-productivity relation are reported.

The quality of the data used and analyzed: A few studies relied on questionable secondary data (e.g. data of Computerworld), while others did not control for contextual factors (Byrd and Marshall, 1997). Others (Cron and Sobol, 1983; Strassmann, 1990) suggested that ICT have an amplifier effect meaning that the introduction of ICT into poorly run firms does not increase productivity, whereas the ICT introduction into well-run firms pay-off. Research that simply incorporated ICT as an input factor of productivity functions did not consider this issue. Thus, before investigating the ICT productivity impact, research should first identify high and low performers.

The metrics measuring productivity: There is a misconception that productivity metrics cannot capture the full impact of ICT (e.g. quality increases, avoidance of competitive disadvantage). However, it is argued (Ball, 1993; Gummesson, 1998) that financial metrics

encapsulate both tangible and intangible productivity gains, because only when tangibles and intangibles are as they should be, will customer levels, income and costs be controlled in such a way that profit is produced at the required rate in relation to the capital employed. Jurison (1996) also claimed that the ICT productivity paradox is due to bad management and not mismeasurement of productivity benefits, meaning that firms fail to translate intermediate ICT benefits (e.g. better customer service) into final outcomes (e.g. charge higher prices). Another concern refers to the level of analysis and productivity measurement. Aggregated inputs/outputs metrics obscure information, while partial metrics hide trade-offs and complementarity among other dimensions (e.g. business departments, resources). To address this, partial metrics may be considered simultaneously, but this is very laborious and may lead to conflicting results (Baker and Riley, 1994).

The metrics measuring ICT: ICT budgets and expenditures are the most frequently used metrics of computerization, as they are readily available and reasonably objective. However, their reliability and validity are widely criticized, as they do not distinguish between different ICT tools, capabilities and applications, which actually provide different results and benefits (Lucas, 1993; Strassmann, 1990). In short, ICT budgets fail to illustrate how ICT provide business benefits. However, recent studies (Bresnahan et al., 2002; Brynjolfsson and Hitt, 2000) showed that ICT productivity benefits accrue only when ICT is embedded in a cluster of organizational changes including increased ICT use, changes in organizational practices, and product/services changes. Within tourism and hospitality, several authors (Sigala et al., 2001a; Siguaw et al., 2000) also stress that ICT provide value when they are used to redefine, differentiate and informationalize product/services, and streamline, rationalize and support processes. Financial metrics for comparing ICT across firms also suffer from fluctuations over time (ICT budgets depend on the firms' accumulated ICT assets and ICT costs which are decreasing), waste of ICT expenses, different ways of financing (e.g. outsourcing) and measuring ICT expenditures.

Level of analysis at which research is undertaken: This refers to the measurement level of both productivity and ICT. Studies measuring productivity at the economy and industry level are limited because macro data do not capture firm level phenomena and hide displacement effects (Brynjolfsson, 1993). Menon (2000) argued that the organizational is the best level of analysis

for two reasons. First, it captures substitution, synergy and complementarities between resources. Second, process-level analyses suffer from difficulties in data collection, insufficient sample size and, thus, generalizability, as a significant number of firms with similar processes should be found, as well as separating ICT from non-ICT effects within a process. Process studies also ignore (Dos Santos et al., 1993; Lucas, 1993) any ICT impact on other processes (dysfunctional or synergy effects among processes), impact on final outcomes (intermediate effects on processes may not be translated to final outcomes), synergy and/or complementarities among ICT applications.

Statistical method relating ICT with productivity: The majority of studies have used regression and ratio analysis, but these can simultaneously only consider a limited number of variables. For example, productivity metric "revenue to number of employees" does not consider other factors of production, while aggregate productivity metrics (e.g. total revenue to total expenses) does not distinguish the productivity impact of different inputs/outputs. Regression is also limited in investigating the effect of one input (or output) on multiple outputs (or inputs). These techniques also assume away production inefficiency, which production functions model. Production functions also consider multiple inputs and outputs simultaneously, but being parametric techniques, i.e. assuming a functional form for the technology transforming inputs into outputs, they can suffer from specification error.

Because of that, a non-parametric, multivariate technique called DEA is used. DEA benchmarks units by comparing their ratios of multiple inputs to produce multiple outputs at the same time and by using the concept of the performance frontier (Avkiran, 1999). DEA shares the advantages of production functions, but it is specification error free because it does not assume a functional form. Instead, DEA estimates a "best practice" frontier in a piecewise linear approach by comparing similar units from the dataset. Other DEA advantages are (Banker and Morey, 1986; Sengupta, 1988) identification of bad from good performers by generating an overall, easy to interpret efficiency score; independence measurement units (giving great flexibility in selecting outputs/inputs); and manipulation of uncontrollable, environmental factors, e.g. competition. Avkiran (1999) highlighted that failure to account for environmental factors is likely to confound DEA results and lead to unreliable analysis. Norman and Stoker (1991) argued that DEA models not including demand factors measure production efficiency, while

models including them reflect market-efficiency, i.e. ability to control production efficiency given demand factors. DEA has been extensively used for productivity measurement in various industries (Avkiran, 1999), as well as for assessing the ICT productivity impact (Banker et al., 1990; Dasgupta et al., 1999; Paradi et al., 1997; Shafer and Byrd, 2000).

A few contributions treat the adoption of information technology (IT) and innovation in hotels. The reasons why small and medium hotels adopt IT to a different stage are manifold and stem from two main factors: economic and managerial. Among the economic factors, lack of financial resources and lack of economies of scale in small hotels are key reasons for not adopting IT. Managerial factors include centralized business structures and lack of professionalism. Although Porter and Millar (1985) claimed over 20 years ago that IT can give companies a competitive advantage, decisions about adopting IT may be irrational (Buhalis & Main, 1998).

With or without facilitation, IT adoption is an evolving process. Murphy, Schegg and Olaru (2006) show that domain name age - when a company first registered a domain name such as hyatt.com for Hyatt hotels - correlates positively with the presence of advanced website features. From a simple web-presence to the implementation of e-business processes, company websites go through several development stages (Doolin et al., 2002; Hanson, 2000).

In hospitality, the most widespread use of ICT has been to achieve operational effectiveness by more efficient data management and analysis, by raising service levels, enhancing (internal and external) communication and to make a wider range of products directly available customers via the use of the Internet. (Piccolo, 2004, Gratzer & Winiwarter 2003) In the future, the opportunities that mobile technology offers will create new opportunities and threats, as will other types of ICT such as remote check-in, web portals, kiosks, meta-search engines etc. An identification of these could provide hotel managers with the information they need in order to be proactive in developing new business opportunities, increase profit and reduce costs.

ICT in Smaller Hospitality Businesses

The rural is often distinguished by its distance from the urban, the centre. Malecki (2003) calls this the rural penalty and identifies the extra costs and difficulties that distance imparts. Thus, the rural becomes both identified and marginalized by distance. Yet information technologies seem to hold the promise to reduce the impacts of distance. In conjunction with entrepreneurship, Drabenstott (2001) argues, tapping into digital technology can reduce the tyranny of distance. Moreover, the very qualities associated with being rural, which is established in distance, have been claimed to allow entrepreneurs to transform what has been conventionally viewed as peripheral weaknesses into business assets (Anderson, 2000).

The use of ICT has provoked considerable interest in rural enterprises and in rural tourism research in particular (Clark et al., 1995: Mitchell and Clark, 1999; Grimes, 2000; Malecki, 2003). Buhalis and Main (1998) note how small rural hospitality business can provide stable employment and enable the infusion of tourist expenditures into the local economy. They also note how the information revolution can offer significant advantages, but point out that their research shows that many rural small firms, especially hospitality organizations, have been reluctant to use ICT. Indeed Mitchell and Clark (1999) talk about the variation in ICT adoption to propose a two tier rural economy, one tier embracing ICT and the others, non-users, left out. There are therefore good sound practical reasons why we should examine ICT in small hospitality firms. Furthermore there are some interesting, more conceptual issues. As indicated earlier, the rural is often presented as a special place with particular attractive qualities. Indeed Anderson (2000) argues that the entrepreneurial maintenance of these "rural" qualities are a product of distance, but produce a shift in a cultural paradigm as well as the technological shifts discussed earlier. Examining rural hospitality businesses therefore may provide us with some insights as to how the cultural qualities of rural are worked and used in ICT. Hospitality providers seem an ideal focus for such a study, since they owe much of their existence to being in the rural.

Rural hospitality firms come in many forms including those firms which provided rooms, food and drinks. These aspects appear to epitomize rural hospitality. However, the diversity of the industry is mirrored by the diversity of methods employed to study the applications of ICT. Studies to date are often descriptive with few theoretical or conceptual studies (Sheldon, 2000).

The very nature of small rural hospitality providers and related products make them ideal for a study. Apart from being a 24 hour operation, the product, rooms, is "perishable" in that if the sale is not made, it is lost forever, and the firm normally "has a fixed capacity and cannot use inventory as a buffer to deal with fluctuations in demand" (Yeoman and Ingold, 1997, p. 5). Thus, the efficient use of the product combines with operating effectiveness in profitably addressing a highly variable consumer demand. Moreover as rural places may suffer in supply terms from distance, an efficient supply system is important (Milne et al., 2005). ICT may offer solutions to these rural problems. In addition, on the market side, the internet is seen as "almost pure manifestations of marketing principles and practices" (Inkpen, 1998, p. 178) in that "it levels the playing field, enables companies of different sizes to compete on more equal terms. It also allows a company to open up a direct channel of communication with its customers and success is not always proportional to the money spent on designing it." On the supply side, it allows for open channels of communication with suppliers, allowing for product identification and maintaining inventory and on both "sides of the counter", it allows for relationship building with suppliers and customers. Consequently, the use of ICT does not just offer practical benefits for general management; it can help hospitality providers to overcome the disadvantages of place and space.

If the attraction of the rural is shaped by physical, social and cultural "distance", what then is the role and impact of ICT in reducing this distance? Small rural hospitality businesses appear to be classically and uniquely located in both the social and economic space of rurality. They may depend upon the uniqueness of rurality to encourage visitors, but are correspondingly disadvantaged by distance. Moreover, some hospitality providers seem concerned that the use of ICT might adversely affect their personal relationships with customers. Consequently, there are two elements of concern; the practical issues of ICT: if, and how ICT is employed in improving the running of small rural hospitality businesses and more conceptually, how ICT is employed in the commodification of the countryside.

The rural, distance and hospitality: The essential physical characteristic of the rural, however defined, is distance from the urban. Space, notes Warntz (1967, p. 7), "is a tyrant and distance enforces his rule". Anderson and McKain (2004) claim that space imparts both isolation and insulation created in the friction of distance. Rural places appear to stand apart from

industrialization by the very nature of their remoteness, so that distance sustains their exclusion. As Urry (1981; 1985) explains, specific spatial effects induce social actions, so being rural can affect small businesses. Yet this characteristic of being separate and different from the urban is also arguably a significant element in rural attractiveness. In essence, it is clear that people living in post-industrialist societies such as the UK are increasingly keen to "consume" rurality. As Anderson and McKain (2004) argue, changes within rurality can be examined usefully in terms of a shift from a zone of production to one of consumption, thus emphasizing the significance of market demand for such rural hospitality providers. Many authors have observed that such markets exist widely in rural areas, and that, in many ways, they may underpin existing rural economies (Keeble et al., 1992; Bryden and Bollman, 2000; Bryden and Munro, 2001). Furthermore, as traditional rural employment and wealth creation opportunities dwindle, they appear to be of increasing importance (Zontanos and Anderson, 2004). In this way being rural, the tyranny of distance creates both the uniqueness of the rural and the friction of distance. The social and physical dimensions of space impart both benefits and costs. Distance creates barriers to communication but simultaneously differentiates the rural. As Hamnett (1984, p. 11) describes it, "the economic evaluation of distance plays a crucial role in the social organization of space". Ball (1984, p. 68) extends this argument, "space is not simply a friction which economic activities have to overcome. Instead spatial differentiation imparts fixity on economic activities".

The hospitality industry in rural locations: Small and medium sized enterprises (SMEs) are drivers of the UK Economy with some 99 percent of all United Kingdom (UK) firms defined as SMEs (Martin, 2004). A large number of these businesses are tourism businesses, consisting of some 127,000 with an average annual turnover of less than £250,000 and as such can be classified as small firms (Department of Culture Media and Sport (DCMS), 2001). Moreover, the very nature of tourism means that there is a large presence in rural areas. Of these small tourist businesses, approximately half are situated in remote locations. Of course, not all of these businesses can be categorized as entrepreneurial. Many are simply classic small business, characterized by owner-management. However, in looking at the application of ICT, we argue that this is innovative in the "Schumpertian" process view; that is to say the application of innovations to do things better and cheaper. Thus, any small business that applies innovation might be categorized, in some ways, as entrepreneurial.

North and Smallbone (1996) note how the relentless decline of rural traditional industries has created a need for the new jobs arising from new and existing small firms in the service sectors such as tourism. Hotels and restaurants are an integral part of the tourism industry that creates nearly 5 per cent of all UK jobs and provide, in total 1.4 million jobs (Office of National Statistics (OFNS), 2004). Morrison (1998) points out that in the tourist accommodation sector, owner operators account for some 85 per cent of establishments, but she also notes the typical weakness of such small firms. When combined with the characteristics of peripheral destinations, such as seasonality, remoteness and low occupancy rates, "the challenges to successful business development are accentuated", Morrison (1998, p. 192). Nonetheless, tourism, especially small firm tourism, remains central to rural development (Briedenhann and Wickens, 2004). Small businesses in rural places are part of the community (Spillan and Hough, 2003) and "often strive to put something back into this community", (Barringer and Greening, 1999, p. 12). Therefore, although crucial to rural community, small businesses are much more fragile than large ones.

Rural businesses, often as a function of their location, are small, but SMEs in peripheral regions face additional challenges to competitiveness beyond those of the innate limitations associated with organizational size (Cooke, 1996; Vossen, 1999, Irvine and Anderson, 2004). Consequently, if these small firms wish to compete they must increase their levels of innovation, where innovation is broadly defined as including both technological and organizational perspectives. Deakins et al. (2003) show ICT as a particular innovation that has been taken up by rural firms. One sector that has shown progress in the area of innovation in small firms is the hotels and restaurants sector (McAdam and McConvery, 2004); Martin (2004) found that the hospitality industry in general seemed keen to embrace the new technology. Milne et al. (2005) note the number of ways that information and communications technologies can enhance the performance of an accommodation enterprise and assist in gaining competitive advantage. These include allowing a quicker response time to market and immediate processing of enquiries; integrating different applications to allow seamless processing with reduced errors; sharing of resources; increasing capacity of workflow and worker productivity; customization and/or standardization of key product offerings; flexibility and the adaptability needed to keep pace with a fast moving market, and the ability to create communities of online suppliers and clients. Martin (2004) examined the concept of E-innovation where innovation relates to the

development of customer relationships to provide long term benefits and easier experiences for the customer; "better enabling customers to do what serves their purposes" (Drucker, 1999,p.225). Customer relationships can thus be built and maintained at both a strategic and operational level by ICT in the hospitality industry. Providing customer service is also an important part of effective use of ICT in hotels. Martin (2004, p. 86) claimed that "rapid and effective follow up" and by "delivering what is promised" could facilitate this. Camison (2000) studied a number of rural hotels in Spain and noted some specific benefits from ICT; more agile management, image improvement, service quality, efficient information, fewer and more motivated employees.

ICT and the hospitality business: Although ICT has been promoted as a panacea by some authors, it can be problematic. Milne et al. (2005) demonstrate that the international literature has generally shown that in the past small tourism firms have been less likely to implement ICT than their larger counterparts (Mutch, 1998; Paraskevas, 2002). Methodologically, Matlay and Addis (2003, p. 322) note the "study of the use of ICT in general is limited by a paucity of empirically rigorous surveys and in itself represents a difficult challenge". Ramsey et al. (2003, p. 253) claim it is "under-researched, conceptually confused and widely generalized". The study of ICT is also considered difficult because of the speed of change and growth of the technologies themselves, thus presenting a challenge of significant complexity and uncertainty (Reynolds, 2000). For example, ICT and computing has been characterized as "Stand Alone" or "Networked" or by functions. Moreover, there are seen to be many barriers to its effective use; as well as time, size and limited resources, factors such as an over-reliance on intermediaries for product marketing, on-line booking and procurement have been noted (Reynolds, 2000). Other barriers may include the lifestyle choice of the proprietor that could dictate a negative attitude towards e-commerce, (Braun, 2003). Ramsey et al. (2003, p. 261) contended that it is not just raising awareness of the potential and benefits of ICT "but by raising a business awareness and increasing business skills in general, as any problems will not just be reduced by increasing the technological competence of small businesses". Although there are some training initiatives provided by agencies and internet forums, it is unclear what the uptake has been by small tourism providers (Galloway et al., 2004). There are also concerns about the availability and transfer rate of ISDN and Broadband (ADSL) in rural areas (Smyth et al., 2001). There are negative factors that may limit

the use of ICT, including the issue of de-personalizing service, the introduction of price transparency, which might benefit the consumer, but reduces the flexibility of management. Most small tourist hotels have long booking horizons and guest stay for longer (Abbot and Lewry, 1999) and are less likely to need the immediacy of ICT. Nonetheless there is strong evidence that ICT has great benefits for the hospitality industry (Baggio, 2005). Buhalis and Main (1998, p. 201) summarize thus, "the internet is gaining commercial viability and is particularly suited to small businesses, where it enables them to keep doors open 24 hours a day, at a minimal cost to customers (and providers) all over the world."

The literature suggests that it is useful to model the use of ICT at different levels of development that reflects their interest and the technology available (Milne et al, 2005). Models have been developed for both the supply side and demand side of ICT application. Chaffey (2003) proposed the following model for the supply side of the business process. This model defines five levels of ICT application:

1. No use of the web for sourcing and no electronic integration with suppliers.
2. Review and selection from competing suppliers using; intermediary web sites, B2B exchanges and supplier web sites. Orders placed by conventional means.
3. Orders placed electronically through "EDI" via intermediary sites, exchanges or supplier sites. No integration between organization and supplier systems. Re-keying of orders necessary into procurement or accounting systems.
4. Orders electronically with integration of company's procurement systems.
5. Orders placed electronically with full integration of company's procurement, manufacturing requirements planning and stock control systems.

For the demand side, the marketing element of service led enterprises, Ditto and Pille (1998) identified three different levels of development – informational, transactional and relational:

1. The informational basic level with web-site providing the same information available through traditional marketing, by a one way process.

2. The transactional level enables communication with the customer who identifies with the options such as the "virtual tour". There is two-way communication carried out by email, telephone or post.
3. The relational level involves interactivity with the customer enabling the development of a continuous relationship from the original transaction through the internet. At this stage, the internet is a key factor in the management of the enterprise.

Tourism is a quite unique area of business in a sense that a product cannot be observed or manipulated through direct experience prior to purchase. Instead, customers have to purely rely on indirect or virtual experience. Due to that, appealing presentations of travel destinations have always been an important factor of success in tourism. Traditional travel agents are being quite successful in their efforts of creating illustrated catalogues that provide potential customers with a significant amount of information jazzed up with highly aesthetic photos, useful tips, maps and much more.

However, it becomes more and more difficult for traditional travel agents to compete with web sites that offer online booking possibilities. One of the main reasons for the increasing number of people booking online is that online experience has much greater potential in visualizing travel destinations. 3D interactive tours, for instance, might be used to convey a clear impression of the travel destination and interactive on-demand videos may be shown online without interfering with other (in-store) customers. Daugherty et al. (2005) conducted a usability study comparing indirect experience (form-based web sites), virtual experience (web sites with 3D product presentation) and direct experience (direct product manipulation) in order to better understand consumers reactions on different product presentation methods. The study showed that virtual experience provokes similar impressions as direct experience. Product knowledge and decision quality are both significantly higher when exposed to interactive 3D products than to static products presented in a form-based way. Additionally, Edwards et al. (2001) argue that one of the factors that makes virtual experience even more successful is its novelty since people that have not yet been exposed to 3D product presentations may simply be curious to experience it. Despite the aforementioned advantages, the mistaken idea that using 3D on the Web is far too expensive and too resource consuming greatly inhibited the proliferation of 3D applications in e-

Commerce (Hurst, 2000). Nevertheless, recent developments prove that in the future 3D applications may be faster and cheaper to create than quality photographs (Frfih et al., 2005). Moreover, the broad availability of broadband Internet access supports this trend.

Besides visualization, users require support during their decision making process. It must be taken care of user's behavior and personal preferences, e.g. track past user interactions to determine individual areas of interest, adapt results according to temporal phenomena such as vacation periods or seasons. Aiming at providing extensive support to customers, Fesenmaier et al. (2003) developed a tourism recommendation system DIETORECS, that offers various form-based ways to interact with the system. In particular, users are asked to express their needs by choosing from a fixed set of attributes represented by option sets or dropdown lists. Due to the domain diversity a broad set of attributes is available and, unfortunately, this plethora of options creates confusion for those booking trips and results in a dramatically overloaded interface. As Dittenbach et al., (2003) report in their findings obtained by conducting a field trial on the acceptance of a natural language user interface to tourism information, alternative approaches are needed in order to take away the burdens associated with traditional form-based tourism environments.

Growth is obvious in all types of mobile devices, e.g. mobile phones, PDAs and laptops. Over 10 million devices were sold in the last quarter of 2004, with Nokia remaining the market leader (http://www.windowsfordevices.com/news/NS5359318094.html [February 13, 2005]). However, despite healthy market forecasts for devices, there are still problems that need to be resolved in relation to location based devices. Several authors have identified critical technical problems as "klunky technology", content provision and consequent charges, lack of integration, lack of standardization, inconsistencies in communication protocols or inaccurate positioning information (Agrawal & Agrawal, 2003; Canalys, 2005; Pugh et al., 2004; ABIresearch, 2005a; Tilson et al., 2004).

From the market perspective, there are issues regarding the perceived "low value" to the consumer, the lack of successful revenue models for the required participants, the fact that the customer still does not understand how it works, problems with privacy and use and misuse of customer information and tracking (Agrawal & Agrawal, 2003; Poslad et al., 2001).

According to Norrie (2004), tourism is, however, identified as an industry with substantial potential and synergy for mobile technologies and some research projects have already developed PDA-based tourist guides, for example, the Lancaster GUIDE system (Cheverst et al., 2000). Indeed, more than one hundred EU funded projects are identified by the POSITION team (Pugh et al., 2004) which reviews 57 of Location based services (LBS) projects, relevant to the tourism domain with 14 having a specific tourism focus and ranging from rail, road, maritime and air platforms to embedded software for pedestrians.

In the EU, only isolated commercial LBS applications have been successfully introduced into the marketplace. Instead, the industry has spawned "an assortment of players, service concepts and business models" (Fernandes, 2004, p.46). Consequently, this creates difficulties for LBS stakeholders when planning any structured business models with such a diversity of interested parties. "It is this need for partnership that makes the business models for LBS particularly complex and the role of the individual LBS providers less clear" (Fernandes, 2004, p.46). However some examples of these complex partnerships do exist within the tourism sector, e.g. ViaInterkom's Restaurant Finder (location based software for locating restaurants in destinations, http://www.viaginterkom.de [September 5, 2005]), StreetHive (http://www.streethive.com [September 5, 2005], a location based mobile social network), LOL@ - an LBS being prototyped in the city of Vienna (http://lola.ftw.at) and HandHeld Tours, mobile tours of the city of London (http://www.handheldtours.net).

Still, general figures on user acceptance remain low (ABIresearch, 2005b). Customers "need seamless chains that serve throughout their mobile activity" (Kaasinen, 2003, p78). They also require usability and privacy (Agrawal & Agrawal, 2003; Kjeldskov et al., 2005) and consequently, the initial positive outlook for location-based services (LBS) has altered (Fernandes, 2004). The answer may be to create a service that is more functional and of value for the customer (Agrawal & Agrawal, 2003; Kaasinen, 2003). Therefore, hotel guest information and attractions should be tailored and offered to specific, targeted segments of the market, in this case, hotel guests on Switzerland. Hotels are in a key position to define, encourage, bundle, explain such services and personalize them to targeted guest segments.

The Role of the Concierge: The role of the concierge is central in many hotels. They are one of the key "touch points" with the guests. Each hotel has its own interpretation of the role the concierge plays in the guest experience, from luxury 5 star hotels providing extensive, full range concierge facilities to little, or no, concierge facilities in budget hotels. The concierge has to develop an affinity with guests and build a rapport with service suppliers, as guests often require external, supplementary services to have their needs fulfilled. The role of the concierge may be critical as he has the capability to create repeat business through his constructive relationship with hotel guests and a wealth of local knowledge. This latter point will be a challenge for a "virtual concierge".

Usability Issues of Tourist Information Systems: "Many mobile applications ignore the fact that input in mobile devices is limited and slow. The design of mobile services is still very technology driven. The consequence is applications and services with poor usability (Reichenbacher, 2004, p. 14). According to this author, the foremost usability problems related with mobile users are varied user activities and usage contexts, changing and distracted users, heterogeneity of devices and interaction restrictions. Some of these inconveniences are associated to cognitive abilities (Reichenbacher, 2004) due to the fact that mobility increases the load of cognitive stimulus. Reports on LBS usability highlight the serious problems encountered in terms of cognitive load (Kjeldskov et al., 2005). The aim of every LBS application should therefore be to simplify visualization and information provision to such an extent that the user is not overwhelmed by the mobile experience.

Rumetshofer et al. (2003, p. 440) state that "most tourist information systems do not support content adaptation based on cognitive styles" and that more individualized tourist information is needed. The better the understanding of information requirements of customers, the better tourism information providers can optimize the information management (delivery, context and style) and decrease information overload.

Though there has been much research on LBS, only a few studies focus on segmenting the information needs of tourists. Poslad et al. (2001) highlight the fact that the typical interest profile for each segment is crucial and has to be identified by empirical studies. To make the LBS application specific to the hotel guests, such information needs will be crucial to consider

(Umlauft et al., 2003) and topical information, personalization, consistency and comprehensive content have already been defined as essential to support user needs in location based devices (Kaasinen, 2003).

Research Methodology

The answer to the question of knowledge affects by implication the way it is acquired; it affects our choice of methodology (Christou, 2003). Methodology is the way by which we gain knowledge about the world, trying to discover how we can go about the task of finding out what we believe to be true.

According to Bryman (2001: p.16) 'objectivism is an ontological position that implies that social phenomena confront us as external facts that are beyond our reach of influence'. In other words, all social phenomena and categories exist beyond the control of the social actors and their actions. Constructionism asserts that 'social phenomena and their meanings are continually being accomplished by their social actors. It implies that social phenomena and categories are not only produced through social interaction but that they are in a constant state of revision' (Bryman, 2001: p.18). The constructionist approach stresses that there is no objective reality but rather constructions of it.

Interpretivists accept ideographic methods which importance to the inductive side concentrating upon the subjective appreciations of human actors. In order for investigators to understand the subjective accounts, they immerse themselves in the research context giving emphasis to the creation and utilization of qualitative data. Interpretivists prefer to blend in the data minimizing the reaction to the researcher's presence in the natural environment of the subjects under investigation rather than use control as positivists do. Therefore interpretivists are more liable in using action research, case studies and ethnography as the main research methods budding radical theory based upon empirical observation.

Nomothetic methodology is the dominant research method in hospitality strategic management. For example, Singh and Gu's (1994) are two USA based researchers who used secondary data to study the diversification and performance of food service firms. Additionally, Elwood-Williams and Tse's (1995) in their effort to study of entrepreneurial types and strategy developed used secondary data. Moreover, Phillips' (1996) UK based study of the relationship between strategic planning and hotel performance is another example of survey-based research approach.

Contrarily, because the interpretivist approach is not so common in the hospitality research there are not lot of examples of using ideographic methodologies. William Forte Whyte's (1947), examined the social structure of the restaurant which reporting on interviews and participant-observation studies carried out in Chicago. He measured social structure, displayed some of the limitations of quantitative measures and reinforced the need to supplement these with a more qualitative approach, concluding his thoughts on statistics versus the case study are as relevant today as it were in the days of the survey.

In addition, an example of the participant – observation approach is the work carried out by two UK based researchers, Prosser and Worsfold (1995), one of whom was employed as a waitress in a large hotel in her effort to evaluate the informal social relations among employees as an outsider. Furthermore, research by Lennon and Wood (1989) is another good example to the participant-observation approach. They used ideographic methods in their effort to analyze sociologically the hospitality labor.

Other research using a similar approach include Saunders (1982) research on hotel head porters, Prus's and Vassilakopoulos (1979) research on the facilitating role of male desk-clerks in prostitution in hotels are other two examples to the participant-observation approach. In addition, Gabriel's (1988) effort to examine the catering employees' perspectives on their working lives in a range of operational contexts, Whytes' and Hamilton's (1964) and Shamir (1975) on the hotel receptionists and chambermaids and Saunders (1982) study on hotel head porter represent a number of qualitative studies. Bowey (1976), Mars et al (1979), Mars and Nicod (1984) also used the participant-observation approach to study on table waiting.

Hospitality industry has unique characteristics which according to Slattery (1983) requires unique methodologies to generate unique insights, asking questions of how a theory of knowledge look like, how it possible and so on.

Hospitality research has up to now been defined in terms of the hotel and catering industry investigation, an economic sector which involves both public and private organizations. According to Taylor and Edgar (1996) drawn on Litteljohn (1990) there are three approaches to hospitality research:

- The natural and physical sciences approach in which hospitality tangible elements are examined from the perspectives of one of the physical science disciplines.
- The hospitality management approach which draws on a variety of disciplines to explore what are perceived to be the unique characteristics o the hospitality industry.
- The hospitality studies approach, which the hospitality industry perceived as unique, is seen to be amenable to investigation in all its dimensions from a much wider range of disciplines, including the social sciences.

Litteljohn (1990) argues that hospitality research performs a positivistic role and normative as well and suggests that hospitality research has four main aims:

- to develop insights into areas of hospitality and the discipline of hospitality
- to underpin the content and direction of academic courses
- to encourage the development of best practice techniques in industry
- to stimulate further research by dissemination and experimentation

The 'hospitality management' and the traditional, quantitative methodologies are the most frequently deployed by UK and USA based hospitality researchers in the Council of Hospitality Management Education's (CHME) annual conference from 1992 to 1995 (Taylor and Edgar 1996). USA researchers are more oriented towards positivism while the interpretivist approach is starting to exist among a minority of UK researchers.

This shift may reflect two elements of educational development in the UK which are the vocational backgrounds and focus of the new universities and the need for credibility and drive for scholarly activities via multidisciplinary approaches to strategic research (Shaw and Nightingale, 1995).

The majority of hospitality researchers subscribe to a positivist epistemological position, although that seems inappropriate to the interpretivists, whereby there is a tendency to more interpretive approach. There is some evidence which support that in hospitality management research that the interpretive position is becoming more popular by using qualitative data and ethnography within tourism and hospitality management research (Connell and Lowe, 1997; Hughes, 1997). It is believed that with respect to the research techniques, the quantitative

techniques can be accounted for in terms of "the links to vocational education and the perceived need for speedy and "solid" results" (Taylor and Edgar, 1996).

Taylor and Edgar (1996) suggests that one test of a field of study's maturity is the extent to which the preoccupation with positivist methodology is sacrificed to greater variety in the use of qualitative and mixed techniques, resulting that hospitality research is not still mature despite the different assertion of Litteljohn (1990). Research activity is considered to be source of academic glory and source of funding. This is a significant aspect that academics to take into account.

As Taylor and Edgar (1996) argue, a significant factor in the process of development is the decision of what the scope of hospitality should be answering the questions if hospitality management need to more clearly define its domain, the boundaries between it and tourism management and so on.

A clear consideration of methodology is an attractive and without a doubt, necessary part of the future development of the field. Hospitality management according to Slattery (1983) and Litteljohn (1990) is largely social based and requires the development of a scientific method to differentiate it from methods used by physical. Taking into account that the UK based researchers embraced more the qualitative approach and the U.S.A based are more close to the quantitative approach in it is clear that in the UK academia there is a shift towards greater qualitative research than in U.S.A

The major question is if qualitative approaches are more or less popular than quantitative approaches. We have to choose whether we are measuring instances or if we are exploring attitudes. With the first option, we adopt explanation through an analysis of informal relationships and through covering norms or to accept ideographic methods which importance to the inductive side concentrating upon the subjective appreciations of human actors.

The first option adopts a highly structured research methodology based on either physical or statistical controls in order to smooth the progress of the examinant hypothesis and in the second the researchers immerse themselves in the research context giving emphasis to the creation and utilization of qualitative data. According to the authors opinion, is not a clear answer to this question.

It is on the eye of the researcher and the nature of his/her research to choose the proper approach for him/her and to his/her investigation. Where a small example exists and the focus is more upon the behavioral dimension, then the qualitative approaches are more valuable and desirable. In case of that is widespread the belief that serious research must exhibit the highest degree of methodological rigor, then the only desirable and valuable approach for research is through quantitative approaches. The chosen approach largely depends on the subject and the field of the research. Time is a very important aspect of any research because the collection of qualitative data needs more time than quantitative.

The methodology of this research is composed of two well-known methods:

- Case study
- Semi-structured interview

Analysis and Findings

The case study is of a restaurant in a city in North Lebanon. First we will see a table depicting the company's performance in August, 2008. We list each order with the total amount paid by the customer. This is all the data available from the archive papers of the restaurant.

Orders - August, 2008 (Not using POS Software)

Order ID				Net Paid LBP
530				20,000
531				12,000
532				5,000
533				8,000
534				8,000
535				35,000
536				12,000
537				4,000
538				4,000
539				4,000
540				1,946,000
543				1,487,000
544				4,000
545				22,000
546				10,000
547				55,000
548				16,000
549				4,000
550				10,000
551				5,000

552				5,000
554				13,000
555				88,000
556				20,000
557				8,000
558				1,000
559				22,000
560				1,000
561				12,000
562				10,000
563				5,000
564				8,000
565				8,000
566				10,000
567				20,000
568				39,500
569				11,000
570				16,000
572				10,000
573				12,000
574				8,000
575				10,000
576				16,000
579				5,000
580				8,500
581				4,000
582				12,000
583				8,000
584				2,500

585				10,000
586				24,000
587				1,311,000
588				3,500
589				12,000
590				8,000
591				13,000
592				2,000
593				20,500
594				6,000
595				8,000
596				70,000
598				2,500
599				49,000
601				4,000
602				10,000
603				16,000
604				46,000
605				5,000
606				16,000
607				4,000
608				12,000
609				18,000
610				24,000
611				23,000
612				8,000
613				8,500
614				15,500
616				5,000

617				4,000
618				8,000
619				4,000
620				4,000
621				10,000
622				6,000
623				10,000
624				20,000
625				20,000
626				8,000
627				59,000
628				10,000
629				4,000
630				5,000
631				4,000
632				10,000
633				9,500
634				180,000
635				4,000
636				5,000
637				12,000
638				7,000
639				20,000
640				8,500
641				15,000
642				4,000
643				5,000
644				24,000
646				6,000

647				9,000
648				32,000
649				32,000
650				53,000
652				36,000
653				16,000
654				4,000
655				4,000
656				16,000
657				2,000
658				33,000
659				22,000
660				10,000
661				10,000
662				24,000
663				10,000
664				12,000
665				8,000
666				8,000
667				8,000
668				12,000
669				11,000
670				16,000
671				52,000
672				4,000
673				14,000
675				3,500
676				8,000
677				20,000

678				69,500
679				8,000
680				10,000
681				3,500
682				13,000
683				8,000
684				12,000
685				18,000
686				10,000
687				8,000
688				5,000
689				5,000
690				6,000
691				4,000
692				7,000
693				12,000
694				3,500
695				7,000
696				33,000
697				12,000
698				22,000
699				7,000
700				7,000
701				12,000
702				15,000
703				4,000
704				9,500
705				8,000
706				12,000

707				11,500
708				20,000
709				8,000
710				8,000
711				8,000
712				10,000
713				22,000
714				8,000
715				10,000
716				3,500
717				6,000
718				6,000
719				12,000
720				11,000
721				8,000
722				2,000
723				10,000
724				33,000
725				10,000
727				39,000
728				19,000
729				6,000
730				12,000
731				10,000
732				7,000
733				50,000
734				16,000
735				15,000
736				1,000

737				4,000
738				4,000
739				63,000
740				9,000
741				8,000
742				3,500
743				8,000
744				15,000
	Total (LBP)			**7,642,000**

So as we see, the restaurant made 7,642,000 LBP in sales on August 2008. Now we will analyze the company's performance on August 2009. We have plenty of data that we were able to withdraw from the computer POS system that was adopted by the company earlier in spring 2009. For the purpose of this study, we chose to restrict the data to be presented to: date and time the order was opened, total amount, service (10%), net amount paid in Lebanese Pound.

Orders - August, 2009 (using POS software)

Order ID	Date Time Opened	Total	Service	Net Paid LBP
889	8/1/2008 01:39:00 PM	32,500	1,625	34,125
890	8/1/2008 01:47:00 PM	65,000	6,500	71,500
891	8/1/2008 08:10:00 PM	95,000	9,500	104,500
892	8/1/2008 08:19:00 PM	38,000	3,800	41,800
893	8/1/2008 08:47:00 PM	25,000	2,500	27,500
894	8/1/2008 08:57:00 PM	58,000	5,800	63,800
895	8/1/2008 08:57:00 PM	22,000	2,200	24,200
896	8/1/2008 09:20:00 PM	57,000	5,700	62,700
897	8/1/2008 09:44:00 PM	40,000	4,000	44,000
898	8/1/2008 09:56:00 PM	25,000	2,500	27,500
899	8/1/2008 09:56:00 PM	34,000	3,400	37,400
900	8/1/2008 10:05:00 PM	28,000	2,800	30,800
901	8/1/2008 10:12:00 PM	57,500	5,750	63,250
902	8/1/2008 10:17:00 PM	21,000	2,100	23,100
903	8/1/2008 10:20:00 PM	40,500	4,050	44,550
904	8/1/2008 10:26:00 PM	18,000	1,800	19,800
905	8/1/2008 11:04:00 PM	40,000	4,000	44,000
906	8/1/2008 11:15:00 PM	57,000	5,700	62,700
907	8/1/2008 11:16:00 PM	36,000	3,600	39,600
908	8/1/2008 11:24:00 PM	28,000	2,800	30,800
909	8/1/2008 11:54:00 PM	11,000	1,100	12,100
910	8/2/2008 12:40:00 AM	20,000	2,000	22,000
911	8/2/2008 01:05:00 AM	22,000	2,200	24,200
912	8/2/2008 01:13:00 AM	16,000	1,600	17,600
913	8/2/2008 12:45:00 PM	38,000	3,800	41,800

914	8/2/2008 01:45:00 PM	48,000	4,800	52,800
915	8/2/2008 02:16:00 PM	19,500	1,950	21,450
916	8/2/2008 08:52:00 PM	37,000	3,700	40,700
917	8/2/2008 08:53:00 PM	54,000	5,400	59,400
918	8/2/2008 09:43:00 PM	228,000	22,800	250,800
919	8/2/2008 10:13:00 PM	12,000	1,200	13,200
920	8/2/2008 10:17:00 PM	25,500	2,550	28,050
921	8/2/2008 10:21:00 PM	44,000	4,400	48,400
922	8/2/2008 10:32:00 PM	382,000	38,200	420,200
923	8/2/2008 10:40:00 PM	99,500	9,950	109,450
924	8/2/2008 10:46:00 PM	174,500	17,450	191,950
925	8/2/2008 10:49:00 PM	69,000	6,900	75,900
926	8/2/2008 11:00:00 PM	95,000	9,500	104,500
927	8/2/2008 11:03:00 PM	385,000	38,500	423,500
928	8/2/2008 11:07:00 PM	134,000	13,400	147,400
929	8/2/2008 11:12:00 PM	144,000	14,400	158,400
930	8/2/2008 11:17:00 PM	103,000	10,300	113,300
931	8/2/2008 11:22:00 PM	52,000	5,200	57,200
932	8/2/2008 11:23:00 PM	41,000	4,100	45,100
933	8/2/2008 11:30:00 PM	74,500	7,450	81,950
935	8/2/2008 11:49:00 PM	19,000	1,900	20,900
936	8/3/2008 12:01:00 AM	203,000	20,300	223,300
937	8/3/2008 12:15:00 AM	49,000	4,900	53,900
938	8/3/2008 12:21:00 AM	254,000	25,400	279,400
939	8/3/2008 02:58:00 AM	9,000	900	9,900
940	8/3/2008 07:30:00 PM	42,000	4,200	46,200
941	8/3/2008 08:29:00 PM	40,000	4,000	44,000
942	8/3/2008 08:35:00 PM	13,000	1,300	14,300
943	8/3/2008 08:37:00 PM	26,000	2,600	28,600

944	8/3/2008 08:38:00 PM	82,000	8,200	90,200
945	8/3/2008 08:43:00 PM	29,500	2,950	32,450
946	8/3/2008 08:43:00 PM	44,500	4,450	48,950
947	8/3/2008 09:02:00 PM	34,000	3,400	37,400
948	8/3/2008 09:16:00 PM	51,500	5,150	56,650
949	8/3/2008 09:35:00 PM	54,500	5,450	59,950
950	8/3/2008 09:42:00 PM	49,000	4,900	53,900
952	8/3/2008 09:47:00 PM	28,000	2,800	30,800
953	8/3/2008 10:37:00 PM	22,500	2,250	24,750
954	8/3/2008 10:45:00 PM	41,500	4,150	45,650
955	8/3/2008 11:28:00 PM	17,000	1,700	18,700
956	8/4/2008 02:01:00 PM	52,500	5,250	57,750
957	8/4/2008 02:18:00 PM	27,000	2,700	29,700
958	8/4/2008 05:45:00 PM	44,500	4,450	48,950
959	8/4/2008 07:41:00 PM	25,500	2,550	28,050
960	8/4/2008 07:44:00 PM	12,500	1,250	13,750
961	8/4/2008 08:15:00 PM	69,500	6,950	76,450
962	8/4/2008 08:55:00 PM	45,000	4,500	49,500
963	8/4/2008 09:20:00 PM	11,000	1,100	12,100
964	8/4/2008 09:31:00 PM	44,000	4,400	48,400
965	8/4/2008 09:42:00 PM	29,000	2,900	31,900
966	8/4/2008 09:42:00 PM	38,500	3,850	42,350
967	8/4/2008 10:06:00 PM	47,000	4,700	51,700
968	8/4/2008 10:06:00 PM	287,000	28,700	315,700
969	8/4/2008 10:07:00 PM	16,500	1,650	18,150
970	8/4/2008 10:24:00 PM	59,000	5,900	64,900
971	8/4/2008 10:25:00 PM	34,000	3,400	37,400
972	8/4/2008 10:32:00 PM	37,500	3,750	41,250
973	8/5/2008 12:17:00 AM	34,000	3,400	37,400

974	8/5/2008 01:16:00 PM	56,500	5,650	62,150
975	8/5/2008 03:34:00 PM	6,000	600	6,600
976	8/5/2008 06:44:00 PM	17,000	1,700	18,700
978	8/5/2008 07:42:00 PM	11,000	1,100	12,100
979	8/5/2008 07:44:00 PM	22,000	2,200	24,200
980	8/5/2008 09:41:00 PM	20,000	2,000	22,000
981	8/5/2008 10:06:00 PM	50,000	5,000	55,000
982	8/5/2008 10:16:00 PM	286,000	28,600	314,600
983	8/5/2008 10:23:00 PM	59,000	5,900	64,900
984	8/5/2008 10:29:00 PM	52,000	5,200	57,200
985	8/5/2008 11:17:00 PM	147,500	14,750	162,250
986	8/5/2008 11:33:00 PM	38,000	3,800	41,800
987	8/6/2008 12:26:00 AM	53,000	5,300	58,300
988	8/6/2008 12:55:00 AM	60,000	6,000	66,000
989	8/6/2008 01:09:00 AM	10,000	1,000	11,000
990	8/6/2008 01:41:00 PM	13,000	1,300	14,300
991	8/6/2008 09:07:00 PM	120,000	12,000	132,000
992	8/6/2008 09:31:00 PM	38,000	3,800	41,800
993	8/6/2008 09:35:00 PM	21,000	2,100	23,100
994	8/6/2008 09:38:00 PM	89,500	8,950	98,450
995	8/6/2008 10:04:00 PM	10,000	1,000	11,000
996	8/6/2008 10:08:00 PM	45,000	4,500	49,500
997	8/6/2008 10:12:00 PM	18,000	1,800	19,800
998	8/6/2008 10:54:00 PM	31,000	3,100	34,100
999	8/6/2008 11:49:00 PM	36,500	3,650	40,150
1000	8/6/2008 11:50:00 PM	14,000	1,400	15,400
1001	8/7/2008 02:25:00 PM	39,000	3,900	42,900
1002	8/7/2008 07:55:00 PM	48,000	4,800	52,800
1003	8/7/2008 08:02:00 PM	8,500	850	9,350

1005	8/7/2008 09:10:00 PM	14,000	1,400	15,400
1006	8/7/2008 09:53:00 PM	25,000	2,500	27,500
1007	8/7/2008 09:53:00 PM	22,500	2,250	24,750
1008	8/7/2008 09:54:00 PM	15,500	1,550	17,050
1010	8/7/2008 10:16:00 PM	44,000	4,400	48,400
1012	8/7/2008 10:34:00 PM	46,000	4,600	50,600
1014	8/8/2008 09:35:00 PM	26,500	2,650	29,150
1015	8/8/2008 10:10:00 PM	28,000	2,800	30,800
1016	8/8/2008 10:11:00 PM	21,000	2,100	23,100
1017	8/8/2008 10:16:00 PM	32,000	3,200	35,200
1018	8/8/2008 11:07:00 PM	42,500	4,250	46,750
1019	8/8/2008 11:15:00 PM	11,000	1,100	12,100
1020	8/9/2008 12:13:00 AM	31,500	3,150	34,650
1021	8/9/2008 12:31:00 AM	13,000	1,300	14,300
1022	8/9/2008 12:42:00 AM	27,000	2,700	29,700
1023	8/9/2008 07:36:00 PM	18,000	1,800	19,800
1024	8/9/2008 08:48:00 PM	118,500	11,850	130,350
1025	8/9/2008 08:50:00 PM	17,000	1,700	18,700
1026	8/9/2008 09:31:00 PM	117,000	11,700	128,700
1027	8/9/2008 09:32:00 PM	87,000	8,700	95,700
1028	8/9/2008 09:32:00 PM	33,000	3,300	36,300
1029	8/9/2008 09:32:00 PM	20,500	2,050	22,550
1030	8/9/2008 09:43:00 PM	10,000	1,000	11,000
1031	8/9/2008 09:47:00 PM	132,500	13,250	145,750
1033	8/9/2008 10:06:00 PM	60,000	6,000	66,000
1034	8/9/2008 10:23:00 PM	28,500	2,850	31,350
1035	8/9/2008 10:29:00 PM	686,000	68,600	754,600
1036	8/9/2008 10:37:00 PM	170,500	17,050	187,550
1037	8/9/2008 10:39:00 PM	74,500	7,450	81,950

1038	8/9/2008 10:45:00 PM	202,000	20,200	222,200
1039	8/9/2008 10:59:00 PM	80,500	8,050	88,550
1040	8/9/2008 11:00:00 PM	70,000	7,000	77,000
1041	8/9/2008 11:00:00 PM	319,500	31,950	351,450
1043	8/9/2008 11:25:00 PM	54,000	5,400	59,400
1044	8/9/2008 11:47:00 PM	38,500	3,850	42,350
1045	8/10/2008 12:01:00 AM	37,000	3,700	40,700
1046	8/10/2008 12:08:00 AM	45,000	4,500	49,500
1048	8/10/2008 01:25:00 AM	34,000	3,400	37,400
1050	8/10/2008 07:48:00 PM	13,500	1,350	14,850
1051	8/10/2008 08:10:00 PM	13,000	1,300	14,300
1052	8/10/2008 08:12:00 PM	7,000	700	7,700
1053	8/10/2008 08:36:00 PM	89,000	8,900	97,900
1054	8/10/2008 08:50:00 PM	4,000	400	4,400
1055	8/10/2008 09:04:00 PM	26,000	2,600	28,600
1056	8/10/2008 09:09:00 PM	53,000	5,300	58,300
1057	8/10/2008 09:36:00 PM	134,000	13,400	147,400
1058	8/10/2008 09:55:00 PM	13,000	1,300	14,300
1059	8/10/2008 10:18:00 PM	76,000	7,600	83,600
1060	8/10/2008 10:42:00 PM	40,000	4,000	44,000
1061	8/10/2008 11:01:00 PM	142,000	14,200	156,200
1063	8/10/2008 11:12:00 PM	17,000	1,700	18,700
1064	8/11/2008 12:19:00 AM	44,000	4,400	48,400
1065	8/11/2008 12:22:00 AM	4,000	400	4,400
1067	8/11/2008 12:38:00 AM	15,000	1,500	16,500
1068	8/11/2008 08:09:00 PM	16,500	1,650	18,150
1069	8/11/2008 08:29:00 PM	12,000	1,200	13,200
1070	8/11/2008 08:49:00 PM	56,000	5,600	61,600
1071	8/11/2008 08:53:00 PM	15,500	1,550	17,050

1072	8/11/2008 09:13:00 PM	24,500	2,450	26,950
1073	8/11/2008 09:33:00 PM	20,000	2,000	22,000
1074	8/11/2008 09:37:00 PM	86,000	8,600	94,600
1075	8/11/2008 09:57:00 PM	40,000	4,000	44,000
1076	8/11/2008 10:00:00 PM	19,000	1,900	20,900
1077	8/11/2008 10:03:00 PM	9,000	900	9,900
1078	8/11/2008 10:11:00 PM	25,000	2,500	27,500
1079	8/11/2008 10:12:00 PM	67,500	6,750	74,250
1080	8/11/2008 10:29:00 PM	85,500	8,550	94,050
1081	8/11/2008 10:55:00 PM	76,000	7,600	83,600
1082	8/11/2008 11:35:00 PM	25,000	2,500	27,500
1083	8/12/2008 12:23:00 AM	71,500	7,150	78,650
1084	8/12/2008 02:24:00 PM	99,500	9,950	109,450
1085	8/12/2008 08:05:00 PM	40,000	4,000	44,000
1086	8/12/2008 09:26:00 PM	24,000	2,400	26,400
1087	8/12/2008 09:59:00 PM	36,000	3,600	39,600
1088	8/12/2008 10:05:00 PM	36,000	3,600	39,600
1089	8/12/2008 10:18:00 PM	28,000	2,800	30,800
1090	8/12/2008 10:28:00 PM	40,000	4,000	44,000
1092	8/12/2008 10:31:00 PM	39,000	3,900	42,900
1093	8/12/2008 10:42:00 PM	50,000	5,000	55,000
1094	8/12/2008 11:37:00 PM	36,000	3,600	39,600
1096	8/13/2008 07:29:00 PM	22,000	2,200	24,200
1097	8/13/2008 09:14:00 PM	32,000	3,200	35,200
1098	8/13/2008 09:15:00 PM	25,500	2,550	28,050
1099	8/13/2008 09:43:00 PM	36,000	3,600	39,600
1100	8/13/2008 10:21:00 PM	26,000	2,600	28,600
1102	8/13/2008 10:56:00 PM	71,500	7,150	78,650
1103	8/13/2008 11:16:00 PM	15,000	1,500	16,500

1105	8/14/2008 12:28:00 AM	9,000	900	9,900
1106	8/14/2008 12:33:00 AM	37,000	3,700	40,700
1107	8/14/2008 12:41:00 AM	24,000	2,400	26,400
1108	8/14/2008 01:01:00 AM	21,000	2,100	23,100
1109	8/14/2008 12:44:00 PM	86,500	8,650	95,150
1110	8/14/2008 02:22:00 PM	27,000	2,700	29,700
1111	8/14/2008 02:56:00 PM	41,000	4,100	45,100
1113	8/14/2008 06:31:00 PM	33,000	3,300	36,300
1114	8/14/2008 06:31:00 PM	11,000	1,100	12,100
1115	8/14/2008 08:11:00 PM	8,000	800	8,800
1116	8/14/2008 08:45:00 PM	19,000	1,900	20,900
1117	8/14/2008 10:05:00 PM	60,500	6,050	66,550
1118	8/14/2008 10:53:00 PM	120,500	12,050	132,550
1119	8/14/2008 10:57:00 PM	33,000	3,300	36,300
1120	8/14/2008 11:02:00 PM	29,000	2,900	31,900
1121	8/14/2008 11:20:00 PM	45,000	4,500	49,500
1122	8/14/2008 11:23:00 PM	17,000	1,700	18,700
1123	8/14/2008 11:47:00 PM	60,500	6,050	66,550
1124	8/14/2008 11:49:00 PM	104,500	10,450	114,950
1125	8/14/2008 11:54:00 PM	31,000	3,100	34,100
1126	8/15/2008 12:03:00 AM	13,000	1,300	14,300
1127	8/15/2008 01:38:00 AM	26,000	2,600	28,600
1128	8/15/2008 02:50:00 PM	60,500	6,050	66,550
1129	8/15/2008 06:49:00 PM	14,000	1,400	15,400
1132	8/15/2008 09:13:00 PM	273,000	27,300	300,300
1133	8/15/2008 09:23:00 PM	47,000	4,700	51,700
1134	8/15/2008 09:30:00 PM	45,000	4,500	49,500
1136	8/15/2008 09:43:00 PM	49,500	4,950	54,450
1137	8/15/2008 09:44:00 PM	36,000	3,600	39,600

1138	8/15/2008 09:48:00 PM	37,000	3,700	40,700
1139	8/15/2008 09:48:00 PM	48,000	4,800	52,800
1140	8/15/2008 10:01:00 PM	227,500	22,750	250,250
1141	8/15/2008 10:02:00 PM	42,000	4,200	46,200
1142	8/15/2008 10:34:00 PM	32,000	3,200	35,200
1143	8/15/2008 11:17:00 PM	25,000	2,500	27,500
1144	8/16/2008 12:21:00 AM	18,000	1,800	19,800
1145	8/16/2008 12:33:00 AM	7,000	700	7,700
1146	8/16/2008 01:31:00 PM	43,000	4,300	47,300
1147	8/16/2008 01:56:00 PM	44,500	4,450	48,950
1148	8/16/2008 03:11:00 PM	15,000	1,500	16,500
1149	8/16/2008 07:17:00 PM	15,000	1,500	16,500
1151	8/16/2008 09:22:00 PM	216,500	21,650	238,150
1152	8/16/2008 09:47:00 PM	29,000	2,900	31,900
1153	8/16/2008 09:49:00 PM	191,000	19,100	210,100
1154	8/16/2008 09:51:00 PM	87,500	8,750	96,250
1155	8/16/2008 09:51:00 PM	25,000	2,500	27,500
1156	8/16/2008 09:53:00 PM	24,000	2,400	26,400
1158	8/16/2008 10:32:00 PM	96,500	9,650	106,150
1159	8/16/2008 10:35:00 PM	36,000	3,600	39,600
1161	8/16/2008 10:39:00 PM	8,000	800	8,800
1163	8/16/2008 10:45:00 PM	18,000	1,800	19,800
1164	8/16/2008 10:50:00 PM	19,000	1,900	20,900
1165	8/16/2008 10:59:00 PM	60,000	6,000	66,000
1166	8/16/2008 11:08:00 PM	48,000	4,800	52,800
1167	8/16/2008 11:18:00 PM	111,000	11,100	122,100
1168	8/16/2008 11:23:00 PM	112,500	11,250	123,750
1169	8/16/2008 11:52:00 PM	147,000	14,700	161,700
1170	8/16/2008 11:56:00 PM	171,000	17,100	188,100

1171	8/17/2008 12:09:00 AM	82,000	8,200	90,200
1173	8/17/2008 01:18:00 AM	69,000	6,900	75,900
1175	8/17/2008 01:35:00 AM	28,000	2,800	30,800
1176	8/17/2008 01:14:00 PM	236,000	23,600	259,600
1177	8/17/2008 01:44:00 PM	105,000	10,500	115,500
1178	8/17/2008 09:04:00 PM	171,000	17,100	188,100
1179	8/17/2008 09:05:00 PM	31,000	3,100	34,100
1180	8/17/2008 09:39:00 PM	63,500	6,350	69,850
1182	8/17/2008 11:40:00 PM	26,000	2,600	28,600
1183	8/18/2008 01:46:00 PM	94,500	9,450	103,950
1184	8/18/2008 01:46:00 PM	46,500	4,650	51,150
1185	8/18/2008 02:26:00 PM	48,000	4,800	52,800
1186	8/18/2008 03:08:00 PM	33,000	3,300	36,300
1187	8/18/2008 03:08:00 PM	37,000	3,700	40,700
1188	8/18/2008 03:19:00 PM	69,000	6,900	75,900
1189	8/18/2008 04:07:00 PM	50,000	5,000	55,000
1190	8/18/2008 04:34:00 PM	28,000	2,800	30,800
1191	8/18/2008 04:51:00 PM	39,000	3,900	42,900
1192	8/18/2008 06:04:00 PM	149,500	14,950	164,450
1193	8/18/2008 08:29:00 PM	91,000	9,100	100,100
1194	8/18/2008 08:40:00 PM	20,000	2,000	22,000
1195	8/18/2008 08:48:00 PM	37,000	3,700	40,700
1196	8/18/2008 08:49:00 PM	46,000	4,600	50,600
1197	8/18/2008 09:14:00 PM	71,000	7,100	78,100
1198	8/18/2008 09:18:00 PM	42,000	4,200	46,200
1199	8/18/2008 09:20:00 PM	17,000	1,700	18,700
1200	8/18/2008 09:45:00 PM	122,000	12,200	134,200
1201	8/18/2008 09:55:00 PM	68,000	6,800	74,800
1202	8/18/2008 09:59:00 PM	6,000	600	6,600

1203	8/18/2008 10:18:00 PM	11,000	1,100	12,100
1204	8/18/2008 10:28:00 PM	27,000	2,700	29,700
1205	8/18/2008 10:37:00 PM	67,000	6,700	73,700
1206	8/18/2008 11:13:00 PM	105,500	10,550	116,050
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1214	8/19/2008 02:18:00 PM	16,000	1,600	17,600
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1223	8/19/2008 09:59:00 PM	38,000	3,800	41,800
1224	8/19/2008 10:17:00 PM	30,000	3,000	33,000
1225	8/19/2008 10:46:00 PM	17,500	1,750	19,250
1227	8/19/2008 10:58:00 PM	42,000	4,200	46,200
1228	8/19/2008 11:02:00 PM	74,000	7,400	81,400
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1240	8/20/2008 08:23:00 PM	35,000	3,500	38,500
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1242	8/20/2008 08:45:00 PM	24,000	2,400	26,400
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1244	8/20/2008 09:01:00 PM	12,000	1,200	13,200
1245	8/20/2008 09:28:00 PM	32,000	3,200	35,200
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1256	8/20/2008 11:02:00 PM	25,000	2,500	27,500
1257	8/20/2008 11:06:00 PM	49,000	4,900	53,900
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1259	8/21/2008 01:14:00 AM	24,000	2,400	26,400
1260	8/21/2008 02:42:00 PM	33,750	3,375	37,125
1261	8/21/2008 07:27:00 PM	33,500	3,350	36,850
1262	8/21/2008 09:03:00 PM	30,000	3,000	33,000
1263	8/21/2008 09:04:00 PM	52,500	5,250	57,750
1264	8/21/2008 09:22:00 PM	95,000	9,500	104,500
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1271	8/21/2008 11:42:00 PM	37,000	3,700	40,700
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1273	8/22/2008 02:50:00 PM	135,500	13,550	149,050
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1275	8/22/2008 07:53:00 PM	18,000	1,800	19,800
1276	8/22/2008 07:55:00 PM	28,000	2,800	30,800
1277	8/22/2008 08:10:00 PM	39,500	3,950	43,450
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1284	8/22/2008 10:58:00 PM	23,500	2,350	25,850
1285	8/22/2008 11:18:00 PM	7,000	700	7,700
1287	8/22/2008 11:41:00 PM	10,000	1,000	11,000
1288	8/23/2008 12:39:00 AM	30,000	3,000	33,000
1289	8/23/2008 03:01:00 PM	48,500	4,850	53,350
1290	8/23/2008 06:32:00 PM	23,000	2,300	25,300
1291	8/23/2008 08:38:00 PM	84,500	8,450	92,950
1292	8/23/2008 08:39:00 PM	53,500	5,350	58,850
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1302	8/23/2008 10:32:00 PM	38,000	3,800	41,800
1303	8/23/2008 10:34:00 PM	231,000	23,100	254,100
1304	8/23/2008 10:42:00 PM	161,500	16,150	177,650
1305	8/23/2008 10:46:00 PM	8,000	800	8,800
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1307	8/23/2008 10:55:00 PM	37,000	3,700	40,700
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1318	8/24/2008 10:03:00 PM	62,000	6,200	68,200
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1320	8/24/2008 10:28:00 PM	17,000	1,700	18,700
1321	8/24/2008 10:32:00 PM	33,000	3,300	36,300
1322	8/24/2008 10:49:00 PM	32,000	3,200	35,200
1323	8/24/2008 11:16:00 PM	22,000	2,200	24,200
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1327	8/25/2008 12:27:00 AM	0	0	0
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1330	8/25/2008 01:28:00 AM	24,000	2,400	26,400

1331	8/25/2008 02:20:00 AM	14,000	1,400	15,400
1332	8/25/2008 02:29:00 PM	59,500	5,950	65,450
1333	8/25/2008 02:33:00 PM	39,000	3,900	42,900
1334	8/25/2008 03:47:00 PM	11,000	1,100	12,100
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1347	8/26/2008 02:00:00 PM	86,000	8,600	94,600
1349	8/26/2008 09:17:00 PM	82,500	8,250	90,750
1350	8/26/2008 09:19:00 PM	13,000	1,300	14,300
1351	8/26/2008 09:31:00 PM	101,000	10,100	111,100
1352	8/26/2008 09:35:00 PM	73,500	7,350	80,850
1353	8/26/2008 10:02:00 PM	265,500	26,550	292,050
1354	8/26/2008 10:04:00 PM	38,000	3,800	41,800
1355	8/26/2008 10:22:00 PM	34,000	3,400	37,400
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1357	8/27/2008 05:41:00 PM	34,000	3,400	37,400
1358	8/27/2008 08:19:00 PM	6,000	600	6,600
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1364	8/27/2008 09:27:00 PM	32,000	3,200	35,200
1365	8/27/2008 10:01:00 PM	48,000	4,800	52,800
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1368	8/28/2008 06:46:00 PM	47,500	4,750	52,250
1369	8/28/2008 08:36:00 PM	47,000	4,700	51,700
1370	8/28/2008 08:59:00 PM	17,500	1,750	19,250
1371	8/28/2008 09:05:00 PM	32,000	3,200	35,200
1372	8/28/2008 09:33:00 PM	281,000	28,100	309,100
1374	8/28/2008 10:04:00 PM	28,500	2,850	31,350
1375	8/28/2008 10:40:00 PM	19,000	1,900	20,900
1376	8/28/2008 10:46:00 PM	27,500	2,750	30,250
1377	8/29/2008 12:06:00 AM	52,500	5,250	57,750
1378	8/29/2008 01:09:00 AM	24,000	2,400	26,400
1379	8/29/2008 07:43:00 PM	82,500	8,250	90,750
1380	8/29/2008 08:07:00 PM	111,500	11,150	122,650
1381	8/29/2008 08:34:00 PM	65,000	6,500	71,500
1382	8/29/2008 08:45:00 PM	7,500	750	8,250
1383	8/29/2008 08:48:00 PM	50,000	5,000	55,000
1384	8/29/2008 09:21:00 PM	30,000	3,000	33,000
1385	8/29/2008 09:24:00 PM	117,500	11,750	129,250
1386	8/29/2008 09:27:00 PM	125,500	12,550	138,050
1387	8/29/2008 09:28:00 PM	34,000	3,400	37,400
1388	8/29/2008 09:34:00 PM	23,500	2,350	25,850
1389	8/29/2008 09:52:00 PM	31,000	3,100	34,100
1390	8/29/2008 09:55:00 PM	51,000	5,100	56,100
1391	8/29/2008 10:12:00 PM	56,000	5,600	61,600

1392	8/29/2008 10:31:00 PM	5,000	500	5,500
1393	8/29/2008 10:33:00 PM	10,000	1,000	11,000
1394	8/30/2008 01:04:00 AM	8,000	800	8,800
1395	8/30/2008 03:05:00 PM	57,500	5,750	63,250
1396	8/30/2008 04:27:00 PM	16,000	1,600	17,600
1397	8/30/2008 08:23:00 PM	35,000	3,500	38,500
1398	8/30/2008 08:51:00 PM	39,000	3,900	42,900
1399	8/30/2008 09:16:00 PM	15,000	1,500	16,500
1400	8/30/2008 09:47:00 PM	26,500	2,650	29,150
1402	8/30/2008 10:29:00 PM	149,500	14,950	164,450
1403	8/30/2008 10:32:00 PM	39,000	3,900	42,900
1404	8/30/2008 10:52:00 PM	155,500	15,550	171,050
1405	8/30/2008 11:10:00 PM	118,000	11,800	129,800
1407	8/30/2008 11:59:00 PM	132,500	13,250	145,750
1408	8/31/2008 12:28:00 AM	37,500	3,750	41,250
1409	8/31/2008 12:34:00 AM	30,500	3,050	33,550
1410	8/31/2008 12:53:00 AM	24,000	2,400	26,400
1411	8/31/2008 01:53:00 AM	37,000	3,700	40,700
1412	8/31/2008 07:14:00 PM	6,000	600	6,600
1413	8/31/2008 08:11:00 PM	35,500	3,550	39,050
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1416	8/31/2008 09:09:00 PM	231,000	23,100	254,100
1417	8/31/2008 09:10:00 PM	30,000	3,000	33,000
1418	8/31/2008 09:11:00 PM	35,500	3,550	39,050
1419	8/31/2008 09:11:00 PM	22,000	2,200	24,200
1420	8/31/2008 09:37:00 PM	24,000	2,400	26,400
1421	8/31/2008 09:37:00 PM	57,000	5,700	62,700
1422	8/31/2008 09:49:00 PM	24,500	2,450	26,950

1423	8/31/2008 09:57:00 PM	14,000	1,400	15,400
1424	8/31/2008 10:07:00 PM	54,500	5,450	59,950
	Total (LBP):	28,137,450	2,812,120	**30,949,570**

We can conclude that the POS software is:

- EFFECTIVE: using the system, the restaurant made no fewer than 7,642,000 LBP in sales.
- EFFICIENT: the system allowed the registration of more variables and more values as well.

Thus, ICT in hospitality businesses passed successfully our quantitative test. In the following pages, we are going to conduct a semi-structured interview with a restaurant manager to determine in qualitative terms, the effect of ICTs.

Interview with Rony Wansa, General Manager at Maison Jabbour – Kousba – North Lebanon

Can you please tell me about Maison Jabbour?

Maison Jabbour was founded in July 2007. It is owned by Robert Jabbour. The restaurant began small and witnessed one major expansion and redecoration, as well as a couple of minor ones. Maison Jabbour is located on Kousba highway.

How is Maison Jabbour positioned today?

Our restaurant is a leader in this area. It's one of the most reputable ones. It features a mixture of both oriental and western styles. We present two weekly one man show nights on Friday and Saturday. On these days, the restaurant is fully booked.

How do you process customer orders?

We use the traditional way. Our chef de rang takes the order from the table, then brings it to the bar where we have a computer equipped with a POS system. The bar tender registers the information that is on the paper (table number, dishes and quantities, and so on), then the order is taken to the kitchen. Our POS system features a separate section for away orders; we apply the same procedure, instead we take phone calls and customer personal information rather than table numbers.

When did you start using the POS system?

We acquired it on June 2009 and started immediately using it since it was easy to learn and covered most of our work process.

How did it affect your business? What benefits did you get?

First, the most important benefit is the increased security of information flow among our workers. Before using the computer program, we had a noticeable amount of waste. For example, we couldn't keep track of our stock. All this changed after we started using the POS system. The software generates comprehensive reports that allow us to keep track of everything.

Secondly, we are saving time. We stopped worrying about archiving or reviewing our data. All this is done automatically. Thus, the third benefit is saving labor expense. We lay off two employees since their job was done by the computer.

When did you launch your Facebook group?

Last summer we launched the Maison Jabbour group.

"The most important benefit is the increased security of information flow among our workers."

Did it bring anything new?

Yes of course. We use it to post photos of the couples who attend our restaurant. It is a new way for us to increase our clients' loyalty.

What about SMS invitations?

"We send our customers personal text messages."

Yes, we do that every week or two. We send our customers personal text messages. This is another way of increasing intimacy with them. Restaurants cannot succeed without good public relations. We always try to find new ways such as SMS and Facebook to make a difference.

How many competitors do you have in your area?

There are plenty of restaurants in this area. But I'd say that our competitors are two.

Do they implement ICT solutions as well?

Yes I'm pretty sure they do.

Finally, do you think that ICTs are a necessity to your business?

I think that they help a lot. If one wants to increase the efficiency of his restaurant, ICT is the way to go. If you use the right software with the right website, you would have developed a competitive advantage that is very difficult to imitate.

"If one wants to increase the efficiency of his restaurant, ICT is the way to go."

Conclusion

Tourism enterprises and organizations are more and more challenged by the rapidly evolving technological environment: the skills required for managing electronic business processes - customer services, property and yield management, and booking requests - are increasing and the way of doing business differs from the traditional approach most restaurants are used to. Stakeholders and employees must therefore constantly update their knowledge on the use of new media. Tourism enterprises that fail to implement these new media successfully in their work processes face competitive disadvantages.

Another option to improve ICT use among SME hospitality enterprises is to offer seminars/courses, customized consultancy services and contacts to trustworthy specialists. Peters and Mathies (2002) further propose e-learning to spread knowledge among hoteliers. In the case of Kleinwalsertal, the tourist organization has created a free consultancy service. The service is run by a full-time employee who is trying to improve the ICT use among all the hotels and guesthouses in the destination.

ICT is now well embedded in the smaller rural hospitality businesses. The majority of northern Lebanese restaurants use ICT to improve the effectiveness of their operation across a very wide range of functions. Whilst there is a slight difference by the size of the establishment in the type of ICT applications employed, there is sound evidence of the recognition of the importance of ICT as a marketing tool. It seems that ICT offers rural businesses great convenience.

Newly-opened restaurants use ICT to improve their businesses, with increased occupancy, reduction of seasonal trends and a real understanding of the advantages of the internet for their business by attracting guests through promoting the uniqueness of their establishments and location.

They are aware of the importance of ICT in a peripheral area and see it as a means to add value and gain a competitive advantage. As Deakins et al. (2003) had noted, ICT as a particular innovation, has been taken up by rural firms. In entrepreneurial terms, our interview respondents were seen to acting entrepreneurially; overcoming the problems associated with being rural by the innovative use of ICT across many functions. This innovative use may have been generated

through interest and experimentation. As Ramsey et al. (2003, p. 261) contend it is not just about raising awareness of the potential and benefits of ICT "but by raising a business awareness and increasing business skills in general as any problems will not just be reduced by increasing the technological competence of small businesses". Thus there may need to be an improvement in the accessibility and promotion of ICT awareness and training.

Moreover, each individual firm needs to be recognized in the context of their size, experience and aspirations. Consequently generic support may not realize the uniqueness of individuals and the ability of the internet to allow them to differentiate their product. The concern about the availability and transfer rate of ISDN and Broadband (ADSL) in rural areas that had deterred users as identified by Smyth et al. (2001) is clearly noticed in this study.

Finally, restaurant and hotel owners in north Lebanon have no option to choose but to adopt ICT solutions in their businesses. ICT is not a luxury anymore. As we noticed, it has become a standard element in this industry.

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