# Diplomarbeit

Malte Rücker

# Revenue Management Integration

The Financial Performance Contribution of an Integrated Revenue Management Process for Hotels



## **Bibliographic information published by the German National Library:**

The German National Library lists this publication in the National Bibliography; detailed bibliographic data are available on the Internet at http://dnb.dnb.de .

This book is copyright material and must not be copied, reproduced, transferred, distributed, leased, licensed or publicly performed or used in any way except as specifically permitted in writing by the publishers, as allowed under the terms and conditions under which it was purchased or as strictly permitted by applicable copyright law. Any unauthorized distribution or use of this text may be a direct infringement of the author s and publisher s rights and those responsible may be liable in law accordingly.

Copyright © 2010 Diplomica Verlag GmbH

ISBN: 9783842828100



Revenue Management Integration: The Financial Performance Contribution of an Integrated Revenue Management Process for Hotels

# Diplomarbeit

## Malte Rücker

## Revenue Management Integration

The Financial Performance Contribution of an Integrated Revenue Management Process for Hotels



#### Malte Rücker

## Revenue Management Integration: The Financial Performance Contribution of an Integrated Revenue Management Process for Hotels

ISBN: 978-3-8428-2810-0

Herstellung: Diplomica® Verlag GmbH, Hamburg, 2012

Zugl. Internationale Fachhochschule Bad Honnef · Bonn, Bad Honnef, Deutschland,

Diplomarbeit, 2010

Dieses Werk ist urheberrechtlich geschützt. Die dadurch begründeten Rechte, insbesondere die der Übersetzung, des Nachdrucks, des Vortrags, der Entnahme von Abbildungen und Tabellen, der Funksendung, der Mikroverfilmung oder der Vervielfältigung auf anderen Wegen und der Speicherung in Datenverarbeitungsanlagen, bleiben, auch bei nur auszugsweiser Verwertung, vorbehalten. Eine Vervielfältigung dieses Werkes oder von Teilen dieses Werkes ist auch im Einzelfall nur in den Grenzen der gesetzlichen Bestimmungen des Urheberrechtsgesetzes der Bundesrepublik Deutschland in der jeweils geltenden Fassung zulässig. Sie ist grundsätzlich vergütungspflichtig. Zuwiderhandlungen unterliegen den Strafbestimmungen des Urheberrechtes.

Die Wiedergabe von Gebrauchsnamen, Handelsnamen, Warenbezeichnungen usw. in diesem Werk berechtigt auch ohne besondere Kennzeichnung nicht zu der Annahme, dass solche Namen im Sinne der Warenzeichen- und Markenschutz-Gesetzgebung als frei zu betrachten wären und daher von jedermann benutzt werden dürften.

Die Informationen in diesem Werk wurden mit Sorgfalt erarbeitet. Dennoch können Fehler nicht vollständig ausgeschlossen werden und der Verlag, die Autoren oder Übersetzer übernehmen keine juristische Verantwortung oder irgendeine Haftung für evtl. verbliebene fehlerhafte Angaben und deren Folgen.

© Diplomica Verlag GmbH http://www.diplomica.de, Hamburg 2012

#### **Abstract**

The diploma thesis assesses the opportunity to implement an integrated approach to revenue management in order to meet the challenges of the competitive tourism environment, which are particularly stemming from the increasing importance of the internet. It is proposed that effective and efficient coordination of the disciplines of revenue management, marketing, sales and ecommerce leads to Revenue Management Integration (RMI), which has a positive effect on financial performance and competitiveness. The thesis aims at identifying key linkages among the disciplines and creates a guideline of how the integration may be achieved. Using multivariate regression, it is tested with 30 hotels, affiliated to eight of the largest hotel chains in Germany, whether Revenue Management Integration is positively related to financial performance. The study showed that integrated revenue management is positively related to RevPAR performance in hotel properties, while the relationship to other profitability measures, such as Return on Equity (ROE) and Operating Profit Margin (OPM) did not yield clear results.

Keywords: competitive tourism environment, internet, disciplines, Revenue Management Integration (RMI), financial performance, RevPAR

## **Table of Contents**

ABSTRACT	I
TABLE OF CONTENTS	II
LIST OF FIGURES	V
LIST OF TABLES	<b>V</b> ]
1. INTRODUCTION	1
1.1. RESEARCH QUESTIONS	2
1.2. Research Contribution.	
1.3. GENERAL OBJECTIVE	2
1.4. Specific Objectives	
1.5. HYPOTHESES	
1.6. RESEARCH DESIGN	
1.7. RESEARCH METHODOLOGY	
1.7.2. Structured Interviews.	
1.7.3. Multivariate Regression Analysis.	
1.7.4. Secondary Analysis	
1.7.5. Sampling Method	
2. IMPACT OF THE MODERN TOURISM VALUE NET ON TOURISM INDUSTRY STRUCTURE	8
2.1. THE MODERN TOURISM VALUE NET.	8
2.2. INDUSTRY ANALYSIS ALONG THE FIVE COMPETITIVE FORCES	10
3. REVENUE MANAGEMENT INTEGRATION (RMI)	14
3.1. INTEGRATED REVENUE MANAGEMENT AS A COMPETITIVE ADVANTAGE	
3.2. REENGINEERING AN ORGANIZATION FOR REVENUE MANAGEMENT INTEGRATION (RMI)	
4. REVENUE MANAGEMENT PERSPECTIVE	
4.1. EMSR METHOD AND DEMAND FORECASTING	
4.2. PRICING AND PRICE ELASTICITIES	29
5. MARKETING PERSPECTIVE	35
5.1. CREATING AND MAINTAINING CUSTOMER VALUE	
5.2. BLUE OCEAN STRATEGY AND VALUE INNOVATION	
5.3. CUSTOMER SEGMENTATION AND DIFFERENTIAL PRICING	
5.4. INTEGRATING CUSTOMER RELATIONSHIP MANAGEMENT	
6. SALES PERSPECTIVE	
6.1. PRODUCT PORTFOLIO OPTIMIZATION	
6.2. COORDINATION AND GOAL ALIGNMENT	
6.4. SALES AND MARKETING	
7. E-COMMERCE PERSPECTIVE	
7.1. CHANNEL ANALYSIS AND SELECTION	
7.1. CHANNEL ANALYSIS AND SELECTION	
7.3. ACTIVE CHANNEL MANAGEMENT	
O SHODT SHMMADY OF THE LITEDATHDE DEVIEW	7

## Financial Performance of Revenue Management Integration

9. THE REVENUE MANAGEMENT INTEGRATION (RMI) STUDY	76
9.4. RESEARCH QUESTIONNAIRE	76
9.1. SAMPLE SELECTION	76
9.2. FINANCIAL PERFORMANCE MEASURES	78
9.3. INDIVIDUAL AND AGGREGATE VARIABLES	80
9.5. MULTIVARIATE REGRESSION FOR STATISTICAL ANALYSIS	80
9.6. ADDITIONAL CONTROL VARIABLES	81
10. DATA ANALYSIS AND RESULTS	84
10.1. MULTIPLE REGRESSION ANALYSIS WITH REVPAR	84
10.2. REDUCING THE MULTIPLE REGRESSION MODEL	86
10.3. ANALYSIS OF REDUCED MODEL RESULTS	
10.4. COMPONENT REVENUE MANAGEMENT INTEGRATION (RMI) ANALYSIS	
10.5. MULTIPLE REGRESSION WITH ROE	
10.6. MULTIPLE REGRESSION WITH OPM	96
11. LIMITATIONS OF STUDY AND FURTHER RESEARCH	98
12. CONCLUSION	100
13. REFERENCES	101
14. APPENDICES	109
APPENDIX A: QUESTIONNAIRE OF REVENUE MANAGEMENT INTEGRATION (RMI)	109
APPENDIX B: AMENDMENT TO THE QUESTIONNAIRE	
APPENDIX C: FORMAL LETTER FOR REVENUE MANAGERS	
APPENDIX D: HOTELS OF THE POPULATION FOR THE STUDY	
APPENDIX E: SPSS DATA OUTPUT OF STEPWISE METHOD	
APPENDIX F: SPSS DATA OUTPUT OF ROE AND OPM IN FULL MODEL	128

## List of Figures

FIGURE 1: VISUALIZED COURSE OF INVESTIGATION	8
FIGURE 2: TRADITIONAL TOURISM VALUE CHAIN	9
FIGURE 3: MODERN TOURISM VALUE NET.	9
FIGURE 4: INFLUENCE OF THE INTERNET ON THE COMPETITIVE FORCES	11
FIGURE 5: FOUR DECISIONS SET MODEL OF INTEGRATED REVENUE MANAGEMENT	15
FIGURE 6: DEPARTMENTAL APPROACH TO REVENUE MANAGEMENT INTEGRATION	17
FIGURE 7: KOTTER'S EIGHT STEPS TO TRANSFORM AN ORGANIZATION	18
Figure 8: Mc-Kinsey 7-S Model	22
FIGURE 9: DIAGRAM OF CAPACITY ALLOCATING DECISIONS	26
FIGURE 10: DEMAND FORECASTING DATA	28
FIGURE 11: EXAMPLE OF A HOTEL STRATEGY CANVAS	38
FIGURE 12: THE FOUR ACTIONS FRAMEWORK	39
FIGURE 13: IMPACT OF BLUE OCEAN STRATEGY ON REVENUES AND PROFITS	40
FIGURE 14: REVENUE POTENTIAL COVERED BY CHARGING ONE PRICE	44
FIGURE 15: REVENUE POTENTIAL COVERED BY CHARGING DIFFERENT PRICES	45
FIGURE 16: REVENUE POTENTIAL COVERED BY CHARGING MANY DIFFERENT PRICES	46
FIGURE 17: FACTORS INFLUENCING A DIFFERENTIAL PRICING STRATEGY	47
FIGURE 18: SEGMENTS ACCORDING TO PROFITABILITY FOR CHOOSING A CRM STRATEGY	57
FIGURE 19: CLASSIFICATION OF METHODS FOR ELICITING WILLINGNESS-TO-PAY	60
FIGURE 21: ONLINE DISTRIBUTION ENVIRONMENT	67
FIGURE 22: OPTIMIZATION DECISIONS IN THE BOOKING HORIZON	71
FIGURE 23: GRAPHICAL ILLUSTRATION OF REVENUE MANAGEMENT INTEGRATION (RMI)	75

## Financial Performance of Revenue Management Integration

## **List of Tables**

TABLE 1: STRATIFIED SAMPLE OF HOTEL CHAINS	78
TABLE 2: ADDITIONAL INDEPENDENT CONTROL VARIABLES	83
TABLE 3: SPSS DATA OUTPUT OF FULL MODEL REGRESSION WITH REVPAR	85
TABLE 4: SPSS DATA OUTPUT OF REDUCED REGRESSION MODEL WITH REVPAR	88
TABLE 5: SPSS DATA OUTPUT OF COMPONENT RMI WITH REVPAR	91
TABLE 6: SPSS DATA OUTPUT OF REGRESSION MODEL WITH ROE	95
TABLE 7: SPSS DATA OUTPUT OF REGRESSION MODEL WITH OPM	97

#### 1. Introduction

An integrated approach to Revenue Management (RM), which spans over various disciplines, has frequently been proposed for tourism companies providing perishable products of fixed capacity, such as hotel chains, to fully capture the potential of total profit optimization (Ng, Maull & Godsiff, 2007, McGuire & Pinchuk, 2009). Kimes and Wagner (2001) defined the general strategy of revenue management as the practice used by service firms with fixed capacity to match the supply of a perishable commodity with forecasted demand via strategies that manipulate price and time of consumption (as cited by O'Connor & Murphy, 2008). Furthermore, revenue management and pricing programs have commonly been praised to have the potential to increase revenues by 3 to 8 % which can in turn result in 50 to 100 % profit improvements (Skugge, 2007). This thesis proposes a departmental and functional integration of various activities to arrive at an integrated revenue management approach that is viewed as the necessary reaction to changing market environment conditions.

Information and communication technologies (ICTs) have been changing the tourism industry structure globally, while developing many new opportunities and threats (Buhalis & O'Connor, 2005). In this new environment, revenue management becomes as important and challenging as never before and to operate effectively, skills are required to combine several knowledge areas steadily and creatively to make profit from the process (Henriksson, 2005). Consequently, it is proposed that particularly due to the modern tourism environment, companies have to make use of strategic integrated revenue management to offset the threats and take advantage of opportunities that the modern tourism environment represents.

An integrated approach to revenue management spans the disciplines of yield management, pricing, marketing, sales and e-commerce distribution and seeks to identify linkages to effectively and efficiently coordinate activities in the different areas to arrive at total profit optimization (McGuire & Pinchuk, 2009). The thesis is designed to illustrate how Revenue Management Integration (RMI) could be achieved, and the research part aims to assess whether hotel chains that embrace a higher degree of Revenue Management Integration operate at higher profitability.

## 1.1. Research Questions

This thesis is designed to evaluate whether an integrated revenue management process provides benefits in terms of financial performance to tourism companies selling perishable inventory such as hotel chains, in particular in a changed and more competitive tourism environment. Consequently, the following research questions guide this thesis:

- a. Does the integrated revenue management process have a positive impact on financial performance of hotels?
- b. Is an integrated revenue management process crucial for competitiveness given the changed modern tourism industry environment?

#### 1.2. Research Contribution

The research is useful since the topic of integrating revenue management achieved increasing interest in the academic field as well as in the practical application in recent years (Tranter et al. 2009, McGuire & Pinchuk, 2009, Pinchuk, 2007, Ng et al., 2007). According to Skugge (2007), future improvements of profitability for companies will be by filling gaps and optimizing current revenue management programs rather than investing in new more elaborate computer systems. As a result, companies have to optimize their revenue management procedures and processes within the company, and it is proposed that this can be achieved by taking a holistic view and integrating various disciplines to come to total profit optimization. Roll (2009) argued that "we only have limited knowledge about the impact of the pricing organization within a company on profitability" (p. 397). Thus, the research fills a gap that gives companies not only a guideline how the integration can be achieved but especially whether it has an impact on financial performance and should be pursued and invested in.

## 1.3. General Objective

The general objective is to find out whether it is worthwhile to invest into the implementation Revenue Management Integration (RMI) due to its contribution to financial performance and/or competitiveness.

## 1.4. Specific Objectives

- 1. Assessment how the tourism value net, with the internet at the centre, changes the tourism industry structure.
- 2. Assessment of how the integration of the revenue, marketing, sales and e-commerce departments is best achieved and identification of linkages and key challenges.
- 3. Assessment what companies may gain from an integrated revenue management process in terms of profitability.

## 1.5. Hypotheses

The following working hypotheses are derived for the thesis:

- 1. Revenue Management Integration (RMI) in hotels is positively related to financial performance.
  - a. Revenue Management Integration stands in positive relation to Revenue per Available Room (RevPAR).
  - b. Revenue Management Integration stands in positive relation to Return on Equity (ROE).
  - c. Revenue Management Integration stands in positive relation to Operating Profit Margin (OPM).

#### 1.6. Research Design

The research design sets out the framework in which data is collected and analyzed for the purpose of testing the hypotheses. A cross-sectional design is chosen to determine the relationship between financial performance and Revenue Management Integration (RMI) of hotel chains. According to Bryman and Bell (2003), cross-sectional design is suited when the research is looking for variation between many cases and for that purpose, from each case observations on several variables are made. Olsen and St. George (2004) emphasized that the cross-sectional study design takes the observations at a single point in time, thus change in observations cannot be measured. In cross-sectional design it is crucial to have a standardized procedure based on quantitative data to measure the variation between cases, which also results in a study of high replicability (Bryman & Bell, 2003). Therefore, sound research methods are crucial for an effective study of cross-sectional design.

### 1.7. Research Methodology

Several research methods are used in the study. First of all, a literature review lays the theoretic foundation for the research and provides a comprehensive illustration of Revenue Management Integration (RMI). Additionally, questionnaires were used and structured telephone interviews conducted, as the primary means to collect relevant data for the study and statistical evaluation. The statistical method used for data evaluation is a multivariate regression analysis, designed to determine the relationship between financial performance and Revenue Management Integration. Secondary data is used for control variables of the statistical modeling and finally, sampling methods are considered to identify the appropriate population for the research study.

#### 1.7.1. Literature Review.

First of all, the literature review gives an overview why integrated Revenue Management within an organization is regarded as more crucial then ever due to economic forces particularly triggered by the modern tourism value net with the internet technology, representing a new medium that is not to be underestimated in its influence. More importantly, the literature review then sets out the theoretic foundation for the research by illustrating the Revenue Management Integration (RMI) between various functions and departments. It will be assessed how the integration may be achieved and which major changes are necessary to reach true integration within the organization. From the theoretic illustration key indicators for the integration are derived and transferred into a questionnaire, intended to measure the Revenue Management Integration in hotel properties and across hotel chains.

### 1.7.2. Structured Interviews.

The questionnaire derived from the literature review was filled out by conducting structured telephone interviews, which were identified as being most suited for the cross-sectional research design used. According to Bryman and Bell (2003), structured interviews are standardized whereby each interviewee receives the same questions in the same order, and the same way. Due to the standardized character, any differences in responses are due to real variation and not due to inconsistency of interviewer conduct. Consequently, a structured interviewing approach is best suited for quantitative research where responses are to be