

# Digitization of European SMEs in Tourism and Hospitality: The Case of Greek Hoteliers

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**Abstract**—The aim of this study is to explore the need of small and medium-sized businesses in tourism and hospitality industry to adopt technology and enhance their degree of digitalization, along with the main benefits enjoyed by technology and the main challenges that hinder its adoption. Within a hermeneutic phenomenological perspective, semi-structured interviews were conducted with three hotel owners and the focus was to identify the main reasons of adoption of technology, enablers and barriers. The findings were grouped with the goal of identifying typology of business practices in using and adopting technology.

**Keywords**—Digitalization, hospitality, SME, Interpretative Phenomenology.

## I. INTRODUCTION

DIGITAL innovation is key for the competitiveness of the tourism industry although European tourism Small Medium-sized Enterprises (SMEs) are lagging behind in using the potential which is offered by modern technologies. In general, the adoption of technology by SMEs has been very slow, and there are various factors identified as the ones playing an important role in the way that SMEs incorporate technology. Some of these factors are environmental pressure, industry pressure or even pressures arising from suppliers and customers. [1] The use of technological innovation in the tourism and hospitality sector has significantly impacted and transformed the businesses in the industry. The industry is also dominated by the appearance of new types of actors which are game-changers in the way that the lifecycle of an entire travel experience evolves: Dreaming, planning, booking, experiencing, sharing, reviewing. Moreover, technology is leading to the emergence of new business models such as shared economy, or else P2P and "collaborative consumption", which usually refers to a new socio-economic system of relationships among people that harnesses the unique power of technology. New on-line platforms are used to connect people and marketplaces through a new form of transactions such as home sharing and these business models and transactions have significant impact on the environment and the society. [2] Moreover, technology and infrastructure have transformed the traveling experience to a seamless or "door" to "door" travel. Nevertheless, the extent and the degree of seamless travel depends greatly on the destination. Some destinations prove to be more ready for the provision of such an experience than others. Research has indicated that United States, as an example, was better on the technological front, whereas Europe

was presented as one of the good examples of seamless travel on the infrastructure front.[3]

Albeit the evolution of new technologies, the degree of digitalization of SMEs is still not very high, and although there are considerable benefits enjoyed through the adoption of technology, businesses face many challenges in implementing technologically enabled solutions. A general assumption is that the tourism sector has mainly reacted to information and communication technologies (ICT) developed in other industries, and has not really produced novel ICT solutions. However, the role of tourism in stimulating ICT developments should not be underestimated given that it has been one of the sectors that has promoted not only the proliferated use of the Internet but also the development of e-commerce. Moreover, as pointed out by the Expert Panel on Service Innovation in the EU in a report published in 2011, enterprises in the tourism industry have already moved from simply reacting to ICT developments to engaging in smart developments that use technological processes and interactive networks in an effort to better meet the requirements of their customers, and to be able to target specific market segments more efficiently. [4] Actually, the internationalisation of the ICT follows one of two models: product-driven or client-driven. The product-driven solutions suggest that companies introduce innovative technologies in the way that end clients do business. The outcomes of the use of such technologies are increased efficiencies, enhanced reliability and security, and cost savings. These type of solutions increase the degree of internationalization of a business, since there is need to develop a market niche for which there is insufficient critical mass in a local or national market. [4] Further research suggests that SMEs make minimal use of back office technology and some of them even prefer person-to-person interfaces through low-tech means. [5]

A different level of adoption of ICT solutions is also identified at a country level. However, the limitation here is that most of the studies on ICT adoption are based on developed countries, such as European countries and USA, and they mainly reflect the use of technology by large organizations instead of SMEs. [6]

While the adoption of online e-commerce applications in general is not very high in Europe, the hospitality sector declares relatively wide usage (around 45% of enterprises use e-commerce facilities).[7] However, it should be noted that most of the studies do not examine cross-cultural variances among SMEs in various countries. Research in this domain

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could help us to further identify the adoption profiles of the businesses and the influence of regional contexts on the use of technology. [8]

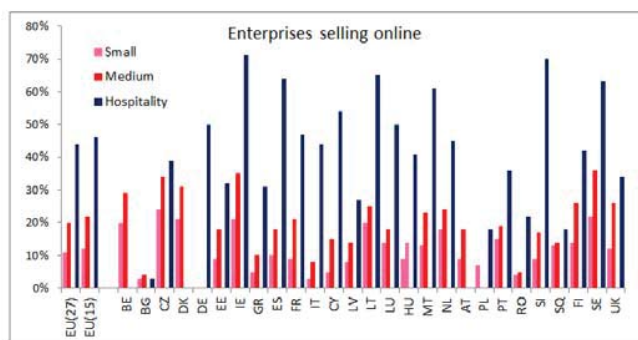


Fig. 1 ICT Adoption by European SMEs [7]

A case study conducted in the UK proves that the majority of SMEs are experiencing a series of risks in adopting e-commerce solutions and these risks have been mainly identified as security, reputation and branding, legal and tax risks as well as leadership, cultural and expertise. [9] Moreover, many SMEs have been identified as supported by owner-managers that are ICT enthusiasts, although the majority of owners lack the required IT skillset enabling them to engage with the digital economy.[10]

Greece in particular seems to be lagging behind when it comes to the ICT penetration and the level of e-commerce on both the supply and demand side. [6] Although most of the tourism businesses in Greece realize the need to have an on-line presence in the form of a web site, their actual technological advancement is limited. Creating a website for the company is undoubtedly a vital component for the success of the business. According to UNWTO, 71% of travelers make arrangements solely on their own, just by using the Internet [11]. Moreover, customers and businesses regard social platforms are vital in providing real-time customer service as these are found to add credibility to the company [11]. Another key trend identified by Xiang is the contribution of social media in the planning phase of the journey. [12]. Travelers use social media for trip planning both before and during their stay at the destination in order to upload content about the trip, as well as to read about the experiences of previous customers [12]. The trend of increased use of Internet in trip planning has a major effect on the business models of different companies in the tourism and hospitality industry [12].

The adoption and use of ICT has been identified by research as a key contributor towards the acquisition of a competitive advantage for SMEs. First of all, ICT enables SMEs to assess the environment and identify opportunities to access new markets. Moreover, the use of technology helps SMEs to cut down their costs and become more cost-effective. Last but not least, ICT helps companies acquire and analyze valuable information about their customers, and thus promote and improve customer relationships and service. [13] A study of travel agencies in developing countries and their degree of

adoption of technology identified five main drivers of adoption: (1) competitors' pressure, (2) suppliers' pressure, (3) adaptation to technology changes, (4) globalization issues, and (5) the survival of travel agents against disintermediation. [1]. Buhalis has further classified the factors determining IT use by SMEs as push and pull. The push factors are related to the risks and threats of not using technological enabled products and solutions, whereas the pull factors are related to the benefits that can be enjoyed by businesses in implementing and using technology. [14] Some of the push factors include new government policies, the pressure exercised to businesses by global marketplaces, and new education and training of employees in the tourism sector. On the other end, some of the key pull factors focus on the benefits arising from the opportunities of increased connectivity and the ability provided to businesses to form synergies with customers and businesses.[14]

Despite the fact that businesses enjoy considerable benefits by using technology, the key barriers of adoption of technology are identified as cost and risk. Moreover, the lack of digital skills and training should also be considered as barriers and it is worthwhile exploring their impact on the degree of technology adoption by SMEs.

To further support literature review and research findings, the researcher engaged into a qualitative research, the findings of which are presented below.

## II. METHODOLOGY

The study used interpretive phenomenology and it was based on the interviews of three entrepreneurs who operate in Greece in the industry of tourism and hospitality. The interviews were carried out within a hermeneutic phenomenological perspective. Hermeneutics is defined as the theory and practice of the interpretation of the meaning of texts. Interpretive Phenomenological Analysis is an approach to qualitative research concerned with exploring and understanding the lived experience of a specified phenomenon [15]. The focus of the research was to explore the degree to which Greek hoteliers of small and medium-sized businesses have adopted technological enabled solutions, and which are the benefits enjoyed by the use of technology and which are the obstacles or barriers - if any.

Qualitative research was selected because semi-structured interviews could inspire more trust between the interviewer and the interviewee and would potentially allow the interviewee to be more frank, and to open up and reveal practices implemented that might affect negatively the image of his/her business.

### A. Sampling

The sample of the research consisted of three individuals, who were selected based on the following eligibility criteria:

1. Status: owner of small medium sized hotel property
2. Size: they should employ at least ten people
3. Industry: businesses in the Hospitality industry operating in Greece.

The main research question and an interview agenda were developed. The researcher then identified a list of candidates from her personal network of professionals. The researcher

called ten professionals in order to identify prospective participants, and the five out of the ten did not fulfill the eligibility criteria. The researcher finally selected the individuals who agreed to participate in the interview and who fulfilled the eligibility criteria.

A short profile of each participant and his/her business is presented below: The first participant is a female, who has gained a degree in English Literature, entrepreneur/owner of a small size business in the industry of Tourism and Hospitality, at the age of 50, and married. Her business is operating for 5 years and is currently employing 14 people. The business is located in Mani, a place in Peloponnese (South part of Greece). The business is mainly operating during the summer months and few weekends during wintertime. The operation of the business is mainly coordinated through the central office of Athens, which employs three people and the rest of the people work at Mani which is located in South Greece. Due to seasonality in the hospitality industry, the business is mainly employing local people, except from the General Manager who is appointed from the office in Athens. The second participant is a male at the age of 40 with a master's degree in Strategic Management. He is also the owner of a family business, a three star mountain hotel of 20 rooms located in Pindo's National Park. The hotel has been operating for the last 15 years and it employs 10-12 people. The last years the hotel is recording negative turnovers, and according to the owner, it has access to very limited financial resources. The third participant is a female at the age of 24 with a bachelor's degree in International Tourism and Hospitality. She is also the hotel owner of a five-star mountain luxury hotel in the area of Metsovo (at the Northern part of Greece) and it has a total of 62 luxury suites. The hotel has been operating for the last 2 years and it has enjoyed considerable growth. It currently employs 23 people.

#### B. Data Collection

The researcher informed participants via an e-mail message about the purpose of the interview and confirmed also in writing that the anonymity of the interviewee would be maintained. A date and time for the interview was then suggested and the interview actually took place at a quiet place, at a non-working time and day, so that the participants would not be occupied with business matters. For two of the three participants living in other cities, a video conference call was set up, during a non-working day and the conversation was recorded so that it could be later transcribed by the researcher. During the interview, the interviewer established rapport with the interviewee and shared some personal background information.

#### C. Interview Schedule

During the interview, it was explained to the interviewees that for the purpose of the consultation, the term 'digitalization' refers to the use of digital/on-line tools by tourism-related businesses for any aspect of a business activity: e.g. provision of information, booking, marketing, consumer satisfaction management, management of resources, administrative issues. The questions asked to the interviewees are the following:

1. Does your business currently make use of digital technologies? If yes, which are they? (i.e. website, on-line reservation system etc.)
2. Overall, what do you think have been the main difficulties/challenges in implementing new digital communication technology solutions within your business?
3. Overall what do you think have been the main benefits that have been enjoyed in implementing new digital communication technology solutions within your business?
4. What could help you further implement new digital communication technology solutions within your business?

#### D. Data Analysis

The researcher had to review the original interviews which were recorded as audio files while keeping notes in order to enhance understanding. As a second step of analysis, spreadsheet software was used in order to assign coding to the transcribed interview and in order to group interviews and analyze content to identify themes. The themes were used to group together the same concepts addressed by the respondents. Finally, common themes were grouped together in order to form the final clusters.

The analysis of data collected produced five interrelated clusters:

1. Use of technology: On-line booking, social media
2. Difficulties/Challenges: Cost, digital literacy and skills of employees
3. Benefits: Cost, increase in productivity, exposure and promotion
4. Technology adoption enablers: Funding, lack of complexity, convergence and standardization.

### III. FINDINGS AND DISCUSSION

In response to the first question and the use of technologies, with respect to back-end technology, two out of the three respondents have reported the use of a Property Management System as a back office system which allows them to keep track of their reservations and bookings. Moreover, only one of the three respondents, the owner of the 5-star luxury hotel is using 43 different Internet Distribution channels such as Expedia and Booking.com, whereas the other two are only using two of the most popular ones. Moreover, the same owner of the property located at Metsovo is the only one using four different Global Distribution Systems in order to communicate with tour operators, as well as a CRM platform to allow them to record and analyze customer information and profiling. In terms of front-end technology all three respondents have confirmed the presence of a website to allow their customers to book online, as well as the use of social media such as Facebook and Instagram to enhance customer engagement and interactivity. Finally, two of the three respondents are further using blogs as a means of encouraging customers to interact and generate content for their websites, and for the social media account of their business.



In response to the second question all three respondents have attested that the major challenge of technology adoption is the cost of the investment. Indeed, the owner of the property at Pindos, which is the less technologically advanced of all three, admits that “So far it was a matter of knowledge and guidance, and we were not able to understand the impact of technology on our business. At this point an investment in digital technologies to support administrative processes, and to support customer satisfaction is almost vital. However, the barrier for that is the cost.” The rest of the respondents have also reported cost as a major challenge in using technology, given that the modern technological solutions become more complex, and may need considerable funding. The second major barrier and challenge of adoption has been identified by two of the three respondents, specifically by the owner of the hotel at Pindos and the owner of the hotel at Mani, as the lack of digital skills and training. The owners of these two properties have attested that they personally feel less comfortable – if not intimidated – with technological solutions and thus strongly feel that the employees working in their hotel lack the appropriate digital literacy, and culture that would promote the use of a larger number of technological solutions. The third owner of the hotel in Metsovo, being also younger in age, considers herself to be net savvy and did not report digital skills as a challenge for technology adoption in her business.

The third question of the survey was focused on the main benefits which have been enjoyed by the hotel owners as a result of implementing technological solutions for their business. All three respondents have agreed that the main benefits acquired by the use of technology are:

1. Better promotion and marketing
2. Cost-effectiveness
3. Increase in productivity

Specifically, and in relation to marketing effectiveness, the owner of the hotel in Mani declared that “Using social media and on-line promotional techniques has helped us to establish faster and more effective communication with our customers”. Moreover, all three respondents have admitted that the use of technology has contributed very positively in the reduction of their costs and expenses, given that it has promoted the productivity of their employees and the streamlining of their business operations.

The last and fourth question of the interview conducted with the three hotel owners has revealed that the main enablers of the use of technology for their businesses is less complexity in the use of technological solutions, and more consolidation and convergence of the technological products implemented. Specifically, the owner of the luxury hotel has affirmed that “in order to use all these technological products in our business we need to find less complex solutions that allow interoperability and standardization”. In addition, the owner of the hotel at Pindos who seems to be the least acquainted with technology has stated that “Guidance about how and where these digital technologies could be implemented and how you can organize a coordinated hotel operation plan using the proper digital technology for each division.”

The above answers provided by the three respondents have been very revealing for the use of technology and adoption by hotel owners in Greece. First of all, it is worth noting that all three hotels are located in rural areas of Greece and indeed in areas which lack a sound technological infrastructure. Yet, all of the hotels - to a different degree - have adopted a technological business solution, appreciating the importance of technology in the tourism and hospitality industry. Moreover, an outcome deriving from the respondents’ answers, and a rather arbitrary assumption which requires further research to be validated as a finding, is that the more net savvy the owner, the higher the level of technology adoption in the business. As also supported by the literature review, the cost of the investment as well as the lack of digital skills seem to be two main barriers that are holding back the owners of these small medium sized hotel businesses from increasing the level of technology adoption. The lack of digital skills of the already existing employees and the cost of training and enhancing digital literacy is highly responsible for the slow pace of digitalization in the business. When it comes to the benefits enjoyed by technology, the use of social media to engage with customers is the minimum level of use of technology and all three hotel owners realize the impact of the use of technology on the effectiveness of their communication with the customers, and they strongly feel that one of the best ways of doing so is to interact with their customers and to encourage them to provide user generated content for their experiences. In that end, technology and the internet has helped them to increase their exposure to a broader customer base, as well as to enhance their degree of internationalization by becoming more globally known as a business. Moreover, the use of technology has contributed towards the development of more cost-efficient business processes and more efficient use of resources. Albeit the benefits enjoyed, all three hotel owners perceive the use of technology as a necessity and not as a means of acquiring a competitive advantage. The new and rather disruptive technologies implemented by modern SMEs are exercising pressure to businesses that wish to remain competitive and survive against technologically agile competitors. Finally, although hotel owners have claimed that the cost of the investment of technological solutions is the main challenge of ICT implementation, when they were asked to isolate key enablers for implementation they did not refer to funding as a key problem; it became evident that they consider the complexity and the lack of standardization in the landscape of technology solutions as more important factors.

The conclusion that could be drawn from the answers provided by the three hotel owners is that the improvement and enhancement of technology adoption is not so much a matter of funding and familiarity with technology, but rather a matter of strategy and culture.

#### IV. BIASES AND LIMITATIONS

The biases of the researcher have to do with the fact that due to past studies and professional exposure, it was inherently assumed that ICT has significant positive implications for the businesses, and that the major challenge that business/owners

and entrepreneurs face is that of lack of funding and training. Moreover, potential limitations of the specific researched study may be summarized as follows:

- rather small sample
- not representative of all tourism related businesses
- lack of quantitative analysis to support findings

Moreover, the semi-structured nature of the interviews might be confining and it might not allow respondents to express themselves honestly.

#### V.FURTHER RESEARCH

The above findings provide adequate ground for the researcher to investigate other aspects, such as the use of policy making in promoting the use of technology in the tourism sector. Moreover, further investigation could be done based on a different type of qualitative analysis such as case study analysis, and a larger sample size, that could lead to more generalized findings.

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