ANALYSIS OF SERVICE ATTRIBUTES
USING KANO'S MODEL
(CASE STUDY AT QUALITY HOTEL YOGYAKARTA)

THESIS
Submitted as Partial Fulfill of the Requirements
to Obtain the Bachelor of International
Industrial Engineering Degree

Arranged By:
BETZY AMANTIA HENNADI
Student Number: 03 14 03711

INTERNATIONAL INDUSTRIAL ENGINEERING PROGRAM
FACULTY OF INDUSTRIAL TECHNOLOGY
UNIVERSITAS ATMA JAYA YOGYAKARTA
YOGYAKARTA
2007
A BACHELOR OF
INTERNATIONAL INDUSTRIAL ENGINEERING THESIS
On
ANALYSIS OF SERVICE ATTRIBUTES
USING KANO'S MODEL
(CASE STUDY AT QUALITY HOTEL YOGYAKARTA)

Has been Examined and Approved
on July 18, 2007

Adviser,
TB Hanandoko, ST., MT.

Co-Adviser,
Baju Bawono, ST., MT.

Board of Examiners,
Chairman,
TB Hanandoko, ST., MT.

Member,
Ir. B Kristyanto, M.Eng., PhD.

Member,
B Laksito Purnomo, ST.

Yogyakarta, July 18, 2007
Dean of Faculty of Industrial Technology
Universitas Atma Jaya Yogyakarta

Paulus Mudjiantono, ST., MT.

ii
As we go on...
We remember all the times we had together...
And as our live change...
Come whatever...
We will soon be friends forever...
Venue Loves Me Like You Do

Each time when I feel all things disappeared...
I'm so glad that YOU are here...
Through the darkest night, YOU always be my light...
And YOU guide me all the ways...

Only YOU can hear broken part in me...
By YOUR love and sensitivity...
With YOU are by my side, everything will be all right...
YOU help me to see the beautiful things YOU gave for me...

Nobody loves me like YOU do...
YOU touch my heart with love so deeply and true...
I have been searching for my whole life through...
Just to find nobody loves me like YOU do...

This thesis is dedicated to:

Jesus Christ; my almighty God
My Mom and Dad; the best parents in the world
Mak Er (1), Ko An, and Ko; my second family
Ko Ndutz; my special friend
Nyo2; my brother
All of my friends

All of people I've ever known
I've been blessed to meet and have you all in this world
ACKNOWLEDGEMENT

Thanks to Jesus Christ, my Almighty God, for His blessing, strength, guidance; also for directing the best way for me and making everything beautiful in His time.

This thesis is one of the requirements to finish the undergraduate study program in International Industrial Engineering Program, Faculty of Industrial Technology, Universitas Atma Jaya Yogyakarta.

I’ve been blessed to have so many people helping me in doing the research and finishing this thesis. In this good opportunity, I would like to say thanks to:
1. Mr. Paulus Mudjihartono, ST., MT.; as the Dean of Industrial Technology Faculty, University Atma Jaya Yogyakarta.
2. Mr. Parama Kartika Dewa SP, ST., MT.; as the Head of Industrial Engineering Department, Industrial Technology Faculty, Universitas Atma Jaya Yogyakarta.
3. Mr. Hadi Santono, ST., MT.; as the Coordinator of International Program of Industrial Engineering Department, Industrial Technology Faculty, Universitas Atma Jaya Yogyakarta.
4. Mr. TB Hanandoko, ST., MT.; as the adviser, who has spent his valuable time and effort to give guidance and directions during the research and thesis.
5. Mr. Baju Bawono, ST., MT.; as the co adviser, who has spent his valuable time and effort to give guidance and directions during the research and thesis.
6. Ms. Ira Pitrawati; as the Human Research Development Manager of Quality Hotel Yogyakarta, who has given
opportunities for the writer to conduct thesis research.

7. My Mom and Dad; for sacrificing a lot of things to let me come in this way. Thanks for your unlimited love, support, and prayer. Hopefully, I can make you proud and happy.

8. Mak Er (†), Ko An, and Kol; for all the love, support and prayer. I wouldn’t come to this way also if I don’t have you.

9. My beloved Ko2 Nдутz; for your love, patience, support, and prayer. Thank’s for accompanying me in both good and bad timers. Finding you is one of the best things ever happened in my life.

10. My bro Nyo2; for your support and prayer.

11. My classmates at TIKI batch 03: Prinzu, Ana, Citra, Endra, Ansell, Jimmy, Oke, Dody, Billy, Arden, Richo, Nino. Thanks for all of the sweet, bitter, and crazy memories we’ve made. I’m proud to be a part of you! ^_^ Viva TIKI-03!!

12. My partners in FO Laboratory: Mbak Yul, Arnint, Lanny, Ulee, Ko Jim, Ko Adi, Ko Laifar, Ko Ledy, Mas Krisna, Mas Sigit, Mas Oka, Mbak Azka, Wahyu, Ryan, Mas Berny, Dhany, Wienda, Amel. Also for the PK assistants; Endra, Jimmy, Irwan, Ade, Ratih, Gombonk, Totok, Ko Lius, Ko Jongky, Ko Handoko, Toni. Thanks for sharing beautiful moments during 3 semesters I worked there.

13. My partners in Angie Production; thanks for the great experience and togetherness that we had.

14. My friends in XomPags Community; thanks for the togetherness that we had. We are family in Christ.
15. My boarding house friends; C Anit, C Loli, Dewi, 
Erika, Nila, Ratih, Nia, C Merry, C Cindy, C Tika, C 
Novi Gombong, C Novi Sorong, C Vina, C Yean, C Ruth, 
C Ing, Lydia, Pasca, Novi Lampung, Santi, Diana, Lia, 
Fenny, Intan, Mei2. All of you have colored my days. 
16. For Mr. Hanard’s “fans”; fight guys! We can made it 
if we try, eventhough it may be spend a litter of 
tears >_<
17. All of my friends that I can’t mention one by one. 
Thanks for all the togetherness and care. Having you 
all for my friends have been a blessing. I love you 
all guys ^_^ 
18. Special and additional thanks to: Jimmy and Citra; 
for all your help in this thesis making, also for 
continuous support ‘-’. Sanny and NN; for the CD and 
info.. Erika, Dewi, Wienda, Dhany, Ryan; for 
listening my pains and cheer me up. Endra; for the 
challenge to do our thesis >_< Thanks... Much 
muach...

Hopefully, this thesis can be useful for the 
peoples related. Critics and suggestions are very 
expected.

Yogyakarta, July 2007
The writer

vii
# TABLE OF CONTENTS

Title Page i
Approval ii
Dedication iii
Acknowledgment v
Table of Contents viii
List of Tables x
List of Figures xi
List of Appendices xii
Abstract xiii

## Chapter 1 Introduction

1.1. Background 1
1.2. Problem Statement 2
1.3. Research Objective 2
1.4. Research Scope 3
1.5. Research Methodology 3
1.6. Report Outline 6

## Chapter 2 Review of Related Literature

7

## Chapter 3 Basic Theory

3.1. Quality 9
3.2. Service 9
3.3. Service Quality 10
3.4. FANO’S Model 11
    3.4.1. Advantages of FANO’S Model 14
    3.4.2. Steps of FANO’S Model 15
3.5. Likert Scale 20
3.6. Sampling 20
3.7. Data Reliability and Validity 22
    3.7.1. Data Reliability 22
    3.7.2. Data Validity 22
3.8. Uniformity Test 23
    3.9.1. AHP Advantages 26
    3.9.2. AHP Steps 26
3.10. Sensitivity Analysis 30
3.11. Brainstorming 31

## Chapter 4 Company Profile and Data

4.1. Company Profile 33
    4.1.1. General Overview 33
    4.1.2. History of the Company 33
    4.1.3. Visions, Missions, and Slogan of the Company 34
    4.1.4. Organizational Structure 35
    4.1.5. Facilities 36
LIST OF TABLES

Table 2.1. Difference between the Earlier Research and the Current Research .................. 8
Table 3.1. The Fundamental Scale ............................................. 25
Table 3.2. Random Inconsistency Index .......................................... 29
Table 4.1. Table of Hotel Attributes from journal ..................................... 41
Table 4.2. Table of Quality Hotel Yogyakarta Attributes ................................. 43
Table 4.3. Number of Guests (March 2007) ......................................... 44
Table 5.1. Service Attribute Classification of Domestic Guests ................. 54
Table 5.2. Service Attribute Classification of Foreign Guests .......................... 55
Table 5.3. Must-be Service Attribute Classification .................................. 57
Table 5.4. One-dimensional Service Attribute Classification ......................... 58
Table 5.5. Indifferent Service Attribute Classification ................................. 58
Table 5.6. Attractive Service Attribute Classification ................................. 59
Table 5.7. Number of Domestic Service Attributes ..................................... 62
Table 5.8. Number of Foreign Service Attributes ....................................... 63
Table 5.9. Number of Service Attributes ............................................... 63
Table 5.10. Pairwise Matrix at Level 2 ............................................... 66
Table 5.11. Pairwise Matrix at Level 2 (Decimal) .................................... 66
Table 5.12. Eigen Vector Calculation at Level 2 ...................................... 67
Table 5.13. Pairwise Comparison Matrix Weighting with Eigen Value at Level 2 ................ 68
Table 5.14. Eigen Value Calculation at Level 2 ...................................... 69
Table 5.15. Priorities Weight ............................................................ 71
Table 5.16. Priority of Attractive Attributes Improvement Alternatives ............ 72
Table 5.17. Inconsistency Ratio Calculation ........................................... 73
LIST OF FIGURES

Figure 1.1. Flowchart of Research Steps .................... 4
Figure 3.1. KANO’s Model of Customer Satisfaction . 13
Figure 3.2. Functional and Dysfunctional Question of KANO’s Questionnaire ....................... 16
Figure 3.3. KANO evaluation .................................. 18
Figure 3.4. Evaluation Process ............................... 18
Figure 4.1. Domestic Respondents’ Sex of Preliminary Questionnaire ......................... 38
Figure 4.2. Domestic Respondents’ Age of Preliminary Questionnaire ......................... 39
Figure 4.3. Domestic Respondents’ Visiting Objective of Preliminary Questionnaire .......... 39
Figure 4.4. Foreign Respondents’ Sex of Preliminary Questionnaire .............................. 40
Figure 4.5. Foreign Respondents’ Age of Preliminary Questionnaire .............................. 40
Figure 4.6. Domestic Respondents’ Visiting Objective of Preliminary Questionnaire .......... 41
Figure 4.7. Domestic Respondents’ Sex of KANO’s Questionnaire ............................... 44
Figure 4.8. Domestic Respondents’ Age of KANO’s Questionnaire ................................ 45
Figure 4.9. Domestic Respondents’ Visiting Objective of KANO’s Questionnaire ............... 45
Figure 4.10. Foreign Respondents’ Sex of KANO’s Questionnaire ............................. 46
Figure 4.11. Foreign Respondents’ Age of KANO’s Questionnaire ............................. 46
Figure 4.12. Foreign Respondents’ Visiting Objective of KANO’s Questionnaire ............... 46
Figure 5.1. Satisfaction – Dissatisfaction Mapping (Domestic Guests) ......................... 61
Figure 5.2. Satisfaction – Dissatisfaction Mapping (Foreign Guests) ............................ 62
Figure 5.3. Hierarchy of Service Attributes Improvement ........................................... 65
ABSTRACT

Quality Hotel Yogyakarta is a well-known hotel in Yogyakarta, which is always try to improve all of the service attributes, in order to improve guests' satisfaction level. Unfortunately, not all of improvement in service attributes will make the customers more satisfied, and in other hand, it will become inefficient. In order to make the service more efficient, analysis of the service attributes of Quality Hotel Yogyakarta is conducted through this research. The objectives of the research are to identify the attractive service attributes, and then prioritize the alternatives in improving the attractive attributes.

From the analysis, it can be identified that there are two different perceptions of domestic and foreign customers. The service attributes of Quality Hotel Yogyakarta can be classified into must-be, one-dimensional, indifferent, and attractive attributes. From the classification, the attractive service attributes of Quality Hotel Yogyakarta are: Room Quality (Sophisticated Door Lock, Room Decoration Details and Variation, and Periodical Furniture Change), General Amenities (Food and Beverages Great Variety, Information Desk Availability, Bible Availability, and Customized Room fragrance), Business Service (Multi Charger Availability), and Value (Hotel Good Reputation and Personalized Service). From the identification above, it can be generated the alternatives in improving them: Guest History (43.8%), followed by Updated Website (32.4%) and Representative Brochure (25.8%).