Chapter 1

Introduction

1.1 Electronic Distribution System an Overview

The exponential growth and adoption of information and communication technology (ICT) in the hospitality industry in last few years have overturned the operation of the hospitality industry. Among the ICT technology adoption by the hospitality industry, adoption of the electronic distribution system is the most prominent and notable one. The Electronic Distribution System (EDS) technology as shown in Figure 1.1 supports hospitality organizations to get seamlessly connected to their customers, traditional travel agents, and online travel agents, etc. directly through the internet to share online room information and provided booking & payment facilities.

![EDS technology ecosystem](image)

Figure 1.1: EDS technology ecosystem

The objective of a distribution management is to provide a place, time and possession utility to the customer. Hotel electronic distribution system nodes provide right information regarding hotel rooms to the right consumer at the right time and at the right place to make a right buying decision and booking & consumption thereof. Optimum
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room distribution is important for hotels because they are strategically important as far as total revenue is concerned. To be competitive and achieve optimum organizational performance hospitality organizations have strategically opted to adopt information communication technology in general and hotel electronic distribution system in particular.

For growth and survival adoption of right matching information and communication technology is a critical decision for a hospitality organization. Many hospitality organizations adopt advanced and sophisticated electronic distribution system technology for their competitive positioning and competitive advantage.

1.2 The Development of Electronic Distribution System

Electronic distribution system, which hospitality industry is using today had undergone many successive changes and improvements in last several years. The earliest concept of electronic distribution came into existence way back in early 1950 when the aviation industry attempted to utilize computers to track inventory and sales to optimize their efficiency (Connor and Frew, 2002). These systems were the path-breaker of the modern electronic system, commonly referred as EDS (O’Connor and Piccoli, 2003). Noticing success of electronic inventory distribution in the aviation industry, large hospitality chains initially began to develop their computerized room reservation system commonly called central reservation system (CRS) (Summee Choi & Mattila, 2004; Sunmee Choi & Kimes, 2002). The next big step in the evolution of EDS occurred when the internet came in. On an earlier occasion, these consumers were not having direct access to the EDS, and only a few authorized travel agents had access to EDS to transact room booking electronically. With the emergence of the internet, consumers can bypass travel agent and access Hotel’s EDS. Earlier the cost and complexity of EDS technology were so high that only a few large international chains from the United States were in a position to afford it. With technological innovation and simplification, the emergence of a large number of EDS vendors and a decrease in the cost of technology reduced the barrier to adoption of this technology by smaller and independent hospitality organization (Gursoy, 2010). Today hospitality organizations have started adopting EDS technology for their survival and growth (Wulf and Zarnekow, 2010).
1.3 **Rationale for the Study**

Information and communication technology applications have been improved a lot in the past few years. The hospitality industry has been witnessing rapid changes and progress in technology development and adoption of those changes. These changes are bringing radical changes in their operation and paradigm shift in their management style. Those they adopt changes sometimes may get the early benefit, but they are not sure those changes are sustainable or not. In most of the cases, the success of adoption of new ICT application depends on the employee's acceptance and effective use of that new technology and changes. Therefore it is very important for the hospitality organizations and the technology providers to understand the status of technology acceptance among the hospitality employees.

1.4 **Aims of the Study**

This exploratory research has three major aims. Those are (i) to examine various dimensions which are affecting EDS continued adoption decisions of hotel organizations. (ii) to develop an integrated model of Technology Adoption Model (TAM) and Technological-Organisational-Environmental (TOE) framework to combining into a single unit to evaluate those factors. (iii) to empirically validate and expand the pertinence of TAM and TOE framework in examining continued EDS adoption by the hospitality industry.

1.5 **Research Problem Statement**

Electronic Distribution System (EDS) has become one of the most important technology for hospitality business operation (Law et al., 2014). Various studies found that hotel managers agree that EDS can improve hotel’s total revenue (Law et al., 2009). Several researchers found that many hospitality organizations have opted for conservative approach while adopting EDS for their organization (Leung and Law, 2013). It is observed that there is very little research has been conducted to find some reasonable reason of the adoption of technology in general and EDS in particular in a hospitality organization.
1.6 Research Gaps

During the preliminary stage, research articles were reviewed to identify research article having any relevance to the research topic on information and communication technology in tourism & hospitality area in general and perception on technology adoption in the hospitality industry in particular. The detailed content analysis was exercised on all of these relevant articles. While doing a content analysis of several research articles, it is observed that most of the hospitality researches are focused and based on developed countries where as very few articles are based on developing countries like India. On technology adoption front most of the researchers have focused on the comparison between technology adopters and nonadopters (Zhu and Kraemer, 2005). This research objectively focused on post-adoption stage that is actual usage. Thus this research moves beyond the dichotomous non-adoption and adoption; rather it explored the existent usage.

1.7 Research Objectives

The major objectives of this study are:

- To evaluate the perceived usefulness of electronic distribution system (EDS) technology among the employees of various hospitality organizations.
- To evaluate the perceived ease of use of EDS technology among the employees of several hospitality organizations.
- To study the perception of the hospitality employees adoption of EDS technology in three key dimensions such as relative advantage, complexity, and compatibility in a technological context.
- To study the perception of the hospitality employees adoption of EDS technology in three key dimensions such as upper management support, training and education, and technological competence in the organizational context.
- To study the perception of the hospitality employees adoption of EDS technology in two key dimensions such as competitive pressure and trading partner support in the environmental context.
• To find the employees attitude towards using EDS technology in hospitality organizations.

### 1.8 Research Scope

This study was undertaken considering the hospitality organizations operating within the geographical boundary of the state Odisha in India. Further, the study is restricted to the hospitality organizations, who have adopted electronic distribution system technology in their business operation.

### 1.9 Organisation of the Thesis

This study is divided into six chapters.

**Chapter One:** It serves as the introductory chapter, which introduces the background and foundation to this research topic on the perception for the application of electronic distribution system by the employees of hospitality organizations. This chapter discusses the development of electronic distribution system, rationale and aims of this study, brings out the research problem statement, research gaps, research objectives and scope of the research.

**Chapter Two:** This chapter is the literature review chapter, which summarizes the research review of literature from various research literature published in research journals. This chapter starts with reviewing literature review articles about information technology mostly in the hospitality industry; then it moves on to reviewing specific research articles on information technology adoption published in leading tourism and hospitality research journals. It further discusses technology adoption and hospitality employees’ motivation, how the EDS technology has been changing. Then it further moves on to discuss various well-established technology adoption theories and then shortlisted two prominent models, i.e., Technology Acceptance Model, Technology-Organization-Environment Framework. The chapter ends with the identification of construct from the literature.
Chapter Three: This chapter focuses on building research hypotheses from the existing literature, and then it proposes a conceptual model. The chapter starts with discussing interrelationship among the constructs, and then from the discussion, several hypotheses were proposed. Based on the proposed hypotheses and earlier literature study, a conceptual model of integrated TAM and TOE for EDS technology adoption is proposed. The chapter ends with a discussion of the indirect effects and direct effects between constructs in the proposed conceptual model.

Chapter Four: Research methodology adopted in this research is taken up for detailed discussion in this chapter. The chapter starts with defining methods used for this research. It further discusses the development of research instrument, plan for sampling and the procedures for actual field data collection. This chapter ends with the discussion of tools and the techniques used for the data analysis and modeling.

Chapter Five: This chapter contains quantitative data analyses and results. It has five major analytical themes. It starts with the descriptive analysis, and then it moves to analyze the scores of responses. Post analysis of the scores the chapter discusses data reliability and validity, and construct validity. In the last part, the inferential analysis was conducted through path analysis.

Chapter Six: This is the concluding chapter, which discusses the finding of the research and suggestions. It further discusses the contribution of this study. The chapter concludes with research limitations, future research scopes.